

Below is an Electronic Version of an Out-of-Print Publication

You can scroll to view or print this publication here, or you can borrow a paper copy from the Texas State Library, 512-463-5455. You can also view a copy at the TCEQ Library, 512-239-0020, or borrow one through your branch library using interlibrary loan.

The TCEQ's current print publications are listed in our catalog at www.tceq.texas.gov/publications/

This document is out of print, and should be used for historical reference only.

Biennial Report

to the 80th Legislature
FY2005–FY2006



TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY

FY2005–FY2006
**Biennial
Report**
to the 80th Legislature



TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY

From the Commission

With projections showing the state's population doubling by the year 2050, the Texas Commission on Environmental Quality has the crucial role of making sure Texas preserves its natural resources that are so attractive and necessary to people, businesses, and organizations in this great state.

The TCEQ stands at the center of—or is a partner in—some critical decisions that will be made on how to adequately plan, fund, and provide the requisite infrastructure for the expanding populace. As Texas grows, so does the number of point sources, area sources, and mobile sources of pollutant emissions, along with the demands on water resources and waste disposal space. We believe it is crucial that the expanding infrastructure be consistent with the goals of clean air, clean water, the safe management of waste, and protection of our public health.

The agency, in partnership with its stakeholders, has made significant progress in reducing adverse environmental and public health impacts, and maintaining and enhancing the quality of life in the state. This steady, measurable progress has occurred through both private and public efforts.

We intend to maintain this progress and to stay focused on protecting the environment and our natural resources, while maximizing economic development opportunities. Our mission is to ensure that beneficial environmental trends continue in the midst of a flourishing economy.

Ultimately, our success depends on several key principles: adopting and consistently applying sensible regulations; effectively enforcing environmental laws; using sound science and innovative technology; and inviting public participation from every sector. Moreover, we remain committed to attracting and retaining a high-quality, diverse workforce at the TCEQ.

As commissioners, we approach our jobs with the fundamental tenet that we are the humble servants of the people of Texas. This belief drives every decision we make and every action we take in striving to fulfill this agency's mission.



Kathleen Hartnett White, *Chairman*



Larry R. Soward, *Commissioner*




Martin A. Hubert, *Commissioner*

How to reach the TCEQ

By phone: 512-239-1000

By mail:
Texas Commission on Environmental Quality
PO Box 13087
Austin TX 78711-3087

Web site: www.tceq.state.tx.us

How to order this report

To obtain copies, call 512-239-0028 and request publication SFR-057/06.
Or view the report online at www.tceq.state.tx.us/publications.



T E X A S C O M M I S S I O N O N E N V I R O N M E N T A L Q U A L I T Y



printed on recycled paper using soy-based ink

The Texas Commission on Environmental Quality is an equal opportunity/affirmative action employer. The agency does not allow discrimination on the basis of race, color, religion, national origin, sex, disability, age, sexual orientation, or veteran status. In compliance with the Americans with Disabilities Act, you may request this document in alternate formats by contacting the TCEQ at 512-239-0028, fax 512-239-4488, 1-800-RELAY-TX (TDD), or by writing PO Box 13087, Austin, TX 78711-3087.

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.

Report Status

The TCEQ's *Biennial Report to the Legislature* is published every December before a regular legislative session, as required by the Texas Water Code, Section 5.178. This submission to the 80th Legislature contains other information and reports that are required by statute:

- **Agency research efforts**, page 19.
This information was last published in December 2004 in the *Biennial Report to the 79th Legislature* (SFR-057/04).
- **Waste exchange results (RENEW)**, page 35.
This information was last published in the *Biennial Report to the 79th Legislature*.
- **Assessment of complaints received**, page 47.
This report was last published in the *Biennial Report to the 79th Legislature*.
- **Permit time-frame reduction process**, page 55.
This report is issued for the first time.

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

Table of Contents

Chapter 1. Innovations and Accomplishments 1

Hurricane Duty	1
Enforcement Reforms Implemented	2
Permit Streamlining	3
Broad-based Monitoring Operations	3
Rapid Detection through Remote Monitoring	4
Remote Sensing: Find It and Fix It	5
Health Screening Guidelines	6
Landmark Landfill Reforms	6
Electronic Services	7
New Online Options	8

Chapter 2. Agency Activities 11

Enforcement	11
Air Quality	12
Water Quality	20
Water Supply	27
Waste Management	30
Environmental Assistance	33

Chapter 3. Legislation from the 79th Session 39

HB 2481: Economic Incentives and Pollution Control	39
HB 1763: Groundwater Districts	40
HB 2876: Certificates of Convenience and Necessity	40
HB 2510: Septic Systems	41
HB 2376: Dry Cleaners	41

Chapter 4. Agency Resources 43

Workforce	43
Finances	44

Appendixes 47

Assessment of Complaints Received	47
Permit Time-Frame Reduction Process	55



Chapter One

Innovations and Accomplishments

As the state's lead environmental agency, the Texas Commission on Environmental Quality assumes the primary role in dealing with issues pertaining to air and water quality, water supply, and waste management. The agency also works around the state promoting pollution prevention and educating Texans on environmental protection.

The TCEQ is also recognized beyond the state's borders for taking a leadership role in the environment—from programs in monitoring and research to the use of economic incentives and new technologies. In many ways, the environmental programs established in Texas serve as models elsewhere. The agency is often called upon to provide information on its programs to other states and even other countries.

These cutting-edge endeavors, as well as other day-to-day agency programs, are planned and carried out in partnership with other agencies and organizations, and with the involvement and participation of stakeholders.

This chapter examines many of the initiatives undertaken by the TCEQ during the 2005 and 2006 fiscal years.

Hurricane Duty

Emergency training for TCEQ staff includes responding promptly to hurricane damage. But responding to a hurricane in another state? That was new. Then another hurricane arrives—this one back home. It was a scenario that few had anticipated.

First, Hurricane Katrina inundated southern Louisiana, followed by Hurricane Rita thundering through the eastern counties of Texas. This dual event proved to be one of the agency's toughest tests. But the 14-member Strike Team and scores of other TCEQ employees reported for duty in both states, addressing environmental hazards and helping to restore vital public services.

The Strike Team is a select group of agency personnel trained to deal with natural or man-made events that trigger an environmental crisis. While many TCEQ employees are trained in emergency response, the Strike Team is usually the first to respond.

The call from the Louisiana Department of Environmental Quality (LDEQ) came soon after New Orleans and surrounding parishes were flooded by Katrina.

With approval from the Governor's Division of Emergency Management, the Strike Team and other emergency response staff set out for LDEQ headquarters in Baton Rouge, where they would sleep in a conference room and shower at a YMCA.

For three weeks, staff teamed up with LDEQ and Environmental Protection Agency (EPA) representatives for daily forays into flooded areas. The TCEQ group brought years of experience to the assignment—in emergency response, industrial and hazardous waste, drinking water, surface water, and air monitoring.

Those skills were put to use in searching for leaking industrial tanks, hazardous waste, petroleum drums that had washed away from industrial sites, and other environmental problems. Once hazards were identified, each group used satellite coordinates to log the locations for recovery teams.

Staff also collected and analyzed water samples. With floodwaters showing unusually high levels of contaminants, it was important to identify the toxins as soon as possible. The TCEQ's mobile laboratories proved to be invaluable in floodwater analysis of *E. coli*.

These support duties were suspended as soon as the TCEQ got word that a massive storm was moving toward Texas. The day after Hurricane Rita made landfall in late September, the Strike Team and regional staff members converged on East Texas. The agency's damaged regional office in Beaumont was closed and no surrounding towns had power, so the responders initially commuted from Houston to reach damaged areas.

Staff participated in reconnaissance flights to inspect damage to oil refineries and other industrial facilities, and surveyed communities to determine the extent of damage to drinking water and wastewater treatment plants. They identified public drinking water systems that were not functioning and helped locate generators and fuel. The final count of water systems losing power was about 1,100.

Other TCEQ response activities included evaluating dam safety, assessing spills, consulting on debris removal, determining which landfills were operational, investigating fish kills, and inspecting state and federal Superfund sites.

Enforcement Reforms Implemented

An in-depth review of the agency's enforcement process was one of the largest projects ever undertaken by the agency. Most of the reforms were implemented over the last two years.

The far-reaching results go to the core of many agency functions.

The review was initiated in 2004 to evaluate TCEQ compliance and enforcement policies and statutes to improve consistency and environmental protection. The review also aimed to simplify processes for more timely, efficient, and effective enforcement, and to enhance compliance with environmental laws.

During the review, the agency solicited public comment through surveys by mail and the web, along with public meetings held in Houston, Harlingen, Dallas-Fort Worth, and Midland. A steering committee of agency staff and management was created to review the comments and identify key issues.

Some of the resulting enforcement reforms are:

A streamlined process. Since much of the public comment focused on the length of the enforcement process, staff looked at ways to shorten it, including fast-track options for certain enforcement cases. The result was an expedited timeline that has reduced the average length of the enforcement process by more than 100 days.

Enforcement-initiation criteria. For the first time, all the divisions within the agency were asked to provide recommendations for the enforcement-initiation criteria, which are used primarily by field operations staff. The agencywide input provided consistency.

Supplemental Environmental Projects. The option of SEPs, which can be undertaken to offset full or partial environmental penalties, are now discussed earlier in the enforcement process—during the investigator's on-site exit briefing. Violators interested in sponsoring

SEPs must meet a deadline for making that choice. The agency expanded the list of pre-approved eligible projects and emphasized the need for direct environmental benefits. SEPs must take place within the community in which the violation occurred, preferably targeting the same environmental media. SEP sponsors must document expenses and the environmental benefits achieved.

Field citations. In a pilot program that began in March 2006, investigators who document certain clear-cut environmental violations have the authority to offer a citation on-site. This gives the regulated entity the opportunity to acknowledge the violation and quickly settle the case. If the violator signs the citation and sends it to the TCEQ, pays the associated penalty within 30 days, and performs the corrective action, the penalty is discounted by a minimum of 10 percent. The reduction, which is granted in exchange for the expedited settlement, saves time and money for both the agency and the violator. Field citations are available for nine violations that fall under the programs of petroleum storage tanks (PSTs), Stage I and II vapor recovery, storm water (industrial), and occupational licenses. In the first six months of the pilot project, 67 field citations were issued, primarily for violations at PST operations. About 53 percent of the citations were settled.

Overdue payments. Starting September 1, 2006, no permits, registrations, certifications, or licenses are issued, amended, or renewed for a person or entity that is delinquent on TCEQ penalties or fees. The agency will not declare an application administratively complete if the applicant is found to be delinquent on a fee or penalty. Also, the TCEQ will withhold final action on any application that was ruled administratively complete before the agency knew about the overdue payments. The new protocol has exceptions, such as for applicants who are on a TCEQ-approved payment plan or in the midst of a bankruptcy proceeding.

Communications. The agency has made more enforcement-related information available in easier-to-use formats. This includes direct web links to complaint reports and to topics such as citizen-collected evidence, the nuisance-odor protocol, and the overall enforcement process.

Environmental complaints. The agency home page now links directly to the environmental complaints page at www.tceq.state.tx.us/goto/report_problem. This page features a choice of an online complaints form, toll-free phone number, or e-mail address for reporting environmental problems. It also has links to information on complaints that fall under the TCEQ's jurisdiction and to information on odor problems (training has been enhanced for investigators who handle such complaints). Another site, www.tceq.state.tx.us/compliance/complaints/track.html, describes the entire enforcement process—from violations to final actions—and provides other links for tracking complaints and specific pending enforcement actions, all searchable by county, region, or company name.

Penalty policy. The Commission directed staff to conduct a series of stakeholder meetings on key issues related to the calculation of administrative penalties, in anticipation of revising the current policy and possibly converting the Commission's penalty policy to a rule. Stakeholders were asked to provide comments on the existing penalty policy and on the major factors that would be considered by the Commission. Among those factors were:

- recovery of economic benefit
- small business and small local government issues
- penalty reduction for good-faith efforts to comply
- penalty enhancement for culpability
- standard penalties

Stakeholder meetings took place at six locations throughout the state. Summaries of the comments were forwarded to the Commission.

Compliance history. The Commission directed staff to revise the compliance history rules by adding positive factors to the formula, redefining “repeat” violator, changing the “average by default” classification, allowing a regulated entity access to its compliance history information prior to publication on the agency's web site, and revising the “appeal of classification” provision to allow additional regulated entities to appeal. The draft rule will be considered for publication in 2007. (See Chapter 2 for more on compliance history.)

A full list of enforcement reforms can be found at www.tceq.state.tx.us/comm_exec/enf_rev/implement_recc.html.

Permit Streamlining

One of the chief projects at the TCEQ has been finding ways to speed up the permitting process. In a typical year, the agency receives more than 8,000 applications.

In 2002, the Permit Time-Frame Reduction Project was established to identify specific time frames for each of the permit types, including air quality, water quality, water supply, municipal solid waste, and industrial and hazardous waste.

The agency also created two permit classifications: Priority I for new facilities or expansions of existing sites, and Priority II for renewals of existing applications. The primary focus has been on Priority I.

The result of these efforts has been a reduction in the backlog of applications that exceeded the established time frames. For a full evaluation of the Time-Frame Reduction Project through fiscal 2006, see Appendix B in this report.

Broad-based Monitoring Operations

To effectively monitor for air quality and water quality, the TCEQ employs vast networks that draw on some of the latest technology.

The TCEQ collects air monitoring data from the largest state-run monitoring network in the United States. Extensive fenceline monitoring of industrial plants is also a part of this comprehensive operation.

The air monitoring network has grown over the years as a result of a booming state population, changes in federal air quality standards, and more communities requested or required to install air quality monitoring.

Today, the TCEQ and its air network partners operate ozone monitors in 33 counties, primarily in and around urban areas.

Using some of the best technology available, the air monitoring network—representing both public and private ownership—encompasses 208 stations. (A single station can contain up to 15 instruments, and a single instrument can collect data on as many as 100 pollutant data types.)

This network includes not only state-owned sites, but also stations funded by Harris County; the cities of

Houston, Dallas, Fort Worth, El Paso, San Antonio, and Victoria; and councils of governments based in Austin, San Antonio, Corpus Christi, Southeast Texas, and East Texas. The network also includes industry-sponsored stations whose data are hosted by the TCEQ as part of self-monitoring initiatives, voluntary agreements, court orders, and Supplemental Environmental Projects resulting from enforcement actions.

The main network components are:

- Continuous-monitoring stations that take 5-minute average measurements of ozone, nitrogen oxides (NO_x), carbon monoxide, and other compounds, in addition to several weather measurements.
- Automated gas chromatographs—owned by the TCEQ and by industry—that tie into agency computers. This equipment separates and identifies 48 to 65 compounds, producing hourly readings.
- Stations, mostly along the Gulf Coast and in urban areas, that take canister samples for volatile organic compounds (VOCs). The 24-hour samples are collected every sixth day for the laboratory analysis of more than 100 air toxics and ozone precursors.
- Noncontinuous PM_{2.5} filter samplers and automated continuous PM_{2.5} monitors that measure for microscopic particulate matter such as soot, smoke, and dust.

Regarding water quality monitoring, the TCEQ has worked the last five years to adapt communications and database technology to support the ability to monitor around the clock. With 28 of these sites in operation, the agency has become the national leader in continuous water quality monitoring. Individual sites monitor for the basic parameters of water quality—water temperature, dissolved oxygen, pH, and specific conductance—while others also collect nutrient data.

Specific sites are operated and maintained by the TCEQ in cooperation with other governmental and private entities. Stations in the San Antonio area are operated and maintained by the U.S. Geologic Survey, under contract with local and regional government entities and private entities—at no cost to the TCEQ.

The main network components are:

- Twenty-eight continuous water quality monitoring network stations that take 15-minute averages of the basic parameters (mentioned above) and, where appropriate, collect weather measurements.

- Five of the 28 stations that also serve as stations in the Environmental Monitoring and Response System (EMRS), monitoring for nutrients as well as basic parameters.

Data from the continuous water quality monitoring network and EMRS sites are used in a variety of ways, such as to target field investigations in the North Bosque and Leon river watersheds, assess water quality for the Clean Water Act 305(b) water quality inventory, and develop the Clean Water Act 303(d) List of impaired waters. The data also factor into management decisions concerning agricultural irrigation in the Trans-Pecos region and protection of potable water supplies in the upper Colorado River Basin.

Rapid Detection through Remote Monitoring

Building on an innovative approach to around-the-clock monitoring, the TCEQ has expanded its use of technology to spot likely pollution events and act quickly.

With creation of the Environmental Monitoring and Response System in 2004, the TCEQ began to study incoming data and alert potential contributing sources to implement corrective actions in advance of air pollution events.

When significant changes occur in the environment, near real-time data is sent to the agency in as little as 15 minutes after collection. Changes in air chemistry, for example, might indicate a release of pollution from an industrial complex. Similarly, incoming surface-water data might point to a local creek or river at which pollution has originated.

Air Quality. In Houston, the TCEQ and participants in the Houston Regional Monitoring Network share the monitoring costs and the resulting data. The focus is on industrial plants along the Houston Ship Channel and the emissions of six highly reactive volatile organic compounds that contribute to rapid escalation of ground-level ozone.

A network of eight automated gas chromatographs continuously sends data to the agency. When data show certain conditions to be developing, the TCEQ sends electronic notifications to alert the Houston regional office and participating industrial sources within a

10-kilometer radius upwind of the monitor that registered the higher-than-expected readings.

With this early notice, industrial facilities can move quickly to identify the potential causes. The industry participants have developed a standardized response protocol and a web-based interface to track the response. In this way, they try to identify opportunities to improve their operating practices.

Water Quality. The Bosque-Leon water quality pilot project under EMRS consists of five stations. Plans call for doubling the number of stations the next two years. The EMRS project is concentrated in the North Bosque and Leon watersheds, northwest of Waco, where runoff from large-scale dairies in the area has been identified as a major source of phosphorus. The resulting algae can deplete a water body of needed oxygen and cause odor and taste problems in drinking water.

At three sites in the Bosque watershed and two more in the adjoining Leon watershed, readings are taken every hour for dissolved oxygen, pH, conductivity, and temperature. With new nutrient monitors, additional information on nitrate, ammonia, and reactive phosphate is being recorded every six hours.

All the data are transmitted to the TCEQ by modem, satellite, or a combination of radio and landline. Unusual patterns detected in water quality data can trigger investigations upstream to determine what may be causing the problem.

Remote Sensing: Find It and Fix It

Air monitoring in Texas took a new turn with the introduction of an infrared-gas imaging camera. This handheld device allows the camera operator to see and record what the naked eye does not: volatile organic compounds. VOCs contribute to ground-level ozone formation, and some are toxic.

The remote-sensing camera is highly effective in detecting VOC emissions from leaks and from industrial sources that were previously unidentified or underreported to the TCEQ. Typical emissions sources include leaks from storage tanks, equipment seals, valves, connectors, compressor seals, open hatches, and cracks in pipelines.

The TCEQ began field testing the new technology in 2004 and used it the following year in several major studies, including one focusing on 1,3-butadiene sources in the Manchester and Milby Park areas near the Houston Ship Channel. It was also used in observational flights over the ship channel and industrial areas of Texas City and the Beaumont-Port Arthur area.

The most significant findings came from the flyovers in Southeast Texas.

The TCEQ was already tracking an estimated 14,000 tons a year of reported emissions in the area of the Houston Ship Channel. The flyovers and follow-up work identified another potential 7,000 tons a year of unreported emissions. These results are still being analyzed.

The leading source of newfound emissions proved to be floating-roof tanks—the cylindrical steel storage vessels equipped with roofs that float on the surface of stored liquid, which is usually petroleum or a petroleum product. The next leading emissions category was barges, followed by oil and gas production sites.

After gathering the study results, the TCEQ moved to address the problem areas. About 40 industrial sites with identified emissions sources were contacted for emissions information. Also, bulk terminals were notified to revise their emissions inventories for 2002 to 2005.

The TCEQ expects to collect \$574,000 in emissions fees as a result of the revised emissions inventories. So far, the agency has obtained commitments from sources to reduce emissions by more than 7,000 tons per year.

While the TCEQ has no jurisdiction over barges in transit, staff began working with the U.S. Coast Guard, the American Waterways Operators, and Louisiana environmental officials to develop more effective strategies for lowering emissions.

Following up on oil and gas production sites, the TCEQ joined with the Houston Advanced Research Center, a nonprofit research management organization, to study the amount of “flash” VOC emissions occurring when storage tanks receive liquid fuel from pipelines. The study findings will be used to more accurately represent the emissions from this industry in the emissions inventory.

Three GasFindIR cameras are regularly used on mobile laboratory trips and for reconnaissance and compliance investigations around the ship channel.

Staff also completed an implementation strategy for using this new technology within agency programs.

Health Screening Guidelines

A two-year effort to update the TCEQ's Effects Screening Level (ESL) guidelines has won the endorsement of a peer-review panel organized by the internationally recognized Toxicology Excellence for Risk Assessment (TERA), a scientific nonprofit in Cincinnati.

ESLs are chemical-specific air-concentration levels established to protect human health. These levels are among the key factors used in setting emissions limits in air permits, evaluating air monitoring data, and determining safe cleanup levels during remediation projects.

The majority of monitored levels of air pollutants in Texas are below their established ESLs. But the agency's toxicologists realized that the guidelines, while health-protective, no longer reflected the latest science. The guidelines were set in the 1970s.

In 2005, the toxicology team underwent a two-day evaluation before a TERA review panel of nine experts with specialties in inhalation toxicology, acute and chronic hazard identification and dose response, and cancer and noncancer risk assessment. The TCEQ team presented an ESL methodology that was designed to meet the highest scientific standards. The panel also took public comment on the proposals.

The review ended with TERA's endorsement and suggestions for further improvements.

In August 2006, the toxicologists began preparing for their next task: developing individual ESLs for the more than 1,100 chemicals permitted by the agency. That includes the 150 chemicals that are monitored for health reasons by the agency's stationary and mobile monitoring equipment.

In this next year-long phase, the toxicologists will concentrate on 20 individual chemicals that are among the most closely watched in the state. Those include 1,3-butadiene and benzene, both of which are known carcinogens.

As this work progresses, the TCEQ will publish material on how individual ESLs are being developed and will seek public comment. Also, individual peer reviews might be sought for chemicals that are of particular interest.

Landmark Landfill Reforms

In the first major rewrite since the early 1990s, the state's municipal solid waste rules were updated and fine-tuned to better reflect today's industry.

The new rules took effect in March 2006, after considerable input from the public and from industry representatives. In addition to reorganizing the solid waste rules and improving readability, the Commission made dozens of substantive changes.

One reason for the overhaul was to keep up with industry changes. The business of managing solid waste has become much broader than operating a community landfill. Now the term encompasses activities like disinfecting and incinerating medical waste; transporting and tracking different types of waste; and handling waste, such as restaurant grease, that can be processed and recycled.

In recent decades, the state's solid waste rules underwent revisions only when the need arose, such as to address new site-operating procedures or to implement legislation.

The new TCEQ rules generally apply to landfill applications filed after the revisions were adopted in March 2006. Applications that were already pending were allowed to proceed under the former rules; however, the resulting authorizations are subject to some new requirements. Existing landfills could continue operating as long as they incorporated some new requirements, in accordance with the schedule included in the revisions.

Some of the major reforms are:

- Previously, landfills had to have a 50-foot buffer between the edge of the landfill and the property line. The buffer requirement was expanded to 125 feet for new and expanded portions of landfills.
- Landfills were previously required to install groundwater monitoring wells to detect leaking pollution. Because there was no clear-cut requirement regarding spacing, it was common to see wells located every 1,000 feet or more. Under the revised regulations, wells will generally have to be placed at least every 600 feet.
- Runoff controls must be addressed at each stage of development while a landfill is actively operated, rather than waiting years or decades for the operating life of the facility to end. This requirement affects existing facilities, so all permits must be revised to comply with this new rule.
- Federal rules on leak prevention generally require landfills to have a two-foot clay liner at the bottom,

overlaid with a thick plastic liner. Some landfills that were already in operation when the requirement took effect simply built higher without having to construct the more protective liner. State rules now require facilities to install a liner in vertical expansion areas between waste already in the landfill and the new waste to be disposed of.

- Local governments may request notification every time a facility alerts the TCEQ of compliance problems, such as fire or erosion.
- Floodplain maps prepared by the Federal Emergency Management Agency may be submitted by applicants, but the TCEQ can consider other information in making a final determination of floodplain locations.
- The TCEQ will conduct public meetings on applications when there is significant community interest or a request by a legislator representing the area. This revision implemented legislation that addressed a situation in which the agency was required to travel to locations around the state to meetings, regardless of whether there was any public interest. The applicant will be required to provide notice of the opportunity for such a meeting.

Solid Waste Facilities Affected by the Rule Changes

The TCEQ classifies municipal solid waste facilities according to the methods of processing or disposing of waste. Here are the classifications and the number of facilities in each.

Type I, 179 facilities

Standard landfills for the disposal of municipal solid waste

Type IV, 44 facilities

Landfills authorized to accept only brush and construction or demolition waste

Type V, 86 facilities

Solid waste processing facilities, such as transfer stations

Type VI, 2 facilities

Facilities implementing a new or innovative method—such as energy recovery—for handling municipal solid waste

Type IX, 11 facilities

Facilities conducting landfill mining or the recovery of energy, material, or gas for beneficial use

Electronic Services



Online government is a growing enterprise at the TCEQ. More electronic services are being made available as a convenience to the companies, municipalities, and individuals conducting business with the agency.

Streamlining and modernizing services will improve the quality and timeliness of data, and ultimately save money by reducing the resources needed to receive and process paper.

Since 2002, the TCEQ has been moving certain permitting and reporting functions to the Internet, using the State of Texas Environmental Electronic Reporting System (STEERS). This project has developed to the point where the agency now has data systems that allow for a number of electronic services, including electronic submittal of environmental information, automated processing of some permit applications, and electronic fee payments.

E-Payment. In coordination with TexasOnline, the TCEQ’s electronic system allows agency customers to pay any invoiced fee and most permit fees online. E-pay, which processes about 600 transactions a month, handled 15,650 transactions between September 2004 and August 2006, for a total of \$3.4 million. TexasOnline, the state government web site at www.texasonline.com, also offers a business portal that provides a wide range of environmental information, such as listings of the TCEQ permits and licenses that a small business owner might need.

E-Licensing. The electronic licensing service is available to individuals and companies needing to renew occupational licenses and registrations. Ten occupational licensing programs are available online. Eligible licensees who have completed their continuing education can renew their licenses online. Payments are made through TexasOnline. With the service complete, the agency had received 724 applications for license renewals by the end of fiscal 2006.

E-Reporting. STEERS was designed to be a user-friendly program for TCEQ customers to submit environmental data electronically. The free service is available for certain programs in industrial and hazardous

waste, petroleum storage tanks, storm water, and air emissions and maintenance events. The agency has received roughly 111,400 online submissions since 2002.

The newest e-reporting component is for Texas Pollutant Discharge Elimination System discharge monitoring reports (DMRs), which are required on a regular basis from most facilities holding water quality permits. The state's permitted water facilities generate more than 50,000 DMRs each year. The electronic DMR system, which went online in March 2006, is used by about 20 percent of the eligible facilities. The TCEQ is working with the EPA and 11 other states to develop a DMR system that will be compatible with EPA's new database for water quality permits. The transition will be invisible to current eDMR users.

E-Permitting. Through STEERS, the agency has been accepting electronic applications for coverage under two storm water general permits. Using TexasOnline, entities can also pay any invoiced fee and most permit fees.

Now, the TCEQ's new e-permitting system also enables the automatic review and approval of applications submitted electronically. Permit or registration types have been prioritized based on the number of applications, the complexity of each application and its review, database flexibility, and economic benefit to the state. Based on these priorities, applications for storm water general permits and air permits by rule have been identified for inclusion in the first phase of the e-permitting initiative. The first release, in August 2006, stood ready to support an expected 10,000 applications for renewals of multi-sector storm water general permits. It also enabled the completely electronic issuance of storm water permits for construction. Air permits by rule should be online by January 2007, followed by registrations for dry cleaners and underground storage tanks.

The automated system allows not only the submittal of forms but also the issuance of authorizations. The estimated time for the entire procedure of accessing the system, filling out a form, paying the application fee, and printing the permit authorization is less than 30 minutes.

To encourage use of e-permitting, the TCEQ notified all permit holders through letters and mail inserts, posted notices on the agency's storm water web page, and offered training sessions. Challenges remain, however, such as maintaining compliance with federal

regulations concerning electronic reporting, and managing complex permit application documents as they pass through the electronic workflow process.

Meanwhile, the Governor's Office has led an effort to revise a business portal on TexasOnline to provide a single point for collecting permit application data from new retail, construction, and child- and elder-care businesses. The goal is to have applicants fill out only one set of forms, which would then be sent to the appropriate agencies for processing. The TCEQ has assisted with this project and is mapping plans to eventually integrate the state's business portal with its own e-permitting system.

New Online Options

The TCEQ web pages have expanded in other ways to offer more information and new features. Here are some highlights:

- Members of the public can go online to enter comments on all proposed TCEQ rules. This new option makes it easier to participate in the process. Proposed rules that are scheduled for public comment are added to the e-comment list on the first date of the comment period and removed at the conclusion of the comment period. Online comments are submitted at www5.tceq.state.tx.us/rules/ecomments.
- Public meetings held by the Commission can be viewed online as they happen. Under an agreement with TexasAdmin.com Inc., the webcasts are conducted when the commissioners meet in open session to consider permit applications, enforcement actions, and other agency business, as well as to discuss TCEQ programs and policies with staff. TexasAdmin.com also provides a six-month archive of the public meetings, which can be searched by agenda item. This free service makes it easier for the public to follow the process of environmental regulation, such as hearing the discussions that precede the commissioners' policy decisions. The webcast linkup can be found on the TCEQ home page under "Express Links," or at www.texasadmin.com/cgi-bin/trcc.cgi.
- Texans now have faster access to public and legal notices issued by the TCEQ by visiting

www.tceq.state.tx.us/comm_exec/cc/pub_notice.html. With notices mailed on or after December 17, 2004, full-text copies of TCEQ notices are posted on a real-time, searchable database. The web site includes notices of applications, public meetings and hearings, and TCEQ hearings at the State Office of Administrative Hearings. Notices can be searched online by type of notice; the date the notice was mailed; program area; and county, TCEQ region, or zip code. For notices issued from 1994 to December 16, 2004, the web site contains limited information, such as principal name, permit or registration number,

publication date, and, if available, the date the notice was published and the closing date of the public comment period.

- Occupational license applicants can find their examination results at www5.tceq.state.tx.us/oce/oler. In addition, the 46,000 current licensees or registered entities can view the status of their licenses—for example, the expiration date or the continuing education hours needed for renewal. The public can search for licensed personnel, such as landscapers or septic system installers, by county or region.



Chapter Two

Agency Activities

On any given day, the Texas Commission on Environmental Quality will have staff in the field conducting investigations, in the laboratory analyzing monitoring samples, or in a seminar presenting pollution-prevention measures to a business or community group. Elsewhere, employee teams will be evaluating permit applications, answering calls about environmental complaints, or working with an urban area dealing with regulatory challenges.

These are just a few examples from the agency's broad range of responsibilities. These various programs, however, are not carried out in isolation, but in consultation with staff having expertise in various environmental media. All are working in concert to achieve a primary mission—to protect human health and natural resources.

This chapter looks at a spectrum of programs and activities in which the TCEQ was engaged during fiscal years 2005 and 2006.

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

In a typical year, an estimated 70,000 regulated entities will be investigated for compliance with environmental laws.

When environmental laws are violated, the agency has the authority to levy penalties up to the statutory maximum per day, per violation, in administrative cases. The statutory maximums vary from \$500 to \$10,000, depending on environmental media types and programs. Civil judicial cases have penalties up to \$25,000 per day, per violation, in some programs.

In fiscal 2005, the TCEQ issued 1,159 administrative orders, which yielded \$8.1 million in fines and directed \$4.2 million to Supplemental Environmental Projects (SEPs).

In fiscal 2006, the TCEQ issued 1,531 administrative orders, which yielded \$9.9 million in fines and sent \$3.2 million to SEPs.

SEPs are voluntary projects undertaken by violators who agree to contribute all or part of their administrative fine to a project that improves the environment in the same community in which the violation occurred.

The TCEQ also can refer cases to the state attorney general. In fiscal 2005, the Attorney General's Office obtained 44 judicial orders in cases referred by the TCEQ or in which the TCEQ was a party. Those orders resulted in \$5.9 million in civil penalties. No judicial orders included SEPs.

In fiscal 2006, the AG's office obtained 30 judicial orders, which resulted in \$25.5 million in civil penalties and another \$5.5 million being directed to SEPs.

The TCEQ's latest annual enforcement report is posted online at www.tceq.state.tx.us/compliance/enforcement/reports/AER/annenfreport.html.

Compliance History

The commissioners began using compliance history classifications in their regulatory decision making in 2002.

The agency rates the compliance history of every owner or operator of a facility that is regulated under certain state environmental laws. The program uses a uniform standard for evaluating compliance history, as well as a performance classification system to rate the 375,000 entities regulated by the TCEQ.

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. Also, agency-approved Environmental Management Systems are included.

Under the rating system, each regulated entity is classified to distinguish among “high,” “average,” and “poor” performers. An entity’s classification comes into play when the agency considers matters regarding not only enforcement but also permit actions, the use of announced inspections, and participation in innovative programs.

In most regulatory programs, the TCEQ—using the uniform standard—annually evaluates the compliance history of each regulated site, and classifies each site and customer in accordance with a formula established by rule. A compliance history report shows the information used to determine the site rating.

A database of ratings is available at www.tceq.state.tx.us/nav/cec.

Ratings below 0.10 receive a “high” classification, 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.

As part of the agency’s extensive review of its enforcement functions, the Commission recommended revisions to the rule. These include factoring the

complexity of a site into the compliance history formula; considering self-reported violations as a component of compliance history only when they are included in an issued order or judgment; adding positive factors to the formulas (such as early compliance with a rule and participation in an agency-supported voluntary program); changing the “average by default” classification to “unclassified”; redefining “repeat violator” as having more than one of the “same” major violation; allowing all “average” performer classifications an opportunity to be appealed; and allowing a regulated entity to request an opportunity to review its rating, classification, and compliance history components before the information is posted on the agency web site.

Complaints Received

Through its regional offices, the TCEQ receives hundreds of environmental complaints each year. These complaints are investigated, and a report is made 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, waste, and water), 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.

The analyses of complaints received in fiscal years 2005 and 2006 can be found in Appendix A of this report.

Compliance History Designations August 2006

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

Entity Classification	Number	Percent
High	22,659	13.3%
Average by default	126,110	74.3%
Average	19,482	11.4%
Poor	1,518	1.0%
TOTAL	169,769	100%

Note: From 2004 to 2006, the total number of classified entities dropped from 216,101 to 169,769. This reduction in the number of regulated entities is attributed to an agencywide effort to clean up data and eliminate duplicate records in the Central Registry.

Air Quality Compliance Dates Looming

With Texas nearing critical deadlines to comply with federal ozone requirements, all eyes are on the federal 8-hour standard.

This new health-based standard, which is predicated on the average value of readings taken over 8-hour blocks of time, was implemented in 2004 by the EPA. Areas across the country were designated as being in attainment or nonattainment for the new standard, which replaced the 1-hour ozone standard.

Along with the 8-hour standard and its tougher compliance requirements came new deadlines for reaching attainment.

In recent years, Texans have seen steady, significant progress in air quality due to a variety of measures that were implemented under the 1-hour ozone standard. In fact, ozone levels here are improving at a rate faster than the national average.

However, three urban areas remain in nonattainment for the 8-hour standard: Houston-Galveston and Dallas-Fort Worth, both with compliance deadlines of mid-2010, and Beaumont-Port Arthur, with a mid-2007 deadline. All three areas face the prospect of federal sanctions if they fail to achieve compliance by the designated dates.

San Antonio and its neighboring counties are also labeled as nonattainment, though their attainment deadline has been deferred. San Antonio and the near-nonattainment areas of Austin and Northeast Texas are all implementing Early Action Compacts (EACs) to lower ozone levels. Through EACs, areas voluntarily reduce emissions to avoid a designation of nonattainment.

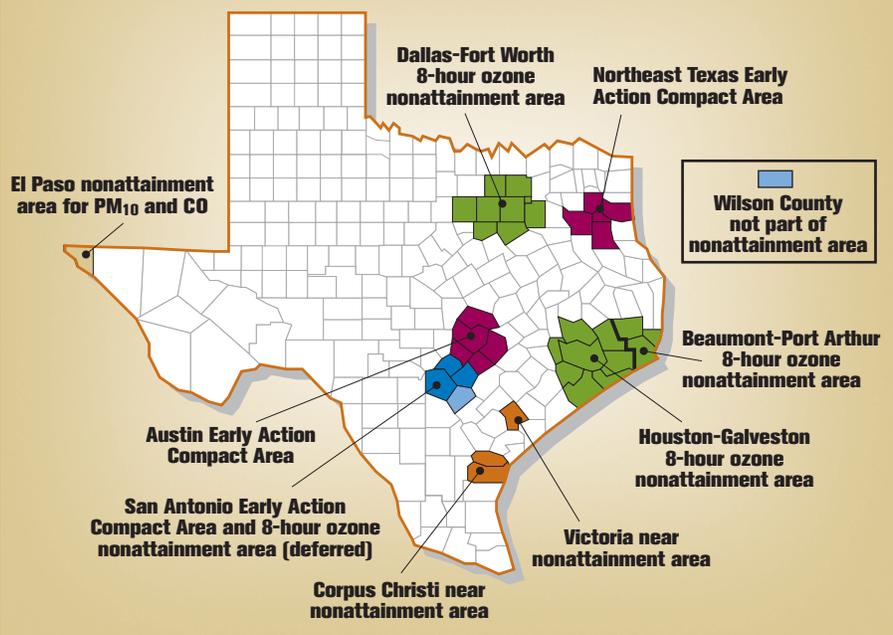
In all, 20 Texas counties have been labeled as nonattainment for ozone, and another 14 counties have volunteered to enter into EACs.

Ground-level ozone, a component of smog, is formed when pollutants emitted by cars, trucks, industrial refineries, chemical plants, power plants, and other sources react chemically in sunlight. Nitrogen oxides (NO_x) and volatile organic compounds (VOCs) are the leading ozone precursors.

Under the federal 8-hour ozone standard, a violation occurs when, over a three-year period, the average of each year's fourth-highest daily maximum 8-hour ozone concentration equals or exceeds 85 parts per billion (ppb).

The TCEQ issues daily ozone forecasts as a way to notify the public of health concerns associated with high ozone levels, especially for the young and elderly. Ozone updates can be found at www.tceq.state.tx.us/nav/eq/eq_today.html.

Map of Ozone Nonattainment/ Near Nonattainment Areas



The TCEQ has implemented a number of broad-based programs to reduce emissions. Two of these initiatives are the Texas Emissions Reduction Plan (TERP) and AirCheckTexas, which are discussed in this chapter. Also, new rules have been passed to implement federal programs on transboundary pollution and mercury emissions (see Chapter 3).

In addition, the agency has worked with each urban area to draw up control strategies that are tailored to the characteristics of the region. In Houston, for instance, a major source of emissions is the large industrial base, while in Dallas-Fort Worth it is mobile sources—primarily cars and trucks in daily traffic—that lead the emissions categories. Such differences are

addressed in the pollution control measures developed for each region in the State Implementation Plan (SIP), which outlines all the measures the state will take to improve air quality.

In drafting SIP proposals for EPA’s consideration, the TCEQ finds itself hampered by the state’s lack of jurisdiction over many emissions sources. Modes of transportation such as highway vehicles, ships, air-planes, and locomotives fall under the federal government’s authority.

Nonetheless, the TCEQ has moved to institute a broad range of control strategies. The TCEQ is addressing all sources of emissions in its jurisdiction to achieve more reductions. While NO_x reductions remain the main element in the SIP strategy, VOC reductions may also be helpful in some areas, such as Houston-Galveston.

Also, projections show that emission levels in urban areas will improve significantly as new federal standards for engines and some fuels are phased in this decade.

Below are descriptions of the status of the nonattainment and EAC areas in Texas.

Houston-Galveston. Mobile sources (onroad and nonroad) make up 56 percent of the NO_x emissions for this nonattainment area; point and area sources contribute the remaining 44 percent, based on a 2009 estimated emissions inventory. While the state has jurisdiction over point and area sources, it must rely on the federal government to help reduce emissions from mobile sources.

This eight-county area is required to comply with EPA’s 8-hour standard by mid-2010.

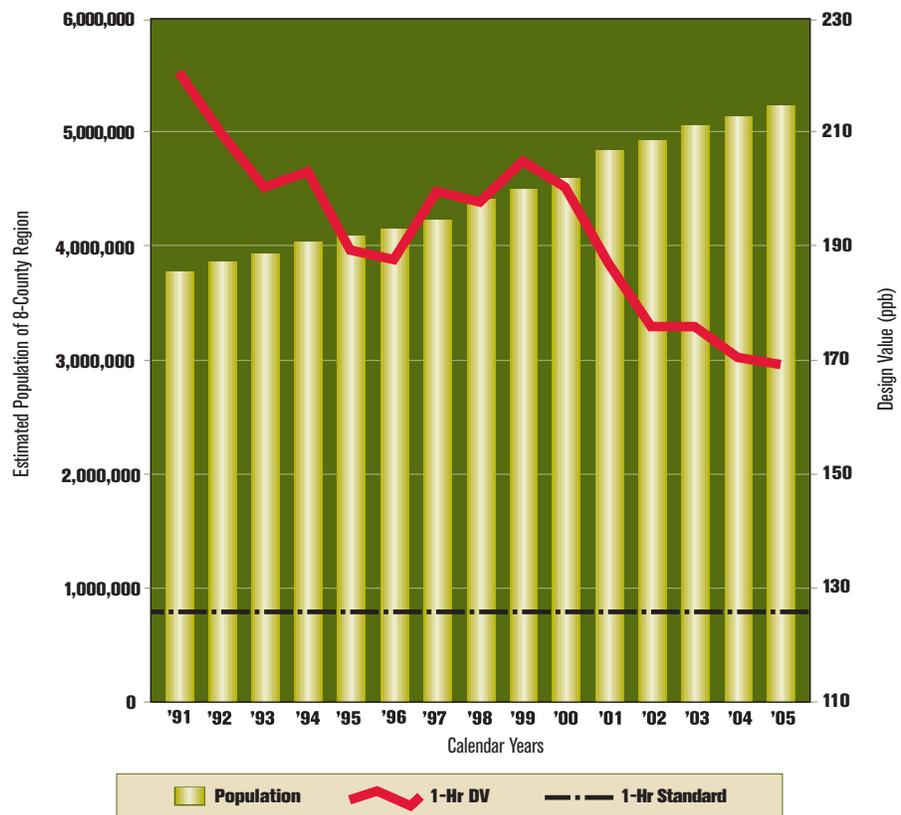
Current control strategies include requirements for point sources of NO_x to reduce emissions by about 80 percent, and an annual cap-and-trade program to

reduce emissions of highly reactive VOCs from process vents, flares, and cooling-tower heat exchangers.

In early 2006, the agency took the unusual step of creating the position of air quality director in Houston, a first for any TCEQ regional office. Rebecca Rentz heads up strategic planning, enforcement, monitoring, and toxicological data evaluation. She has been a frequent speaker at public meetings and civic and professional organizations. She also coordinates with environmental and industry stakeholders and other state and local agencies on SIP development.

In another move, the TCEQ added 10 inspectors to the regional staff, and took other actions to cover the enforcement duties previously fulfilled by the city of Houston. For many years, the TCEQ and the city shared several central enforcement functions in the air

Houston 1-Hour Ozone Average



Note: The design value is the best measure of ozone severity. Each 1-hour DV is calculated as the fourth highest 1-hour reading in three consecutive years of data.
Sources: EPA, TCEQ, and U.S. Census Bureau

quality program. But in September 2005, the agency did not renew Houston's contract to conduct routine inspections at industrial plants within the city limits. Region 12 staff also assumed activities such as leak detection and repair, investigations into emissions events and citizen complaints, and enforcement follow-up.

For Houston's portion of the SIP, the TCEQ plans to proceed in fiscal 2007 with rule development, stakeholder informational meetings, and technical work, including a field study to better understand the complexity of Houston's ozone problems. The Commission will consider proposals by the end of the calendar year. Adoption is scheduled for May 2007, a month before EPA's submission deadline.

Dallas-Fort Worth. Based on a 2009 estimated emissions inventory, mobile sources represent

73 percent of the NO_x emissions from all sources in this nine-county region. These sources are under federal jurisdiction, while the state's jurisdiction covers the remaining 27 percent.

As with the Houston area, Dallas-Fort Worth has a mid-2010 compliance deadline.

The area has made substantial strides in air quality improvements. In fact, if the 1-hour ozone standard were still in place, the area would be in compliance, due in large part to various control strategies in place since the early 1990s.

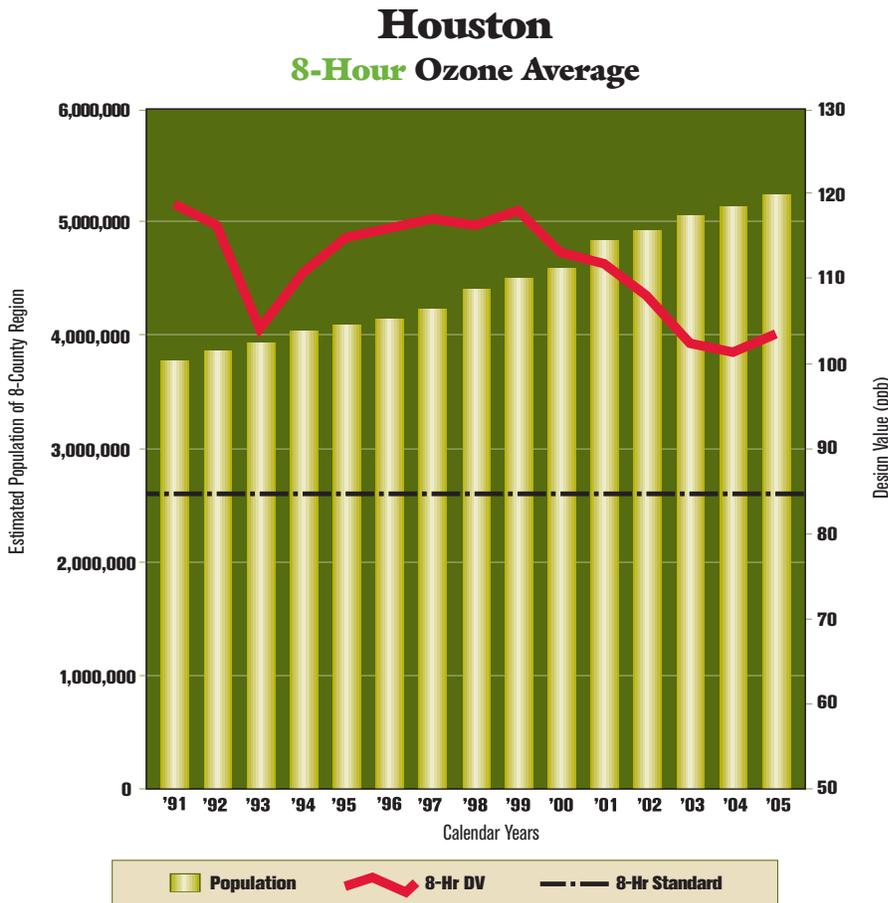
Annual emissions testing of vehicles, the TERP, cleaner fuels and cement kilns, lower speed limits, airline agreements, and other control measures have had a positive impact. The 5 Percent Increment of Progress, adopted in 2005, includes NO_x emission

limitations for lean-burn and rich-burn engines, expansion of requirements for surface coating to additional counties, and a lower exemption level for Stage I gasoline system requirements.

The agency has worked with the regulated community, local governments, and other interested stakeholders to determine additional appropriate control measures to propose for meeting the 8-hour standard. The SIP revisions are due to the EPA in June 2007.

Beaumont-Port Arthur. In 2004, the TCEQ adopted an attainment demonstration for both the 1-hour and 8-hour ozone standards in this three-county region. The 1-hour standard was revoked by the EPA the following year. However, control strategies applied under the 1-hour standard remain in place. In September 2005, the Commission adopted a revised 8-hour attainment demonstration.

The EPA was still reviewing the SIP submittal at the end of



Note: The design value is the best measure of ozone severity. Each 8-hour DV is calculated as the average of the fourth highest 8-hour readings from each of three consecutive years of data.

Sources: EPA, TCEQ, and U.S. Census Bureau

August 2006. The area's compliance deadline for the 8-hour standard is no later than mid-2007.

Definitions

Emissions that affect air quality can be characterized by their sources, as follows:

Point sources: industrial facilities such as refineries and cement kilns

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

Onroad mobile sources: cars and trucks

Nonroad mobile sources: construction equipment and engines such as locomotives

Under the terms of its compact, San Antonio must keep certain ozone controls in place until the area meets the 8-hour standard. In exchange for a deferment of the effective date of the 8-hour ozone designation, the San Antonio area agreed in its EAC to achieve clean air by the end of 2007, which is earlier than would be required under the 8-hour standard.

El Paso Close to Attainment

For more than 15 years, El Paso residents and local officials have labored to overcome high emission levels of ozone, carbon monoxide (CO), and particulate matter. In fact, their city was the only one in Texas having to deal with nonattainment for three different pollutants.

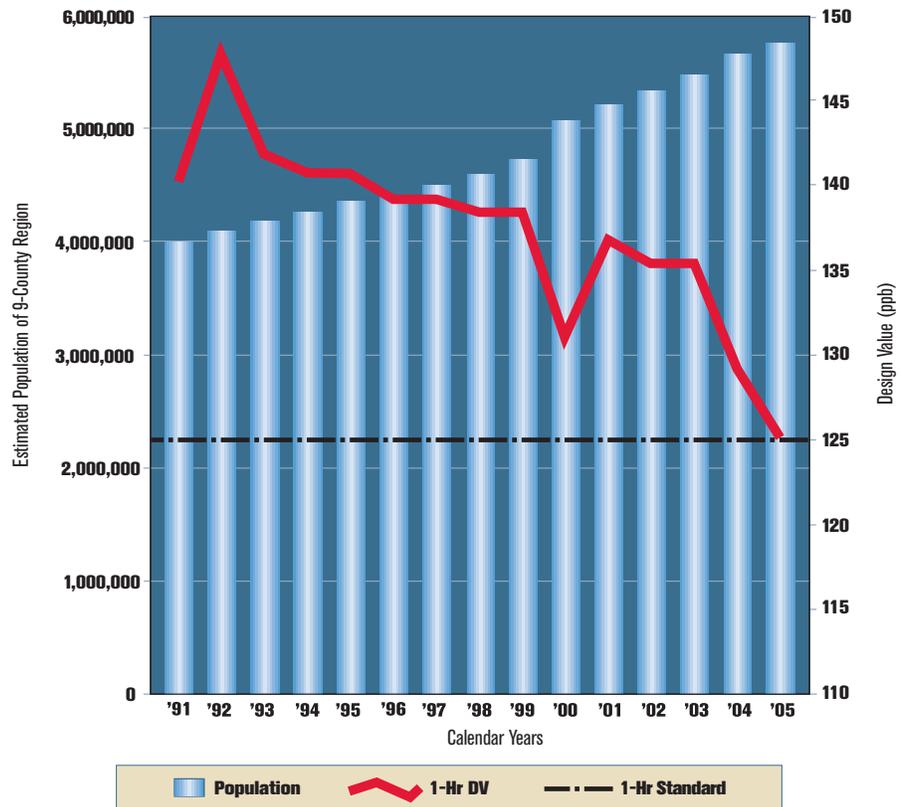
Early Action Compact areas.

Texas pioneered the concept of early-action, voluntary ozone reduction plans. In 2002, San Antonio became the first area in the country to begin the EAC process. Austin and Northeast Texas (Longview-Marshall-Tyler) entered into their own compacts later that year.

An EAC includes all the necessary elements of a comprehensive air quality plan, but is also adapted to recognize local needs and decision making. Each EAC area develops control strategies, accounts for growth, and plans for continued attainment of the 8-hour ozone standard.

Among the various programs selected by some, but not all, EAC areas are heavy-duty diesel idling restrictions, VOC controls for degreasing products, Stage I vapor recovery system requirements, and annual testing of vehicle emissions.

Dallas-Fort Worth 1-Hour Ozone Average



Note: The design value is the best measure of ozone severity. Each 1-hour DV is calculated as the fourth highest 1-hour reading in three consecutive years of data.
Sources: EPA, TCEQ, and U.S. Census Bureau

The hard work has paid off.

In 2004, the EPA announced that El Paso was in attainment of the new 8-hour ozone standard. In early 2006, the Commission adopted a request seeking attainment status for El Paso for CO. At the same time, the Commission adopted maintenance plans for ozone and CO to ensure that the area remains in attainment. EPA's approval is all that remains for the redesignation to CO attainment to become official.

El Paso has won recognition as the first ozone nonattainment area in Texas to reach attainment and the first area in the country to achieve redesignation to attainment for two different pollutants.

This success can be credited to a number of control strategies, including vehicle inspection and maintenance, low Reid vapor pressure gasoline (summer) and

oxygenated fuels (winter), Stage I and II vapor recovery system requirements for gasoline-handling facilities, and restrictions on industrial and wood burning.

The TCEQ will keep all control measures in place and even enhance the established vehicle inspection and maintenance program, effective January 2007, to more effectively identify high-polluting vehicles. All this ensures that the ozone and CO maintenance plans will help El Paso maintain compliance with the air quality standards.

The community is still working to address particulate matter (PM₁₀). The TCEQ and the EPA continue to monitor daily readings for PM₁₀ and to discuss the best ways to reach attainment.

Analysis of PM monitoring data shows that if all dust storm events were removed from consideration, El Paso would attain the PM₁₀ standard.

Federal rules allow for an area's PM air quality to be excluded from decisions regarding nonattainment status if the data are shown to be influenced by uncontrollable events caused by natural sources of particulate matter.

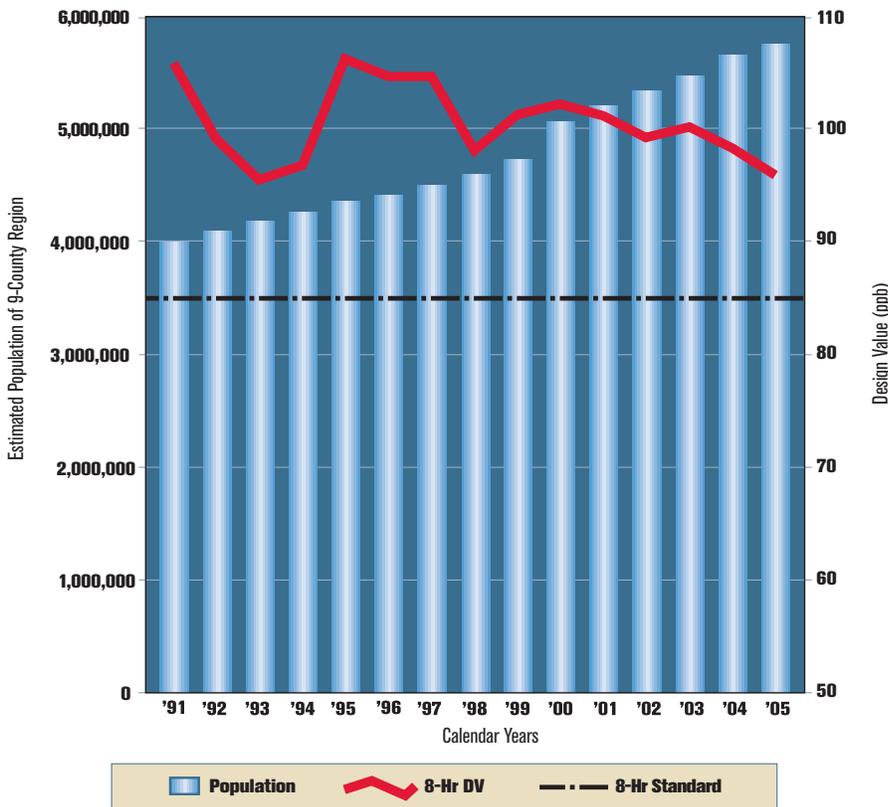
The TCEQ will submit to the EPA a Natural Events Action Plan (NEAP), which provides strategies to protect public health during these events. With the NEAP in place, the state would be in a better position to seek El Paso's redesignation to attainment for PM₁₀.

Fuel Requirements

In another strategy to lower levels of NO_x and VOCs from mobile sources, the TCEQ requires use of various fuel mixtures in different parts of the state. These are:

- Reformulated gasoline year-round in the eight-county

Dallas-Fort Worth 8-Hour Ozone Average



Note: The design value is the best measure of ozone severity. Each 8-hour DV is calculated as the average of the fourth highest 8-hour readings from each of three consecutive years of data.

Sources: EPA, TCEQ, and U.S. Census Bureau

Houston-Galveston-Brazoria area and the four-county Dallas-Fort Worth area.

- Low Reid vapor pressure gasoline each summer in 95 counties in East and Central Texas, as well as El Paso.
- Oxygenated gasoline each winter in El Paso (to lower carbon monoxide).
- Low-emission diesel fuel 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_x 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 nonhighway 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 October 31, 2005; for bulk plant distribution facilities, December 15, 2005; for retail fuel dispensing outlets, wholesale bulk purchasers, and consumer facilities, January 31, 2006.

Eighty-six producers have registered to supply the region. There were no reports of supply disruptions.

Incentive Grants

The Texas Emissions Reduction Plan has been operating in high gear the last two fiscal years.

Under this voluntary program, grants provide financial incentives to owners and operators of heavy-duty vehicles and equipment for projects that will lower NO_x emissions in nonattainment and near-nonattainment areas.

These projected emission reductions are key to the state's strategy for meeting federal deadlines under the federal Clean Air Act.

Since its creation in 2001, TERP has funded 895 projects that represent 4,870 individual engines, vehicles, and pieces of equipment that are designed to produce lower emissions. Funds have helped upgrade or replace equipment such as transit buses, gas compressors, construction equipment, and locomotives.

In all, TERP has awarded \$335.9 million in grants, resulting in about 75,532 total tons of projected NO_x reductions. On a daily basis, the projected NO_x reductions average about 36 tons.

TERP grants and activities are detailed in a separate report, *The Texas Emissions Reduction Plan: Biennial Report to the Texas Legislature* (SFR-079/06).

AirCheckTexas

Owners who properly maintain and repair their vehicles go a long way in helping to improve air quality. Vehicle emission test rates show that this investment contributes to downward ozone trends in urban areas.

The state's vehicle emissions testing program, known as AirCheckTexas, is part of the annual safety inspection in 17 counties throughout the state. Operated by the Department of Public Safety (DPS) in conjunction with the TCEQ, AirCheckTexas relies on privately owned inspection stations to test cars and trucks that are 2 to 24 years old.

Vehicles that are model year 1996 and newer are subject to an onboard diagnostic (OBD) test in which an analyzer scan tool is plugged into the vehicle's computer to check how the emission components are operating.

Vehicles that are model year 1995 and older undergo a tailpipe test, such as the acceleration simulation mode (ASM), in which a dynamometer simulates actual driving and a probe in the tailpipe measures emissions. In another option, a two-speed idle test measures tailpipe emissions while the vehicle idles at high and low speeds.

In the Houston area, owners of vehicles registered in Brazoria, Fort Bend, Galveston, Harris, and Montgomery counties are subject to the program.

In the Dallas-Fort Worth area, the counties of Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, and Tarrant participate.

In El Paso County, a two-speed idle tailpipe test has been the standard requirement, but starting in January 2007, an OBD test for 1996 and newer model vehicles will be added.

Travis and Williamson counties joined the program in September 2005 as part of the Austin area’s EAC, which calls for OBD tests and two-speed idle tailpipe tests to be performed.

The private vehicle testing and repair sector has grown with the program. By August 2006, the testing station network stood at 3,570 stations. Also, DPS had certified more than 11,900 inspectors and had designated 541 facilities as “recognized emission repair stations.”

Vehicle emissions testing, which has been in place in Texas since 1987, has proven to be a success. In the last two years, an estimated 13.3 million emissions tests were administered in the 17 counties, resulting in a pass rate of more than 94 percent. Of the roughly 72,000 vehicles that failed, almost three-quarters passed a retest after repairs were made. Owners of the remaining cars and trucks were denied renewal of their vehicle registrations until they provided proof of compliance.

Financial assistance through the AirCheckTexas Repair and Replacement Assistance program was

available to vehicle owners who could not afford emissions-related repairs. About 15,300 owners were provided with a total of \$7.4 million in repair assistance—an average of \$489 per vehicle. Another 498 individuals chose to retire their vehicles.

The state’s assistance program paid \$495,076 toward replacement vehicles—about \$994 per retired vehicle.

Environmental Research

The TCEQ continues to be a national leader in scientific research on emissions as well as on the formation, accumulation, and movement of air pollutants. It has also made significant improvements to modeling tools.

The agency conducts research to support development of pollution-control strategies designed to meet federal air quality standards and regional haze rules. Improvements to the state of the science have enhanced the reliability of the control strategies developed for the SIP.

Until recent years, research on air quality focused exclusively on ozone, the primary pollutant of concern in Texas. But with federal regional haze rules requiring states to submit plans to protect visibility in Class I areas

Vehicle Emissions Testing in 17 Counties

Fiscal Year	Vehicle Test Information			Number of Stations	Number of Inspectors	Recognized Emission Repair Facilities
	Number Tested	Passing Rate	Failure Rate			
2005	6.2 million	94.6%	5.4%	2,970	11,944	479
2006	7.1 million	94.4%	5.6%	3,570	11,960	541

Cost of Vehicle Repairs and Replacements

Fiscal Year	Number of Vehicles Repaired	Overall Repair Cost	Average Repair Cost	Number of Vehicle Replacements	Overall Replacement Cost	Average Replacement Cost
2005	7,267	\$3.5 million	\$484	268	\$266,371	\$993
2006	8,034	\$3.9 million	\$493	230	\$228,705	\$994
Total	15,301	\$7.4 million	\$489	498	\$495,076	\$994

such as national parks, research has expanded to include regional haze and the formation of particulate matter that causes regional haze.

In the last two years, the TCEQ has conducted important research in air quality science. Most significant was the second Texas Air Quality Study (TexAQS II) of the eastern half of the state, conducted from July 2005 through September 2006.

By contrast, the first TexAQS, conducted in 2000, lasted only one month and concentrated on a much smaller area—mostly the Houston area.

The most intense period of TexAQS II occurred in August and September 2006 when the National Oceanic and Atmospheric Administration (NOAA) brought its largest research vessel to monitor air quality and meteorology over Galveston Bay and the Gulf of Mexico. This exercise provided scientists, for the first time, the data needed to fully assess the impact of these bodies of water on ozone and particulate formation and movement in and around Houston.

The goals of the TexAQS II are to:

- Better understand the importance of different emission sources in the formation of ozone and particulate matter.
- Study the movement of ozone, ozone precursors, particulate matter, and regional haze into Texas, within Texas, and out from Texas.
- Obtain more accurate estimates of NO_x and VOC emissions.
- Check regional ozone model performance through aircraft measurement of multiple pollutant species over East Texas.
- Determine how NO_x and VOC concentrations have changed in the Houston area since 2000.

For the TexAQS II, about \$4.5 million was earmarked in fiscal 2005; about \$4.6 million in fiscal 2006.

The research was conducted in cooperation with a number of organizations, including the EPA, NOAA, Pacific Northwest National Laboratory, Houston Advanced Research Center, University of Texas at Austin, Texas A&M University, Texas Tech University, Rice University, Lamar University, University of Houston, Baylor University, North Carolina State University, and University of New Hampshire.

One significant aspect of the study involved the use of infrared gas imaging technology to detect VOCs from sources such as petroleum storage tanks, barges in the Houston Ship Channel, and oil and gas production sites. As noted in Chapter 1, this technology proved to be highly effective in detecting unreported or under-reported VOC emissions. These results triggered revisions in emissions inventories, payments of back emissions fees, and reductions in lost raw products.

Results from the field study findings were to be made available in November 2006, although analysis will continue through the coming year.

Other TCEQ research projects are ongoing and focus primarily on advancing the state of the science in emissions estimates and modeling tools. Spending came to about \$252,000 in fiscal 2005 and \$165,000 in fiscal 2006.

A number of projects were conducted through the TCEQ's funding of the Texas Environmental Research Consortium (TERC). Air research funding reached about \$2.9 million in fiscal 2005 and \$1.8 million in fiscal 2006. The projects included:

- model-improvement studies
- pollutant transport modeling assessments
- emissions-inventory improvements for VOCs and NO_x through innovative methodologies
- improvements to land characterization for modeling
- urban heat island modeling studies

Water Quality

Addressing Surface Water

Every two years, the TCEQ assesses water quality to determine which water bodies meet the standards for their designated uses, such as contact recreation, support of aquatic life, or drinking water supply. The assessment is published on the TCEQ web site as the Texas Water Quality Inventory and 303(d) List.

The inventory evaluates conditions during the assessment period and identifies the status of the state's surface waters in relation to a set of standards for quality. The 303(d) List identifies waters that do not regularly attain one or more of the standards.

Because of its large number of river miles, Texas can assess only a small portion of its surface water bodies. The most important river segments and those considered to be at highest risk for pollution are assessed regularly.

In 2004, water quality data was collected at an estimated 1,800 fixed sites. That assessment identified 306 water bodies with a total of 416 impairments (one water body can have multiple impairments). Still, overall water quality in the state remains good, with most water bodies meeting their standards.

Improved guidelines for the 2006 water quality assessment were completed in late 2005 with the assistance of an advisory group. Work continues on the assessment, with expected completion in fiscal 2007. This assessment will include data on more than 175 new water bodies.

Restoring Water Quality

The Total Maximum Daily Load (TMDL) Program is one of the agency's primary means of addressing impaired surface waters. A TMDL is like a budget for pollution—it designates the maximum amount (or load) of a specified pollutant that a body of water can receive and still meet its water quality standards.

Since 1998, TMDLs have been developed to address a number of the impaired water bodies on the 303(d) List, which describes the status of the state's water bodies and identifies those not meeting one or more standards.

As of August 2006, the TMDL Program had restored water quality to attainment standards for 21 impairments to surface waters. Overall, the program restored fishing uses, conditions for aquatic life, and proper salinity to 278 stream miles; made water suitable as a source of drinking water for 3,943 reservoir acres; and restored conditions for aquatic life in 12 estuary square miles.

In fiscal years 2005 and 2006, the Commission adopted TMDLs for five pollutants in four water bodies. In August 2006, the Commission approved implementation plans for three of the four water bodies. In all, the projects aim to restore 287 stream miles as a source for drinking water supply and for general uses, and 22,260 lake acres for support of aquatic life and the safety of fish consumption.

Projects. Implementation of TMDLs has resulted in measurable environmental progress in five water bodies. The projects are described below.

1. Health authorities have lifted a ban on the consumption of fish caught in segments 1101 and 1102 of Clear Creek in Harris County. A TMDL project targeting these segments was instituted in 2001. The Department of State Health Services has found that concentrations of VOCs and chlordane in fish tissue are within acceptable levels of risk. To ensure that it remains safe to eat fish, the TCEQ is funding further risk analyses by DSHS on fish from both segments.
2. Another successful TMDL project targeted concentrations of nickel in 14 segments of the Houston Ship Channel. These segments continue to meet the criteria to protect aquatic life from toxic effects. The TMDL program receives updated information as new wastewater permits are issued, and reviews the permits to ensure continued compliance with the TMDL.
3. At E.V. Spence Reservoir, north of San Angelo, the annual average concentrations of chloride and sulfate—two salts causing concern for the lake's viability as a source of drinking water—have been within TMDL target levels. Although overall concentrations of total dissolved solids declined on average from 1999 to 2005, the TDS levels remain significantly above target levels. In late 2005, rain elevated lake levels by 18 feet. This influx of relatively low-salinity water further reduced the chloride and sulfate concentrations in the lake.
4. In the Waco area, phosphorus concentrations in the North Bosque River (Erath, McLennan, and Bosque counties) have been below TMDL target levels since 2003 at three of the five sites being monitored, while concentrations at two sites remain in excess of the targets. The average reduction for all five sites is 7.3 percent, ranging from no change at the station farthest upstream to 76.3 percent at the farthest station downstream.
5. In the Rio Grande Valley, the Arroyo Colorado is now safer for fishing. This 90-mile-long channel of the Rio Grande runs through Cameron, Hidalgo, and Willacy counties. In 1993, the state health department issued an advisory, cautioning the public against eating any fish caught in the Arroyo upstream

Environmental Progress through TMDL Implementation

The TCEQ has approved TMDL implementation plans for the following streams, reservoirs, and estuaries. Each project is identified by water body, basin and segment number of the impaired water body, the use that is affected, and the geographic extent of the impairment.

Implementation Plan	Basin & Segment(s)	Use Affected	Year Begun	Status	Area of Impairment
Aquilla Reservoir: atrazine	Brazos River; 1253	Source for drinking water	2002	Goals met	3,943 lake acres
Arroyo Colorado: legacy pollutants and organics	Nueces–Rio Grande Coastal; 2202, 2202A	Safety of fish consumption	2001	Under way	504 stream miles; 333 lake acres
Clear Creek: chlordane	San Jacinto–Brazos Coastal; 1101, 1102	Safety of fish consumption	2001	Goals met	42 stream miles
Clear Creek: dissolved solids	San Jacinto–Brazos Coastal; 1102	General (not tied to a specific use)	2006	Under way	60 stream miles
Clear Creek: volatile organic compounds	San Jacinto–Brazos Coastal; 1101, 1102	Safety of fish consumption	2001	Goals met	84 stream miles
Dallas and Tarrant county waterways: legacy pollutants	Trinity River; 0805, 0841, 0841A	Safety of fish consumption	2001	Under way	18,970 lake acres; 127 stream miles
E.V. Spence Reservoir: total dissolved solids	Colorado River; 1411	General (not tied to a specific use)	2001	Under way	29,900 lake acres
Fort Worth waterways: legacy pollutants	Trinity River; 0806, 0806A, 0806B, 0829, 0829A	Safety of fish consumption	2001	Under way	101 lake acres; 47 stream miles
Houston Ship Channel: nickel	San Jacinto River and Bays; 1001, 1005, 1006, 1007, 1013, 1014, 1016, 1017, 2426, 2427, 2428, 2429, 2430, 2430, 2436	Support of aquatic life	2001	Goals met	152 stream miles; 24 bay square miles
Lake Austin: low dissolved oxygen	Colorado River; 1403	Support of aquatic life	2001	Under way	1,830 lake acres
North Bosque River: soluble reactive phosphorus	Brazos River; 1226, 1255	General (not tied to a specific use)	2002	Under way	121 stream miles

Notes: Legacy pollutants are chemicals that persist in the environment long after their use has been banned or severely restricted. To learn more about any of these projects, go to www.tceq.state.tx.us/implementation/water/tmdl/tmdlcompletedsummary.html.

from the Port of Harlingen. The TCEQ completed a TMDL for the project in 2001. Since then, the state's fish advisory has been modified so that fish consumers are advised to avoid only the smallmouth buffalo.

Technical progress. Bacteria accounted for almost half of the impairments listed in the 2002 Texas Water Quality Inventory and 303(d) List. Bacteria concentrations are used to indicate whether a water body is safe for swimming and other forms of recreation that involve a likelihood of ingesting natural waters. High bacteria concentrations can also affect the safety of oyster harvesting and consumption. Bacteria impairments present a unique technical challenge for assessment and control.

With funding from the TCEQ, the Texas State Soil and Water Conservation Board, and the EPA, scientists with the Texas A&M University System have developed bacterial source tracking (BST) libraries for thousands of *E. coli* bacteria isolated from more than 1,500 human and animal source samples.

The BST libraries, which catalog bacteria using both genotype and phenotype, are used to indicate possible animal and human origins of *E. coli* bacteria in surface waters. The libraries were built using data from the watersheds of the Waco and Belton lakes, as well as from watersheds in the San Antonio area. The libraries developed through this research are the foundation of a statewide bacterial source tracking database and important in the development of water quality protection strategies.

New Drinking Water Standards

Since the late 1990s, the EPA has instituted major changes requiring 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 byproducts 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 6,686 public water systems in Texas, about 4,600 are community water systems, such as those

operated by cities. The remainder are noncommunity water systems—such as those of schools, churches, factories, businesses, rest stops, and state parks.

All public water systems are required to monitor the levels of contaminants present in the treated water and to verify that they do not exceed EPA's maximum contaminant level (MCL) established for each contaminant. Based on EPA's risk assessments, the MCL is the highest level at which the contaminant is considered acceptable in drinking water for the protection of public health.

In all, the EPA has set standards for about 90 contaminants in the major categories of microorganisms, disinfection byproducts, disinfectants, organic and inorganic chemicals, and radionuclides. For Texas, the most common chemicals of concern are disinfection byproducts, arsenic, fluoride, and nitrate.

Of EPA's recent changes, two have had a significant impact in Texas: the standards for disinfection byproducts and arsenic.

A stricter standard now applies to disinfection byproducts, which are potentially carcinogenic chemicals formed when a disinfectant such as chlorine reacts with naturally occurring organic carbon.

About 300 systems in Texas have experienced some level of difficulty complying with Stage 1 of the Disinfection Byproducts Rule. In August 2006, the TCEQ was working on the proposed Stage 2 Disinfection Byproducts Rule, as well as on the Long-Term Stage 2 Enhanced Surface Water Treatment Rule to address *Cryptosporidium* removal and inactivation.

New 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 (ppb), which replaced the old standard of 50 ppb.

About 150 water systems in Texas could have difficulty complying with the arsenic standard that took effect in early 2006.

New screening. Implementing new regulations has been difficult and often costly, especially for smaller systems. The agency has been proactive by alerting water systems to the new rules and their impact on water systems.

Water system officials were notified about the upcoming Stage 1 Disinfection Byproducts Rule prior

to 2000. At that time, the agency projected that 700 to 800 systems would be out of compliance by the effective date in 2004. Following the agency’s outreach efforts, however, only about 300 were noncompliant when the regulation took effect. As a result of those efforts, many systems had already switched to alternative treatment protocols.

To deal with new federal regulations, the TCEQ turned to 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 public water systems.

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

For educational purposes, the TCEQ holds a free symposium on public drinking water. The conference drew 650 attendees in 2005, and 900 the following year.

Right to Know. Since 1999, public water systems have been required to provide consumers with an annual report on the quality of their drinking water. Consumer Confidence Reports offer basic information, such as the type and source of water used by the local system, and report on the system’s compliance status with drinking water regulations. When exceedances of MCLs occur, the system must describe their potential health effects and the measures taken to restore safe water.

If a public water 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 enforcement program.

Violations of Drinking Water Regulations

	FY 2005	FY 2006
Enforcement Orders	118	242
Fines	\$218,000	\$395,700
Contributions to SEPs	\$19,000	\$43,380

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 years 2005 and 2006, the agency performed compliance reviews of about 4,100 engineering plans.

Investor-owned utilities and water supply corporations are also required to obtain certificates of convenience and necessity (CCN) before providing service. A CCN is a TCEQ authorization that allows a retail public utility to furnish adequate retail water or sewer utility service to a specified geographic area. Investor-owned utilities 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 investor-owned utilities, and has appellate jurisdiction over the rates of water supply corporations, water districts, and out-of-city customers.

In the last two years, the TCEQ completed about 470 reviews of CCN-related applications and 143 rate-related applications. (See Chapter 3 for legislative changes.)

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 with financial, managerial, and technical expertise. An estimated 900 utilities were referred for this assistance. The TCEQ also has a contract 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 regionalize. The consolidation of two or more systems can lead to better utility service and lower rates. More than 300 utilities have been certified as regional providers.

With this certification, utilities are eligible for tax-exempt status for utility-system construction and improvements. The TCEQ and TRWA have conducted more than 20 regionalization assessments to encourage consolidations and mergers of water and sewer utility systems.

The TCEQ also has jurisdiction over creation of and bond reviews for water districts, such as municipal

utility districts, water control and improvement districts, and fresh water supply districts.

The agency reviews creations of general law water districts and bond applications for water districts to fund water, sewer, and drainage projects. In the last two years, the TCEQ created about 120 water districts and approved 359 bond applications for more than \$1.4 billion in water district infrastructure improvements.

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 to Texas, including storm water permits.

As the permitting authority, the TCEQ has renewed the federal permits as they expired and has 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 e-permitting to some of these permitting and reporting functions, and it has outsourced the management of incoming Notices of Intent (NOIs), contracting with Texas State University at San Marcos for the administrative processing of about 1,000 storm water general permit NOIs a month.

Permits are issued under these main categories:

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. This general permit was re-issued in August 2006.

Construction. The Construction General Permit was issued 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.” Construction operators at large sites are required to apply for coverage under the general permit. Operators at small sites must meet permit requirements but are not required to submit an NOI. The TCEQ receives about 930 NOIs a month for large construction activities. The current general permit will expire in March 2008.

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 like the Texas Department of Transportation in areas with a population of 100,000 or more. Twenty-six municipalities fall into this category.

Completion of the storm water general permit for small MS4s in urban areas was delayed due to a case before the 9th U.S. Circuit Court of Appeals and subsequent guidance issued by the EPA. Issues stemming from the appellate court decision were resolved, and public comment on the proposed permit was accepted. The permit, which will require coverage of about 300 to 500 public entities, is expected to go before the Commission in the spring of 2007.

Storm Water Permits FY 2006

Activity	Number Affected	Applications Received Monthly (on average)
Industrial	11,667 facilities	53
Construction	21,851 large sites	888
MS4s	500 public entities	NA

Edwards Aquifer Protection Program

Interstate Highway 35, which cuts a north-south swath through the state, has witnessed a population boom, particularly in the area encompassing San Antonio and Austin. Such growth has brought more land clearing, paving, construction, and related activities over one of the state's most sensitive geological features—the Edwards Aquifer, which serves as the primary source of drinking water for more than 2 million people.

The Edwards Aquifer Protection Program is designed to protect this vital resource. Under the program, anyone planning to build or engage in other regulated land-use activities on the recharge, transition, or contributing zones of the aquifer must first apply to the TCEQ for approval of their plans. The program also monitors sites for compliance with the approved plans.

To meet the demands of economic development and to maintain the quality and quantity of surface water entering the aquifer, the TCEQ streamlined its process for permitting these activities. The goal is to review plans no later than 60 days from the date the plans are deemed administratively complete. Formerly, plan reviews could exceed 90 days.

To meet the new review goal, the plans must be more complete and accurate when submitted to the TCEQ. Stakeholder meetings were held in Austin and San Antonio in August 2006 to advise the public of the revised timeline.

In another development, duplicate approval requirements were eliminated by an innovative agreement between the U.S. Fish and Wildlife Service and the TCEQ. The federal agency agreed in February 2005 that the voluntary use of new, enhanced measures in the Edwards Aquifer Protection Program can protect water quality and, at the same time, provide safeguards for federally listed endangered or threatened species, such as the fountain darter and the Barton Springs salamander.

Examples of the optional measures available to applicants include practices that reduce the impact of development activities on water quality in and upstream of the aquifer and that address stream channel erosion resulting from increased impervious cover.

The Fish and Wildlife Service has agreed that applicants who choose to use the optional measures as part of their TCEQ-approved plans need not apply for a separate approval under the federal endangered species program. This step was not a delegation of the federal responsibilities to the TCEQ, but an acknowledgement that the TCEQ rules and guidance address known water quality threats to the endangered or threatened species inhabiting the aquifer and its springs.

Bays and Estuaries Programs

The plans for comprehensive conservation management of Galveston Bay and the Coastal Bend bays were established in 1995 and 1998, respectively. Participants in the planning process included local governments, state and federal agencies, port authorities, other bay user groups (such as private industry or commercial fishing interests), conservation groups, and interested individuals.

In keeping with the diversity of the state and the spirit of providing flexibility to stakeholders, the plans are being implemented through two different approaches. The Galveston Bay Estuary Program is managed by TCEQ staff, while the Coastal Bend Bays and Estuaries Program is managed by a nonprofit entity established for that purpose. Both programs are funded by the TCEQ.

The Galveston Bay Estuary Program has partnered with more than 40 groups and organizations to implement 51 environmental projects that address the priorities of the Galveston Bay implementation plan. Priorities include watershed protection, habitat protection and restoration, development of best management practices for nonpoint sources, management of invasive species, seafood safety, protection of freshwater inflows, and public outreach.

In fiscal years 2005 and 2006, the Galveston Bay program contributed \$567,630 of its budget, including federal funding, to bay conservation projects, while third-party partners of the estuary plan contributed \$3.5 million. This works out to a leveraging ratio of 6-to-1. Such cooperative efforts have helped create, protect, or restore almost 700 acres of important coastal habitats. Partners of the estuary program

contributed an additional \$22 million to protect and restore 550 acres through projects not led or funded by the estuary program.

The Galveston Bay program also worked to improve several impaired water bodies by managing work groups that support watershed protection efforts, and it continued to monitor the safety of bay seafood consumption. Community-based open houses and presentations, and hands-on volunteer events reached several hundred area residents.

In the Corpus Christi area, the Coastal Bend Bays and Estuaries Program implemented 62 projects in fiscal years 2005 and 2006 and acquired about 5,500 acres for habitat protection and restoration. Staff worked with a variety of organizations to educate students and the general population about the unique nature of the area’s natural resources.

The Coastal Bend program has been active in TMDL projects such as bacterial source tracking and DNA fingerprinting in Copano Bay, zinc contamination of oyster tissue in Nueces Bay, and elevated bacteria conditions in Oso Bay. Also, the program has implemented a multi-year sampling project in area bays for more comprehensive assessments of water quality.

The Coastal Bend program has also succeeded in leveraging state funds with federal and local government grants and private industry funding.

Water Supply Continued Drought

Unusually hot, dry weather conditions have caused problems for much of Texas. The severity of the problem can be measured by the fact that rainfall averages from March 2005 through February 2006 were among the lowest on record for that 12-month cycle, according to the state climatologist.

The result has been widespread wildfires, extensive crop and livestock losses, and a high number of public water systems activating their drought-contingency plans.

The TCEQ took action in early 2006, when drought indicators spelled trouble. In January, the agency urged 4,600 public water systems to address pipeline leaks, unaccounted-for water losses, and

Activating Drought Plans

Since 1996, the TCEQ has maintained a database to record the public water systems enacting drought contingency plans—voluntary or mandatory. A decade of record-keeping shows that 2006 was one of the most difficult years for systems dealing with drought.	Year	Number of Systems Activating Drought Plans
	1996	352
	1997	1
	1998	317
	1999	57
	2000	252
	2001	144
	2002	51
	2003	64
	2004	61
2005	49	
2006	284	

preventive maintenance by spring. They were also advised to review their drought-contingency plans and be prepared to implement the proper restrictions.

In mid-summer, the agency again notified these systems that lake levels and groundwater supplies for much of the state were in decline with “no end in sight” for the areas hardest hit by drought. By late August, 267 systems had taken measures to avoid water shortages: 171 with mandatory restrictions and 95 with voluntary cutbacks. In the fall, the total reached 284.

For communities that encounter troubles during a drought, the TCEQ helps the local water systems examine funding options and evaluate the need for wells, pipelines, and interconnects with neighboring water systems.

State law requires all public water systems to submit their water-conservation and drought-contingency plans to the TCEQ for review. Although the vast majority of systems can withstand even severe drought, it is vital that all utilities anticipate unusual events such as reduced supplies, distribution problems, or system outages.

The agency reviews drought-contingency plans every five years. The current review got under way in May 2005, when about 1,000 plans were submitted.

Of the 805 plans reviewed by the end of August 2006, almost 700 were approved. The rejected plans must be revised and submitted again. Utilities failing to comply could face enforcement penalties.

Meanwhile, stream flow in most of the major river basins was insufficient to meet minimum requirements of some water rights containing streamflow restrictions. In some basins, water rights containing restrictions were required to limit diversion. In mid-2006, Executive Director Glenn Shankle instructed that no temporary permit applications be processed for new appropriations of water until conditions improved and surplus water became available.

The availability of unappropriated water for new water-use permits continued to decrease rapidly, as the search for long-term, alternative sources of water remained a priority.

Water Rights

Water flowing in Texas creeks, rivers, and bays is state water. The right to use it may be acquired through appropriation via the permitting processes established in state law.

Each application for a permit 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 2005 and 2006, the agency processed a total of 973 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. As a result, 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.

This type of project requires a bed-and-banks permit. In the last two fiscal years, the TCEQ issued nine bed-and-banks permits for indirect reuse. Two of these allow the Tarrant Regional Water District to re-divert and reuse 195,000 acre-feet of water per year from the Trinity River.

As the state population grows, the TCEQ is faced with the difficult task of ensuring the maintenance of the biological soundness of the state's rivers, lakes, bays, and estuaries, while balancing all other interests, including providing adequate water for public health and welfare.

Recognizing the need for more certainty in water management and environmental flow protection, the governor created the Environmental Flows Advisory Committee, which counts Chairman Kathleen Hartnett White as a member. Staff from the TCEQ, as well as from the Texas Water Development Board and the Texas Parks and Wildlife Department, provide committee support.

The committee is charged with recommending Commission action or legislation on methods of making future decisions to protect instream flows and freshwater flows. The committee's recommendations will be issued by the end of 2006.

As directed by the Legislature, the TCEQ has also worked with other state agencies and local partners on four priority instream flow studies. The study results will be used to improve the scientific basis for special conditions that are placed in water right permits to maintain instream uses and natural habitats.

Water Debt Resolved

A decade-long dispute between the United States and Mexico was finally settled on September 27, 2005, with the final water transfer owed by Mexico. The delivery was made to the Anzalduas Dam near Mission.

Under a treaty signed in 1944, the United States and Mexico share water from the Rio Grande and the Colorado River. Mexico's obligation is to transfer from six Rio Grande tributaries a minimum of 350,000 acre-feet (af) of water a year, on average, over delivery cycles lasting five years. (An acre-foot of water equals 325,851 gallons.)

In 1992, Mexico began accumulating water debt, which eventually climbed to 1.5 million af.

Treaty negotiations this decade eventually reached the highest levels of government, as Presidents Bush and Fox included discussions about water-sharing in their one-on-one meetings. Governor Rick Perry and TCEQ officials also encouraged Mexico to comply with the treaty.

By the time a repayment schedule was agreed upon in late 2004, the debt was fixed at 716,670 af, which accounted for water already delivered specifically for debt reduction in the first two years of the 2002-2007 delivery cycle.

The many years of waiting for full repayment took a toll on farms and ranches, businesses, and municipalities along the border. Growers in the Rio Grande Valley especially rely on the annual water deliveries to maintain production levels for citrus fruit, vegetables, and grain.

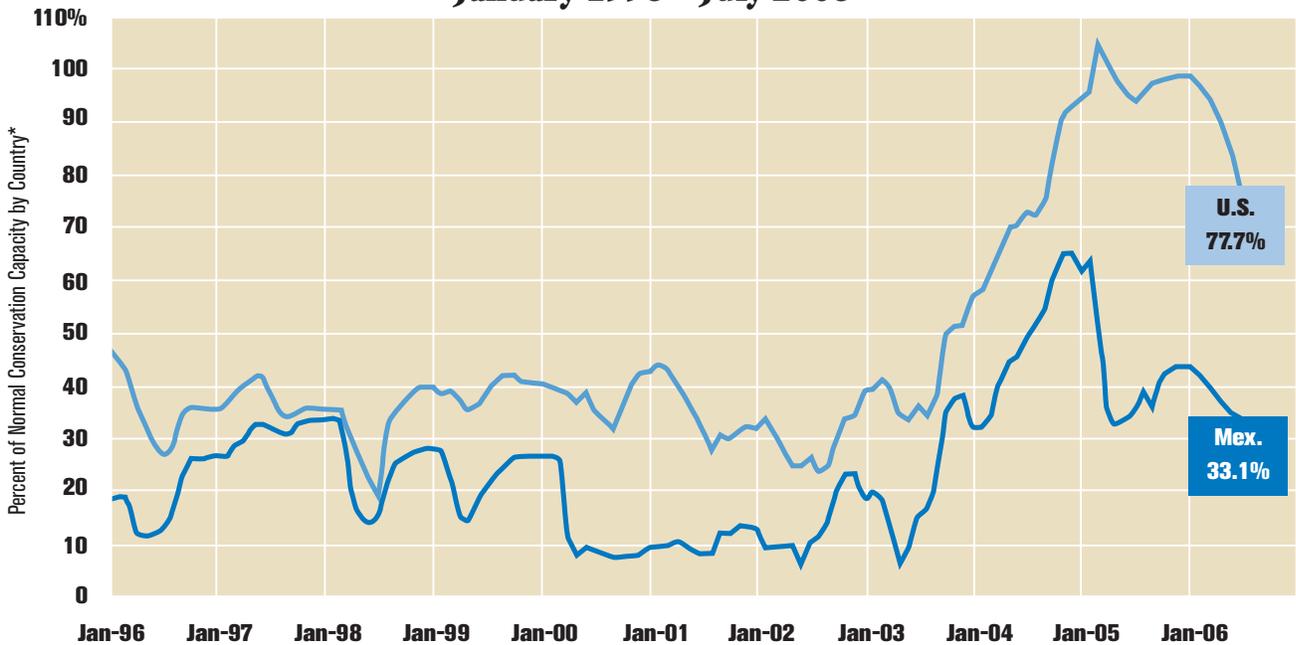
During the negotiations, Mexico made an important decision to begin investing in infrastructure to improve water conveyance systems. Both countries, in fact, have now spent millions of dollars on improved methods of conserving water.

The negotiations resulted in further agreements, such as Mexico’s commitment to develop a drought-management plan for the Rio Grande Basin.

Both governments also endorsed better data exchange on water availability, projected water demands, water inflows to reservoirs, and Mexico’s water-management regulations. And there was a mutual pledge to hold annual meetings to assess basin conditions and to mitigate the impact of drought through appropriate water deliveries from alternate sources.

The first of these annual meetings, called the Binational Rio Grande Summit, was held in November 2005 at McAllen and Reynosa, Tamaulipas. Among the topics was sustainable development in the basin, with emphasis on preventing future problems with water transfers.

Combined Storage Levels of Amistad and Falcon January 1996 – July 2006



Storage levels remained low in the Amistad and Falcon reservoirs during years of drought. But with decent rainfall and water repayments from Mexico, U.S. levels soared from mid-2003 to early 2005. Levels dropped that spring, as in most years, when irrigation resumed during planting season. By mid-2006, U.S. storage was 77.7 percent of its capacity; Mexico’s, 33.1 percent. This difference reflects management decisions on inflows and releases.

* Normal conservation capacity refers to full water storage under normal operations. Additional capacity—anything above 100 percent—is held available in the event of flooding.

Source: International Boundary and Water Commission

Waste Management

Disposal of Low-Level Radioactive Waste

The TCEQ is engaged in a license application review to determine whether a proposed low-level radioactive waste disposal facility can be sited and operated in a manner that is safe to the public, facility workers, and the environment.

In August 2004, the agency received one license application to construct and operate a low-level radioactive waste disposal facility in West Texas. Waste Control Specialists, LLC, of Dallas applied to operate a facility in Andrews County, about 30 miles from the city of Andrews. Along with a 4,000-page application, the company submitted the minimum required fee of \$500,000. The TCEQ set in motion a series of application reviews and analyses to determine whether the proposed facility achieves the complex and stringent environmental, safety, and public health standards established by law and agency rules.

Under state and federal laws, the licensed Texas disposal facility could accept commercial low-level radioactive waste generated in Texas and Vermont, both members of a waste disposal compact. A license issued by the TCEQ may also approve the operation of a separate, adjacent facility that accepts low-level radioactive waste as well as mixed waste (waste that contains both a hazardous and a radioactive constituent) from federal facilities.

Waste envisioned for the Texas “compact” facility generally includes discarded paper, plastic, glass, and metals that have been contaminated by or contain radionuclides. These materials are commonly generated by nuclear power plants, diagnostic and therapeutic nuclear medical facilities, industries, universities, and government. Waste that is bound for the proposed adjacent federal facility could include contaminated soil and debris from federal facilities engaged in nuclear weapons research and production.

Neither disposal facility would be licensed to accept high-level radioactive wastes, such as spent nuclear fuel rods or weapons-grade plutonium.

The application was determined to be administratively complete in February 2005. Soon after, a public meeting to discuss the application was held in Andrews County. The agency’s technical review began in May 2005.

In August 2006, the applicant requested to extend the review to May 31, 2007, to fully respond to outstanding technical issues. The executive director granted an extension until May 1, 2007, subject to any legislative direction regarding the time period for completing the review.

On completion of the technical review, if the proposed facility is determined to be protective of both the environment and human health, a draft license will be prepared. An environmental assessment summarizing the TCEQ staff conclusions regarding the application will also be prepared.

As part of the public notice of a proposed draft license, there will be an opportunity for a contested case hearing held by the State Office of Administrative Hearings. The issue of whether to grant the license will then go before the Commission.

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 that are on the National Priorities List (NPL), which is EPA’s ranking of the most serious Superfund sites.

In addition, there is 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 plan.

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 2005, Texas had a total of 98 sites in the state and federal Superfund programs, including sites proposed for the state Superfund registry in McCulloch, Midland, Nueces, and Titus counties.

In fiscal 2006, additional state sites were proposed in the counties of Bell, Cass, Grayson, Harris, Liberty, Mitchell, Nueces, Selby, and Tom Green. At the same time, four completed sites were deleted from the state registry, leaving a total of 103 sites.

Cleanup at three federal NPL sites was completed in 2006: Rockwool Industries Inc. in Bell County, Sheridan Disposal Services in Waller County, and Air Force Plant 4, which is a Department of Defense contractor-operated facility in Tarrant County. Also,

cleanup was finished at two state registry sites: Cox Road Dump Site in Liberty County and Poly-Cycle Jacksonville in Cherokee County.

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 who have met all statutory deadlines for reimbursement.

Since the program began in 1987, there have been 24,510 leaking PST sites—primarily at gasoline stations—reported to the TCEQ. Of these, cleanup had been completed at 21,093 sites by the end of fiscal 2006, and corrective action was under way at 3,417 sites. Of the total reported, 9,130 were confirmed to 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 includes drilling monitoring wells and taking soil and groundwater samples. The TCEQ oversees the remediation until cleanup is completed.

Under state law, leaking tanks discovered and reported after December 23, 1998, are not covered under the PST 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 properly operate and monitor their storage tank systems, install leak detection equipment and corrosion protection, and take spill and overfill 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

State and Federal Superfund Projects

The number of Superfund projects in Texas changes from year to year as projects are closed out and new ones are added.

Stages of Remediation	FY 2005	FY 2006
New (proposed) sites	4	9
Evaluations conducted	28	33
Cleanup under way	17	15
Cleanup completed	6	5
Operations/Maintenance	43	41
Total	98	103

unwilling or financially unable to do the work. State and federal funds are used to 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 2005, will not be available after September 1, 2007, for any tank owners or operators.

Leading up to that sunset deadline, several action 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 remediation fund expires, the PST regulatory program will continue.

PST releases reported on or after September 1, 2003, are subject to the Texas Risk Reduction Program, which represents a different set of assessment and cleanup standards.

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 its creation in 1995, the program has provided regulatory oversight and guidance to more than 1,700 applicants and has issued more than 1,100 certificates of completion for residential, commercial, and industrial properties.

In the last two years, the program received 102 applications and issued 155 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 sporting arenas like the American Airlines Center in Dallas and Minute Maid Park in Houston.

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 were to be discovered related to previous site activities, 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 migrates to their property from off-site.

The Innocent Owner/Operator Program (IOP) 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 500 of these applications and issued more than 300 certificates.

Municipal Solid Waste Management

A fast-growing state like Texas has growing demands placed on waste disposal facilities. That is why it is important to evaluate whether all regions will have adequate landfill capacity available in the coming decades. The TCEQ’s responsibility also includes working to reduce the overall amount of waste generated.

In fiscal 2005 (the latest year for which data are available), Texans disposed of 29.7 million tons of municipal solid waste, an increase of about 3 percent over the previous year.

Using EPA’s definition of municipal solid waste, which excludes construction and demolition debris and treatment-plant sludge, the per-capita landfill disposal rate in Texas was almost 5.6 pounds per day. (Before

2004, TCEQ reports used a definition of solid waste that included construction and demolition debris and municipal sludge. Excluding these types allows for consistent comparisons with other states and the EPA.)

With construction and demolition debris and treatment plant sludge included in the total disposal, Texas had a per-capita rate of 7.1 pounds per day. Under this definition, the per-capita rate dropped from 2004 to 2005, based on annual population growth.

Of the municipal waste delivered to landfills in 2005, the greatest volume was in residential waste, with 10.1 million tons (35 percent); followed by commercial waste, 6.7 tons (33 percent); and construction and demolition debris, 5.5 tons (19 percent). Sludge, brush, soil, and other types of waste constituted the remainder.

Construction and demolition waste is expected to substantially increase in the next reporting cycle because of the large volume of hurricane-related debris that has reached Texas landfills.

By the end of fiscal 2005, municipal solid waste capacity stood at about 1.2 billion tons, representing about 41 years of disposal capacity. Texas had 249 municipal solid waste landfills. Of those, 218 were open, or holding permits. Of that group, 186 were actively accepting waste. Meanwhile, 19 active landfills received permit amendments to expand.

The resulting net increase from the statewide 2004 capacity was about 70.3 million tons (roughly 211 million cubic yards), or 6.2 percent. These landfill expansions indicate a trend toward more regional landfills serving larger areas.

Most parts of the state—as defined by the boundaries of the 24 council of governments (COGs) regions—appear to have adequate disposal capacity for the coming decades. However, capacity by region can vary substantially—some lag far behind the statewide average. For example, the Brazos Valley COG has less than 10 years of disposal capacity. Facilities in this area have filed new or amended municipal solid waste permits that will expand capacity.

To address solid waste issues, particularly in critical areas, the TCEQ manages a statewide planning program to ensure adequate landfill space for the state. Regional plans have been developed by the COGs to assess landfill capacity.

To help the COGs, the TCEQ issues grants, which are funded by municipal solid waste disposal fees. For the 2005 grant period, a total of \$7 million in grants funded 235 local and regional projects. These projects included collection stations in underserved areas, recycling and organic waste management projects, education programs, and programs to enforce illegal dumping laws. Project priority is established using the regional plans.

Environmental Assistance Voluntary Programs

The TCEQ uses technical assistance, education, and voluntary programs to encourage actions that result in environmental improvements.

In fiscal 2006, the agency's Small Business and Environmental Assistance Division took many of these programs in a new direction to better focus on the agency's overall priorities and to align with TCEQ regulatory systems.

Some of these steps affected major programs, such as Clean Texas, an environmental leadership and recognition program that encourages members to focus on environmental issues important to their communities. Changes also encompassed the Drive Clean Across Texas campaign, in which the TCEQ and the Texas Department of Transportation work in partnership to publicize ways of reducing air pollution and saving money through reduced fuel use and proper vehicle maintenance.

Examples of this new direction in environmental assistance include:

- Shifting resources to high-result efforts, such as pollution-prevention site assistance visits, in which TCEQ staff help companies identify opportunities to reduce environmental risks and save money.
- Improving the Clean Texas program to encourage wider participation.
- Targeting the Drive Clean Across Texas campaign in areas that are in nonattainment or near nonattainment for ozone.

- Prioritizing areas with impaired stream segments for agricultural waste collections and pollution-prevention efforts.
- Increasing resources to small businesses for technical assistance.

The agency concentrated technical assistance, educational outreach, and voluntary programs in the areas of greatest need. In fiscal 2006, for example, high monitored levels of benzene near the Houston Ship Channel brought a deployment of pollution-prevention resources. Months later, technical specialists in pollution prevention continued to work with companies in the affected area to identify opportunities to reduce benzene emissions through innovative technologies and changes in operational practices.

A thorough review of TCEQ assistance activities has also resulted in more coordination of services for small businesses, local governments, industrial sites, and individuals. For small businesses and local governments, the TCEQ provides a free, confidential hotline, as well as web-based resources, on-site assistance, and volunteer consultants.

In the last two fiscal years, the TCEQ fulfilled more than 14,200 requests for assistance by providing technical material in plain, easy-to-understand formats.

To inform small businesses and local governments about changes to storm water permits and waste recordkeeping rules, the agency held 58 workshops across the state.

Another assistance tool, the Compliance Commitment Program, allows small businesses and local governments to achieve compliance without the fear of enforcement. In fiscal years 2005 and 2006, more than 600 small businesses and local governments took advantage of the program, and at least a quarter voluntarily achieved 100 percent compliance.

For larger entities, the TCEQ offers technical advice on innovative approaches to improve environmental performance. This is accomplished primarily through pollution-prevention planning, site assistance visits, and Clean Texas. The last two years have yielded a number of achievements, including:

- Pollution-prevention planning helped reduce hazardous waste by almost 984,100 tons and toxic chemicals by about 187,540 tons.
- A total of 152 site assistance visits were conducted. Also, participating sites reported a combined savings of \$31.7 million and an overall reduction of 130,160 tons in wastes or emissions.
- Clean Texas enrollment grew by 60, reaching a total membership of 370. As a result of environmental improvements, members reported eliminating a total of 165,970 tons in emissions and waste.

Commute Solutions

Through the Clean Air Commitment, the TCEQ has promoted strategies to reduce air emissions from the day-to-day operations of state agencies and their employees. The TCEQ issued the challenge to state agencies in August 2004.

Twenty other state agencies joined the TCEQ to officially launch the Clean Air Challenge. Eventually, another 15 agencies signed on, pledging to promote commuting options that will help improve air quality. These options include voluntary use of vanpooling, carpooling, teleworking, compressed workweeks, flexible schedules, bicycling, and walking—all alternatives to the single-person daily commute.

While state agencies are encouraged to extend these strategies to employees throughout the state, the primary focus is on the Austin area. With almost 70,000 employees at various agencies and universities in Central Texas, the state is the region's largest employer. The 36 partner agencies represent more than 60,000 of the 70,000 state employees in the Austin region.

Initial efforts have focused on reducing the commuter miles logged by state employees, most of whom drive to work alone.

The TCEQ has worked with Capital Metro and the Capital Area Metropolitan Planning Organization to provide training and resources.

With this assistance, partner agencies have established individual Commute Solutions programs. In addition to commute-reduction efforts, the TCEQ expanded the Clean Air Commitment to promote hybrid vehicles and idling-reduction policies for state agency fleets.

These efforts were launched at the 2005 Hybrid Vehicle Fair, which displayed the full range of hybrids

sold on the market. To increase the number and variety of vehicles available to agencies on state contract, the TCEQ has worked with the Texas Building and Procurement Commission to include new models of hybrid sedans, SUVs, and pickups as they enter the market.

As of August 2006, state agencies had 80 hybrid vehicles in their fleets. The TCEQ had 10 hybrids, with plans to add 13 more in fiscal 2007.

In cooperation with the Employee Retirement System and Capital Metro, the TCEQ worked to develop a qualified transportation benefit that would allow state employees to pay for alternative transportation costs with pre-tax deductions.

Renewing Old and Surplus Materials

The Resource Exchange Network for Eliminating Waste (RENEW) was established in 1988 to promote the reuse or recycling of industrial waste.

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

In the last two fiscal years, a total of 25,000 tons of materials was exchanged through RENEW. Were it not for this program, much of that would have been disposed of in landfills.

In fact, during the 18 years of RENEW, an estimated 458,000 tons of materials have been exchanged, representing a total savings of almost \$16 million in disposal costs.

The network is a marketing channel for industries, businesses, and governmental units looking to sell

surplus materials, byproducts, and waste. These entities need to be linked with facilities seeking to reclaim and reuse the materials.

The RENEW catalog is published twice a year with free listings of “materials available” and “materials wanted.” In addition to a printed catalog, RENEW supports an online resource at www.renewtx.org to promote information exchange and networking opportunities with national and regional waste exchanges.

Here are a few examples of RENEW exchanges made during fiscal years 2005 and 2006:

- A chemical manufacturing plant transferred 18 million pounds of heavy oil byproduct to a fuel-blending fuel distributor. The chemical company earned \$1 million from the sale of the byproduct, which otherwise would have been stored at the facility and eventually sent to a waste management facility. Instead, the byproduct was blended with other liquid hydrocarbons and sold to power plants to be used as fuel.
- A manufacturer of valves and pipe fittings sold 8,000 pounds of brass chips generated from machining and grinding operations. These chips generated \$300 in revenue. More importantly, a disposal cost of \$6,000 was avoided.
- A dry bulk handling terminal saved \$12,500 in disposal costs by transferring 360 tons of potassium carbonate. This material could have ended up in a landfill, but instead was used by another company to make fertilizer.

Toxics Release Inventory

The Toxics Release Inventory (TRI), which is administered by the EPA, documents the toxic chemical releases, transfers, and waste management activities that

RENEW Transactions

Fiscal Year	Number of Exchanges	Materials Exchanged	Savings in Disposal Costs	Earnings from Sales
2005	16	11,000 tons	\$2.1 million	\$1.3 million
2006	20	14,000 tons	\$2.1 million	\$2.3 million
TOTAL	36	25,000 tons	\$4.2 million	\$3.6 million

occur both on-site and off-site for 1,523 facilities in Texas, mostly manufacturing plants. These activities affect toxic releases to air, water, and land, including subsurface strata affected by underground injections.

As part of the federal Emergency Planning and Community Right-to-Know Act, the TRI was created to make information available to the general public on chemicals considered to be toxic to people, animals, fish, and plant life. The database is used nationally as the leading indicator of trends in pollution prevention.

The most recent TRI data—released by the EPA in June 2006—reflect activities that occurred in 2004.

Over the years, the TRI reporting requirements have been modified. In 1987, the original list of toxics consisted of 308 chemicals in 20 chemical categories. By 2002, the list had been revised to include an additional 285 chemicals and eight chemical categories, while removing 18 chemicals. In 1998, the EPA also included seven new industry categories that were required to report their toxic chemical releases.

Because of the changes in the list of industries encompassed by the TRI and the chemicals that must be reported, a core set of chemicals common to all the reporting years from 1988 to 2002 is used for analyzing long-term trends within the TRI. On- and off-site releases and waste disposal totals are tracked annually for these “1988 core chemicals.”

Records for Texas facilities show that the amounts of the 1988 core chemicals released and disposed of fell from 308.1 million pounds in 1988 to 131.1 million pounds in 2004, a drop of 57.4 percent.

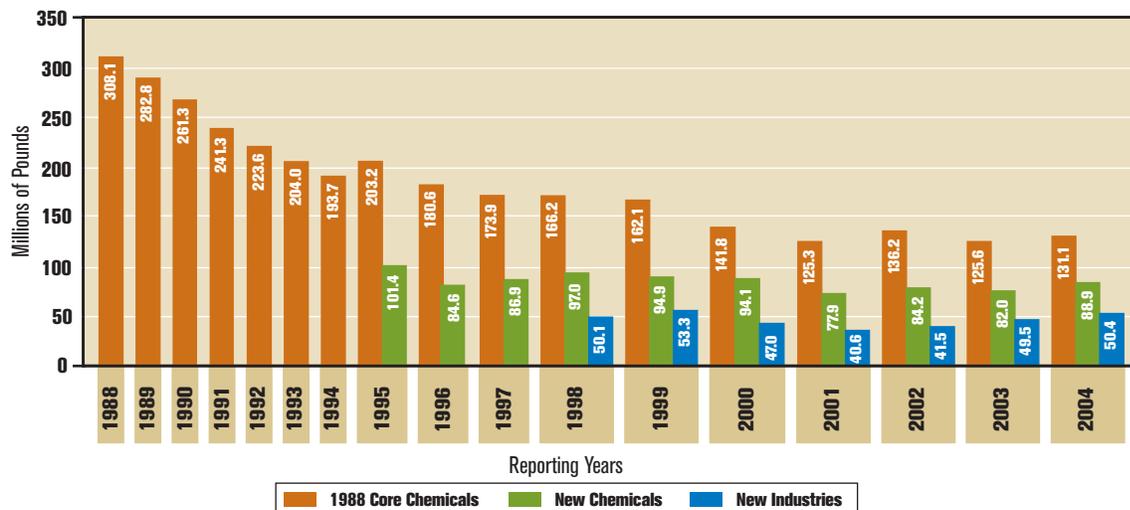
A second method of analysis—looking at shorter-term trends—uses the 1988 core chemicals and the “new chemicals” that were added from 1988 to 1995. Under this analysis, the releases and waste disposals in Texas declined from 304.6 million pounds in 1995 to 220 million pounds in 2004, a drop of 27.8 percent.

In 1998, seven new industry sectors were added to the inventory: oil- and coal-fired electric utilities, commercial waste management, solvent recovery, coal mining, metal mining, chemical distribution, and petroleum bulk terminals and stations. Incorporating these “new industries” data, along with the releases and waste disposals of the 1988 core chemicals and the new chemicals, the TRI shows a change for Texas from 313.3 million pounds in 1998 to 270.4 million pounds in 2004, a 13.7 percent reduction.

Beginning in reporting-year 2000, a subset of the TRI chemicals was designated as persistent and bioaccumulative toxins (PBT).

Due to the concerns about long-term effects caused by these chemicals, the thresholds for reporting PBTs have been significantly lowered, compared to the thresholds for other TRI chemicals. Lead and

TRI Trends: Total Releases for all Media



lead compounds were added to the list of PBT chemicals in 2001.

The number of PBT-reporting facilities in Texas has expanded—from 224 in reporting-year 2000 to 541 in reporting-year 2004.

The amount of releases and waste disposals in Texas for PBT chemicals has risen from 3.2 million

pounds in 2001 to 3.5 million pounds in 2004, an increase of 7.8 percent.

The increases in the number of facilities and the pounds of releases can be attributed in part to the large number of additional facilities reporting lead and lead compounds.



Chapter Three Legislation from the 79th Session

As a result of legislative action in 2005, the Texas Commission on Environmental Quality was included in 215 new pieces of enacted legislation.

Almost 200 of the measures required some type of action by the TCEQ, including 44 rule-making packages. The new rules addressed 18 bills that dealt with water issues, four with solid waste, and three with air quality. The remainder encompassed more than one media.

Some of the new laws are highlighted below.

HB 2481 Economic Incentives and Pollution Control

The Texas Emissions Reduction Plan (TERP) was extended by two years to 2010 to continue providing economic incentives for voluntary reductions of nitrogen oxides (NO_x), a component of ozone. The Legislature appropriated about \$128 million a year (see Chapter 2 for a summary of grants issued).

Incentives. TERP grants, which are made available to several areas of the state dealing with ozone nonattainment and near nonattainment, are an important part of the State Implementation Plan and its regional strategies to reach compliance with federal ozone standards.

The program, which is funded from the vehicle title transfer fee and several other state fees, focuses on high-emissions diesel sources such as heavy-duty vehicles, stationary equipment, and large nonroad equipment (construction equipment, locomotives, and marine vessels).

Legislation altered the allocation and administration of TERP funds.

Under a contract with the TCEQ, the Texas Environmental Research Consortium (TERC) of Houston assumed the responsibility for the TERP's New Technology Research and Development (NTRD) program in September 2005. The NTRD program supports new technologies that lower emissions and have the potential to succeed in the marketplace.

The NTRD program is scheduled under law to receive an increase in funding after September 2008: a jump to 33 percent of TERP funds from the current 9.5 percent. At that time, the allocation of these funds will be shared by the TERC and the TCEQ, with a portion targeting air quality research in the Houston and Dallas-Fort Worth areas.

At the same time, the allotment for diesel emissions reductions will drop to 64 percent of funds from the current 87.5 percent. These grants will continue to be administered by the TCEQ. The agency has established cost-effective limits on awards for locomotives and marine vessels, and created a rebate grants program to streamline some of the application process.

Annual Distribution of TERP Funds

	Grants	Administration
NO_x Reductions	\$116.3 million	\$684,000
Research & Development	\$11.3 million	\$250,000
Total	\$128.5 million	

Pollution control. The TCEQ was directed by legislation—and federal rule—to adopt, with specified changes, state rules based on the new federal Clean Air Interstate Rule (CAIR) and Clean Air Mercury Rule (CAMR).

CAIR was created to help states that are in nonattainment for ozone and for particulate matter of less than 2.5 microns (PM_{2.5}) to control NO_x and sulfur dioxide (SO₂) emissions from new and existing electric generating utilities.

Under this program, 28 eastern states have been identified as upwind contributors to the nonattainment of the 8-hour ozone standard and the PM_{2.5} standards, prompting the requirement for reduced emissions of NO_x and SO₂. Both pollutants contribute to the formation of PM_{2.5}, and NO_x aids the formation of ground-level ozone. The EPA points out that these airborne pollutants can originate at points hundreds or even thousands of miles from areas where violations are detected.

While Texas is in attainment for the federal standards for PM_{2.5}, the EPA has stated that its modeling demonstrates that electric generating utilities in Texas contribute to PM_{2.5} pollution in Illinois.

In July 2006, the TCEQ approved rule-making to implement the CAIR trading programs for NO_x and SO₂. The EPA will phase in reduction requirements for NO_x, starting in 2009, and for SO₂ in 2010.

Legislation gave specific direction to the TCEQ for the methodology to be used in allocating the NO_x trading budget provided to Texas. It also identified an amount of the CAIR NO_x allowances to be set aside for new sources, and specified that reductions under CAIR be required only from electric generating units, as defined by the EPA in this program.

In addition, legislation stipulated that the TCEQ take “all reasonable and appropriate steps” to exclude the West Texas and El Paso regions from CAIR requirements. The TCEQ’s petition seeking this exclusion was denied by the EPA.

The TCEQ also approved rule-making for the federal CAMR, which is intended to permanently cap and reduce mercury emissions from both new and existing coal-fired electric generating utilities nationwide. These reduction requirements will be phased in, starting in 2010.

In a study required by legislation, the agency evaluated the availability of mercury-control technology, examined the timeline for implementing the reductions required under the CAMR, examined the cost of additional controls to plant owners and consumers, and analyzed the fiscal impact of higher levels of mercury emissions from 2005 to 2018. The study also examined the impact on local communities of trading mercury emissions under the CAMR.

The report, *Mercury in Texas: Background, Federal Rules, Control Technologies, and Fiscal Implications* (SFR-085), can be found at www.tceq.state.tx.us/assets/public/comm_exec/pubs/sfr/085.pdf.

HB 1763 **Groundwater Districts**

Groundwater conservation districts (GCDs) are authorized to adopt rules and issue permits necessary for managing groundwater resources within their boundaries.

Legislation established uniform notice, hearing, rule-making, and permitting procedures for GCDs. Legislation also modified the requirements for management planning for individual GCDs and for joint-management planning in common groundwater management areas.

As a result, TCEQ rules were approved, with language modified to conform to language in the legislation. The revisions addressed the following:

- Requirements for documenting GCD management plan compliance and joint GCD management planning compliance.
- Procedures and documentation for petitions requesting inquiries related to joint management planning in groundwater management areas.

By the end of fiscal 2006, 86 GCDs had been created and confirmed by law or election. Of these, 79 districts were born of legislation, and seven were created administratively by the Commission in response to landowner petitions. Four other GCDs were created by legislation, but remained unconfirmed by local voters.

HB 2876 **Certificates of Convenience and Necessity**

Responding to legislation, the TCEQ made changes in the process for issuing, amending, and revoking certificates of convenience and necessity (CCN).

A CCN is required before a retail water or sewer utility can begin providing service to the public in a specified area.

The TCEQ gained greater discretion in its evaluation of CCN applications, while giving affected landowners more latitude in deciding whether their land will be included in or decertified from a CCN.

The CCN rules were amended as follows:

- Landowners with more than 25 acres must receive notice of CCN applications.
- Landowners with more than 25 acres may opt out of a proposed CCN area.
- CCN applicants are required to submit additional criteria.

- Landowners may be released from a CCN under specific circumstances.
- Utilities must file CCN maps in county records.

HB 2510

Septic Systems

The TCEQ was assigned more oversight of the companies and individuals responsible for maintaining septic systems, also called on-site sewage facilities.

Legislation also laid out new requirements for registering companies and individuals that provide maintenance-related activities on aerobic systems. At the same time, homeowners may be trained by the installers or manufacturers to maintain their own aerobic systems, but they must also comply with maintenance and reporting requirements.

The TCEQ created a program to register maintenance companies and individuals. This includes a tracking system to ensure proper certification. The new law requires that at least one person in a maintenance company be an Installer II, but the agency will allow individuals with Wastewater D licenses to continue providing maintenance until August 31, 2008.

All individuals (including Installers) who provide aerobic system maintenance for compensation are required to take a mandatory 16-hour basic maintenance-provider course and become certified by a manufacturer. Those records and registration forms were due to the agency by September 1, 2006. By that deadline, an estimated 1,450 individuals had completed the course.

By the end of August, the agency had received registration applications from about 150 companies and 150 individuals.

Homeowners wanting to do their own maintenance can qualify by completing six hours of training provided by the aerobic system installer or manufacturer. Once training is complete, the homeowner becomes responsible for maintaining the system and filing reports with the local permitting authority.

HB 2376

Dry Cleaners

The TCEQ is responsible for collecting fees for a remediation fund designed to help pay for the cleanup of contaminated dry cleaner sites. The fees are associated with the annual registration of facilities and drop stations, as well as the sale of perchloroethylene and other dry cleaning solvents.

By the end of fiscal 2006, the agency had registered 1,944 dry cleaning facilities and 1,822 drop stations. About \$19 million had been collected for the remediation fund.

The agency also received 94 applications for ranking. Of these, 74 applications had been ranked and prioritized for corrective action. The ranking system determines scores for facilities based on factors that could impact human health or the environment.

Legislation in 2005 made several adjustments and clarifications to the program, such as allowing the registration fees to be paid quarterly and giving dry cleaners until February 28, 2006, to opt out of the fund, contingent on the property owner's consent.

Overall, about 14 percent of registered facilities and drop stations have opted out, saying they never used perchloroethylene. This represented 19 percent of the facilities and 9 percent of the drop stations.

Legislation also required distributors of dry cleaning solvents to register with the agency. A total of 28 distributors were registered.



Chapter Four Agency Resources

With a central office complex in Austin, 16 regional offices, and three special project offices, the Texas Commission on Environmental Quality has a visible role to play in every quarter of the state.

The agency has about 2,850 full-time employees—almost a quarter of whom are located in the regions.

While the majority of employees work out of the Austin headquarters, it is field staff who have the principal responsibility of dealing directly with municipalities, business and industry, and community groups. From El Paso to Beaumont and Amarillo to Harlingen, these frontline employees conduct investigations, answer emergency calls, and provide helpful information to Texans.

The TCEQ's budgetary needs are based on the demands of protecting human health and the environment. The operating budget totaled \$463.9 million for fiscal 2005, and \$510.4 million for fiscal 2006. Most of the agency's annual revenues were generated by fees.

Workforce

The overall size of the TCEQ workforce has remained fairly consistent. In fiscal 2005, the agency was authorized

to have 3039.5 full-time equivalent (FTE) positions. Of those, 2,782 were filled, including 26 contractor positions, as of August 31, 2005. In fiscal 2006, the authorized FTE cap was 2,937. Of those, 2,853 were filled, including 40 contractor positions, as of August 31, 2006.

Professionals and paraprofessionals represented 65.3 percent of the agency's workforce; technical and administrative support staff made up 25.1 percent; and officials and administrators filled 9.6 percent of positions.

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

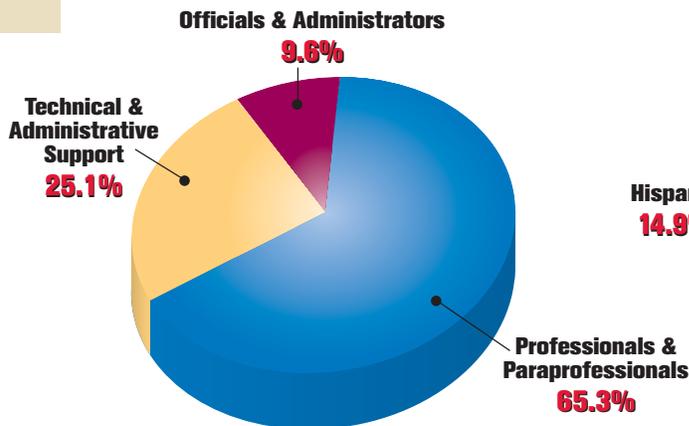
The agency is committed to recruiting, selecting, and retaining a diverse workforce that is representative of the state's civilian labor force. In addition, all employees are provided training on equal employment opportunities to make them aware of state and federal employment laws and regulations.

By race and ethnicity, the workforce composition in fiscal 2006 was white, 67.8 percent; Hispanic, 14.9 percent; black, 11.1 percent; and other (including Asian), 6.2 percent.

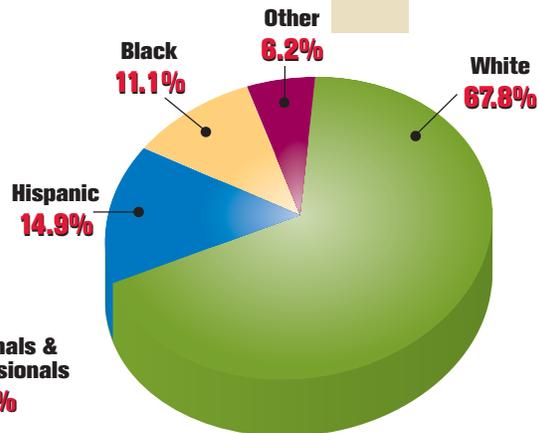
Men represented 51.2 percent of agency employees; women, 48.8 percent.

TCEQ Workforce FY 2006: FTE Cap of 2,937

By Job Category



By Race & Ethnicity



Since 1999, the Legislature has required each state agency to conduct an analysis of 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. These data sets provide the percentage of blacks, Hispanics, and females—by job category—within the total civilian labor force in Texas.

At the end of fiscal 2006, the TCEQ minority workforce exceeded the percentages of the available labor force in top management (officials and administrators) for females and was close (within 1 percent) to exceeding the percentages for Hispanics. In the job category for professionals, the TCEQ workforce exceeded the percentage of the available Hispanic labor force, but was below the percentage of the available female labor force and slightly below the percentage of the available black labor force.

In the coming years, TCEQ officials anticipate several challenges as the agency strives to fulfill its mission and goals. Although staff turnover for fiscal 2006 was less than 11 percent—and turnover remains below overall statewide averages—upcoming retirements and intensified competition for qualified applicants could present problems for the goal of maintaining a diverse, well-qualified workforce.

Finances

In fiscal 2005, the agency’s operating budget was \$463.9 million. Of that, \$392.2 million came from dedicated fee revenue; \$40.3 million from federal funds; and \$26.4 million from general revenue, including earned federal funds. Other sources provided the remaining \$5 million.

In addition, with House Bill 10, the 79th Legislature provided the agency with \$25 million in emergency supplemental appropriations for the Petroleum Storage Tank Program.

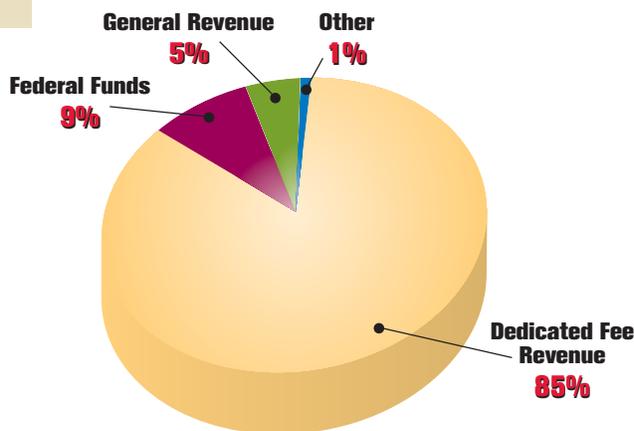
In fiscal 2006, the operating budget totaled \$510.4 million. Of that, \$450.7 million came from dedicated fee revenue; \$45.8 million from federal funds; and \$5.4 million from general revenue, including earned federal funds. Other sources provided the remaining \$8.5 million.

The amount of general revenue and earned federal funds appropriated to the TCEQ for the 2006-2007 biennium was a significant reduction. The agency’s appropriation of \$9.6 million in those two fund categories was about \$40 million less than the amount approved the previous biennium.

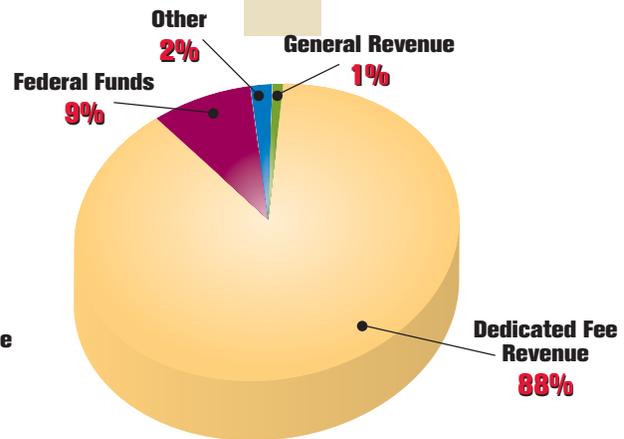
The drop in general revenue was offset by an increased appropriation for the Water Resource Management Account. The total appropriation from

Annual Operating Budgets

FY 2005: \$463.9 million



FY 2006: \$510.4 million



this account was \$90.4 million for the 2006-2007 biennium. Funds from the Water Resource Management Account support the TCEQ's water programs and water-related activity.

The TCEQ collects more than 80 separate fees. Each of the following fees generated revenue in excess of \$30 million a year:

Texas Emissions Reduction Plan (*\$176.6 million in FY 2005, \$129.8 million in FY 2006*). Assessed on the sale, registration, and inspection of vehicles. The TERP "fee" is actually made up of five separate fees and surcharges that are collected by the Department of Public Safety (DPS) and the Texas Comptroller. In fiscal 2005, the TCEQ was appropriated all of its share of the revenue deposited to the fund, but in fiscal 2006 the agency's collections were limited by appropriations.

Petroleum product delivery fee (*\$72.7 million in FY 2005, \$74.1 million in FY 2006*). Assessed on bulk delivery of petroleum products. The fee is collected by the Comptroller's office and is deposited to the Petroleum Storage Tank Remediation Account.

Air emissions fee (*\$34 million in FY 2005, \$34.6 million in FY 2006*). Authorized to recover the costs of developing and administering the Title V Operating Permit Program.

Solid waste disposal fee (*\$37.6 million in FY 2005, \$35.8 million in FY 2006*). Assessed on operators of municipal solid waste facilities for disposing of solid waste.

Motor vehicle safety inspection fee (*\$35.3 million in FY 2005, \$33.6 million in FY 2006*). Assessed per vehicle on the sale of state safety inspection stickers on inspection stations, auto dealers, and other service providers. The fee is collected by the DPS and deposited to the Clean Air Account.

Pass-through funds accounted for 53 percent of the agency's operating budget in fiscal 2005, and 56 percent in fiscal 2006. 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.

The remaining operating funds were devoted to agency operations. Salaries accounted for about 30 percent of the fiscal 2005 operating budget, and 28 percent of the fiscal 2006 budget. The remainder was consumed by other expenses, such as supplies, utilities, rent, travel, training, and capital.

Fee Revisions

A number of minor changes were made to the TCEQ's fees and funding structure as a result of legislation passed in 2005.

- SB 1354 requires rock quarries that discharge within a water quality protection area—the John Graves Scenic Riverway in Palo Pinto County—to obtain a permit from the TCEQ, and it provides for penalties for discharges in violation of the permit or statute.
- HB 2376 made several changes to the registration fees and penalties paid by dry cleaning businesses.
- HB 2510 requires persons who provide maintenance for aerobic on-site sewage disposal systems to obtain a license from the TCEQ and pay the license fee.
- HB 2815 created a new watermaster for the Concho River with the authority to assess fees on water right holders.



Appendix A

Assessment of Complaints Received FY 2005 – FY 2006

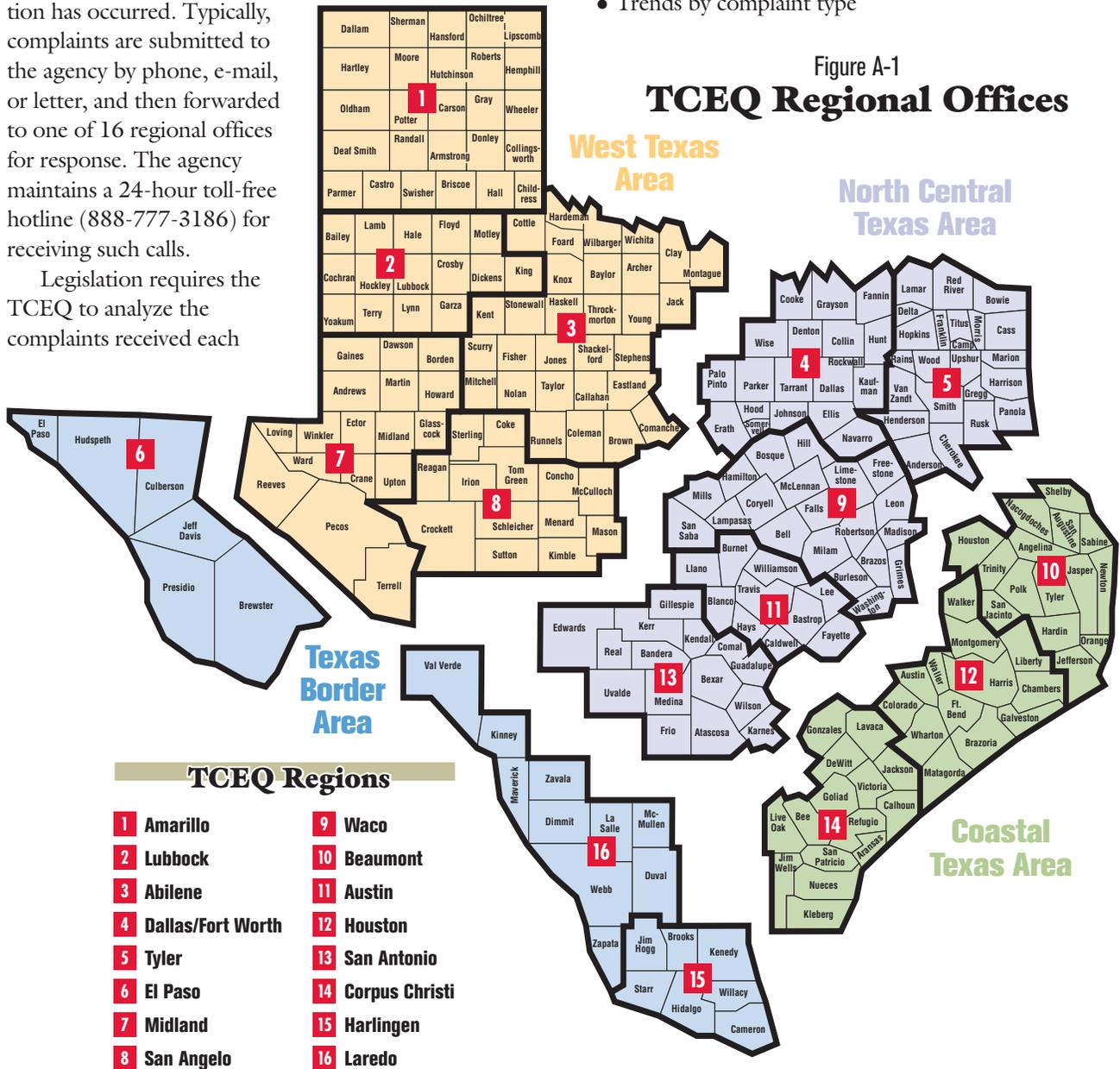
The Texas Commission on Environmental Quality receives thousands of complaints each year from Texans concerned about various environmental matters.

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 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 analyze the complaints received each

year, including analyses by the following categories.

- Region
- Air, waste, and water
- Priority classification
- Enforcement action
- Commission response
- Trends by complaint type



Appendix A

The agency is also required to assess the impact of changes made in the Commission’s complaint policy. All of these requirements are contained in Article 1, Section 1.16 of House Bill 2912, 77th Legislature, which amended Section 5.1773, Subchapter E, Chapter 5 of the Texas Water Code. In addition, Article 1, Section 1.17 of this legislation amended Section 5.178 of the Texas Water Code to require that a summary of these analyses be published biennially, as part of the reports required by Section 5.178 of the Water Code.

Complaint Data Collection and Reporting

After an environmental complaint is received by the Field Operations Division, the data related to the initial complaint are recorded in the Consolidated Compliance and Enforcement Data System (CCEDS). Regional managers then assign the complaint to an investigator, who investigates the complaint and enters all resulting data into CCEDS. Review, approval, and closure of the investigation is performed by management and entered directly into the data system.

All of the data reviewed and summarized for this report were extracted from CCEDS.

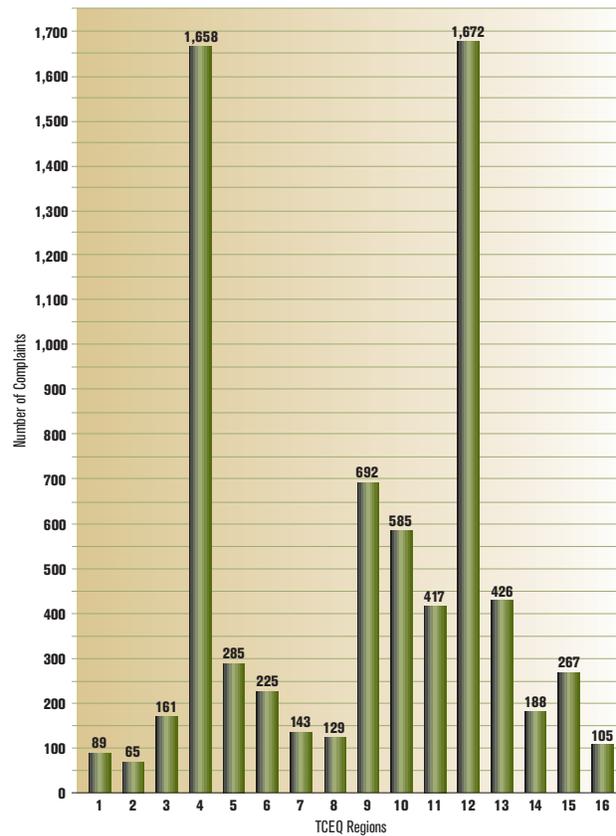
This report reflects activity that occurred in the agency’s 16 regions during fiscal 2005 (September 1, 2004, to August 31, 2005) and fiscal 2006 (September 1, 2005, to August 31, 2006). The data are presented in a series of charts (Figures A-2 to A-9).

Complaints by Region

In fiscal 2005, the TCEQ received a total of 7,107 complaints; in fiscal 2006, the total was 6,609. Figures A-2 and A-3 show the complaints received annually by each of the TCEQ regions. These include complaints in all priority classifications, including complaints that were received but were not eligible for investigation by this agency.

The data show that the number of complaints received varies generally according to regional popula-

Figure A-2
Complaints by Region
FY 2005

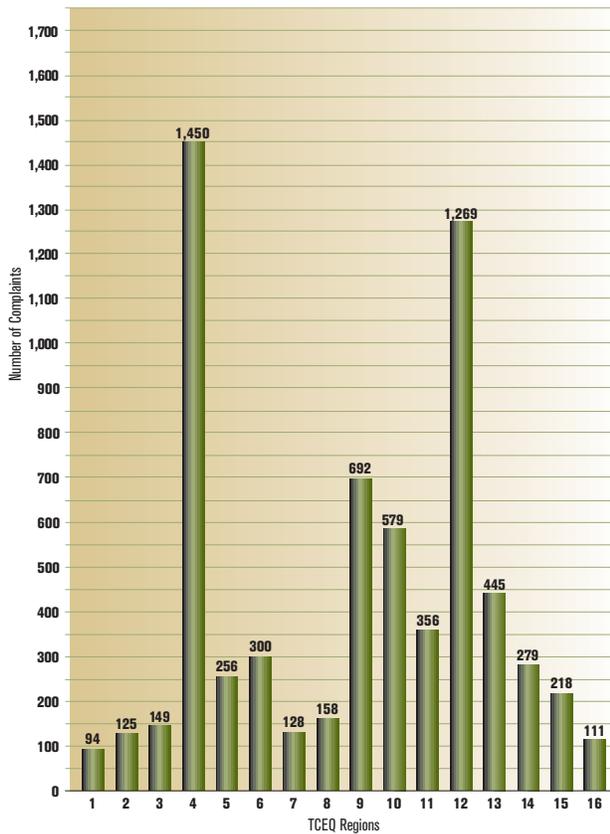


tion. For example, 75 percent of all complaints received occurred in the six largest metropolitan areas (Dallas-Fort Worth, Houston, Waco, Beaumont, San Antonio, and Austin).

The total number of complaints, 13,716, was almost 1,000 complaints short of the total from the previous reporting period—fiscal years 2003 and 2004. The primary reason for this drop-off was the discontinuation of the city of Houston’s contract with the TCEQ to conduct routine inspections within the city limits, effective September 1, 2005.

Beginning in fiscal 2006, the complaints received and investigated by Houston local officials are not entered in CCEDS and therefore are no longer reflected in this report. Complaints originating within the city limits but received and investigated by the TCEQ’s Region 12, based in Houston, are entered in

Figure A-3
Complaints by Region
FY 2006



CCEDS and included in the TCEQ numbers for complaints received.

The total complaints received in Region 12 during fiscal 2006 represented about 62 percent of the annual totals recorded in the FY 2003–2004 report. For the current reporting period, 942 fewer complaints were entered in CCEDS for Region 12 than in the previous report. This accounts for most of the statewide decrease.

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

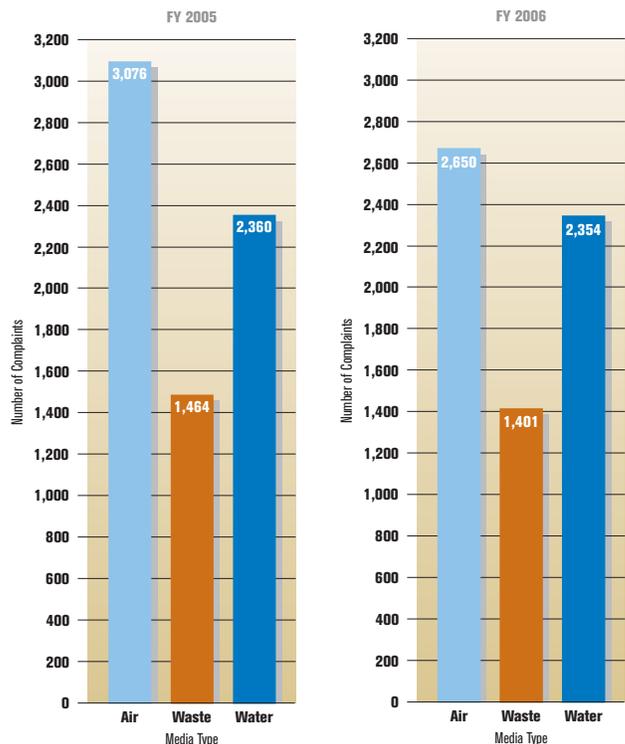
Total complaints received can be analyzed by environmental media (air, waste, and water) on a statewide

basis and by regions. As seen in Figure A-4, the largest number of complaints received statewide each year pertained to air quality.

Regional data in Figures A-5 and A-6 show that the air complaints received in the heavily populated areas of Houston and Dallas-Fort Worth (Region 4) account for most of the complaints in this media. Otherwise, there is a wide variation among regions as to which media type received more complaints.

As discussed, the discontinuation of Houston’s local air quality contract caused a significant drop in the number of complaints recorded for that area. On the other hand, Region 4 experienced a near two-fold increase in air complaints, probably because of increased public attention and media activity regarding air quality and ozone nonattainment in the Dallas-Fort Worth area.

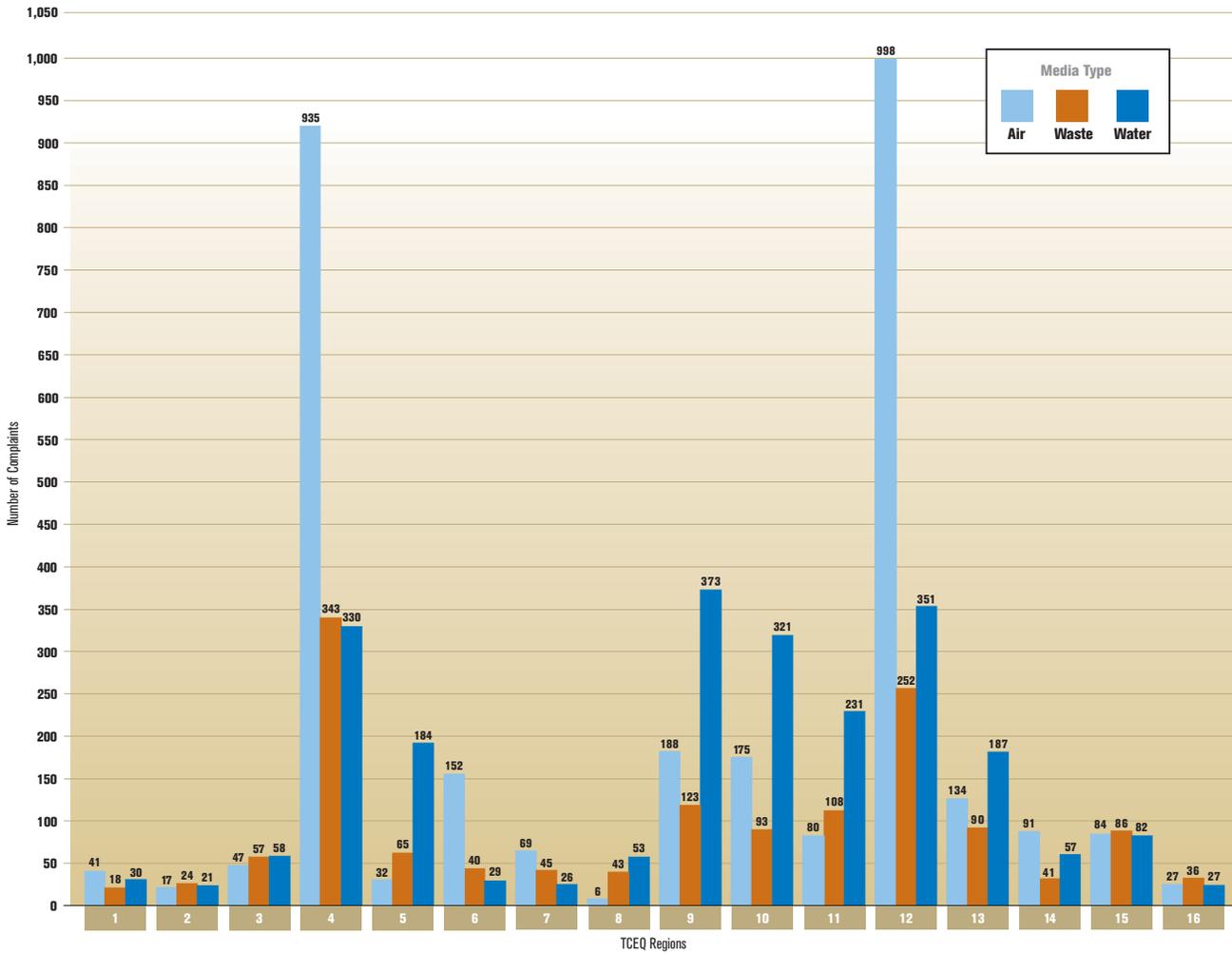
Figure A-4
Complaints by Media Type, Statewide
FY 2005 – FY 2006



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

Appendix A

Figure A-5
Complaints by Region & Media Type
 FY 2005

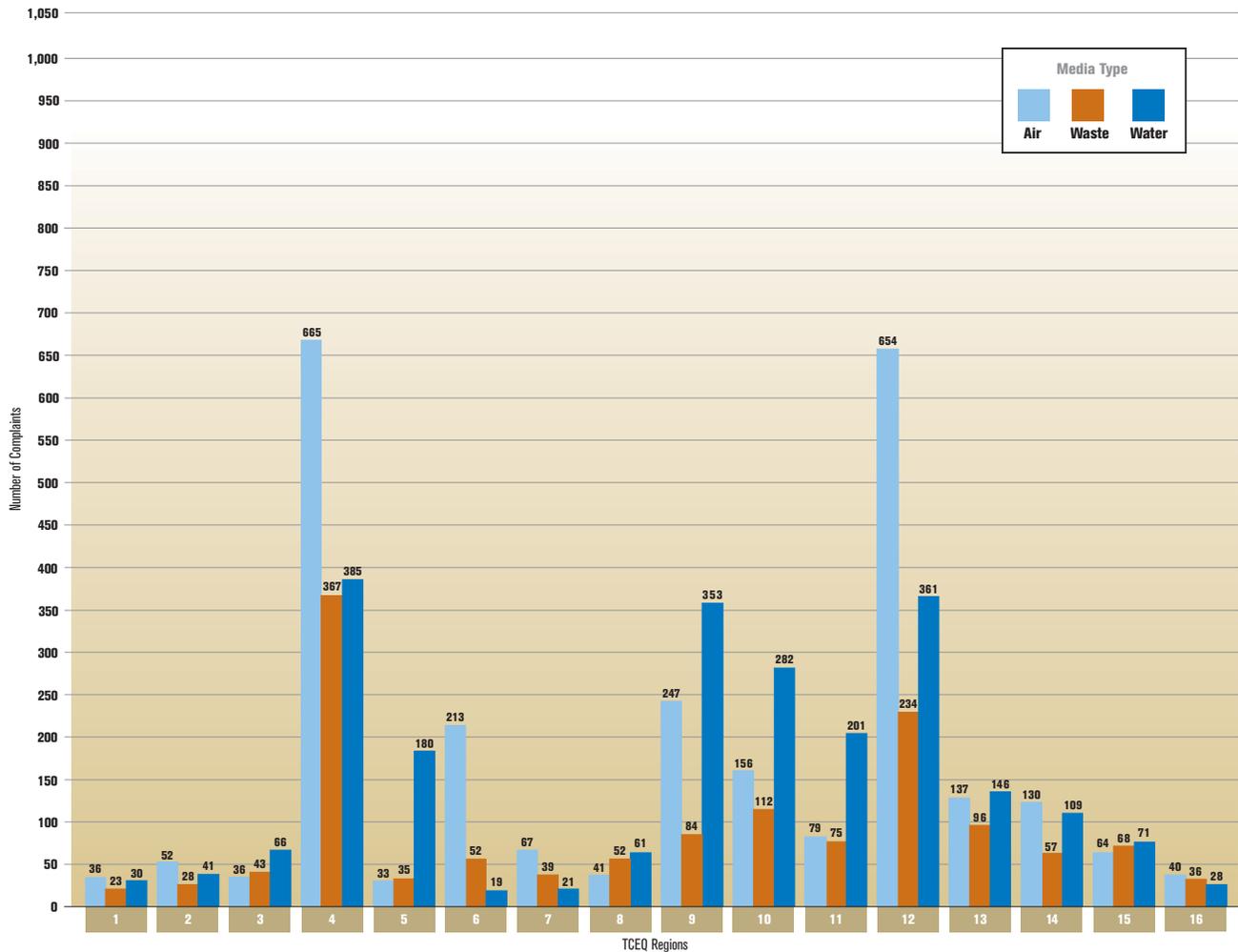


Complaints Received by Priority Level

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 has a prescribed response time. The priority levels are:

- Other specified time frame.** This classification is for special projects that occur as on-demand events. Response time is based on management evaluation of the project and the overall staff workload.
- Immediate response required.** As soon as possible, but no later than 24 hours from receipt.
- Respond within one calendar day.** As soon as possible, but no later than one calendar day from receipt.
- Respond within five calendar days.** As soon as possible, but no later than five calendar days from receipt.
- Respond within 14 calendar days.** As soon as possible, but no later than 14 calendar days from receipt.

Figure A-6
Complaints by Region & Media Type
FY 2006



- **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.
- **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). More than 80 percent of complaints received in the last two years were classified as requiring investigation in 30 calendar days or less. About 15 percent of complaints received were classified for referral or no response—most were referred to another governmental entity for evaluation. The remaining complaints were prioritized for investigation in either 45 or 60 days.

Appendix A

Figure A-7
**Complaints by
 Priority, Statewide
 FY 2005 – FY 2006**

FY 2005		FY 2006	
Priority	Number of Complaints	Priority	Number of Complaints
Other	34	Other	58
Immediate	125	Immediate	79
1 day	1,141	1 day	389
5 days	142	5 days	254
14 days	1,097	14 days	1,252
30 days	3,413	30 days	3,305
45 days	159	45 days	100
60 days	60	60 days	60
Refer	935	Refer	1,112

Note: For an explanation of priority levels, see page 50.

Complaints that Trigger Enforcement Action

All complaints received are investigated according to priority levels, as described above. Subsequent action depends on the outcome of the investigation. For about 80 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 or a Notice of Enforcement.

Issuance of a Notice of Violation (NOV) indicates that TCEQ rules have been violated, but that the violation is not considered serious enough to require an enforcement order and the case is expected to be resolved quickly within a timeframe specified by the investigating regional office.

A Notice of Enforcement (NOE) occurs when a substantial violation of TCEQ rules has been docu-

mented and some formal action is required. Often, an NOE leads to the assessment of administrative penalties.

In fiscal 2005, the agency issued 1,474 NOV's and 242 NOEs as a result of complaint investigations; in fiscal 2006, the totals came to 1,255 NOV's and 218 NOEs (Figure A-8).

Although somewhat fewer complaints were received than in the previous two-year reporting period, the number of NOV's and NOEs increased slightly. In fiscal years 2003–2004, a total of 2,495 NOV's were issued as a result of about 17 percent of the complaints received; the 399 NOEs represented about 3 percent. For fiscal years 2005–2006, a total of 2,727 NOV's were issued as a result of about 20 percent of the complaints received; the 460 NOEs represented about 3 percent.

Complaints Investigated by Program Type

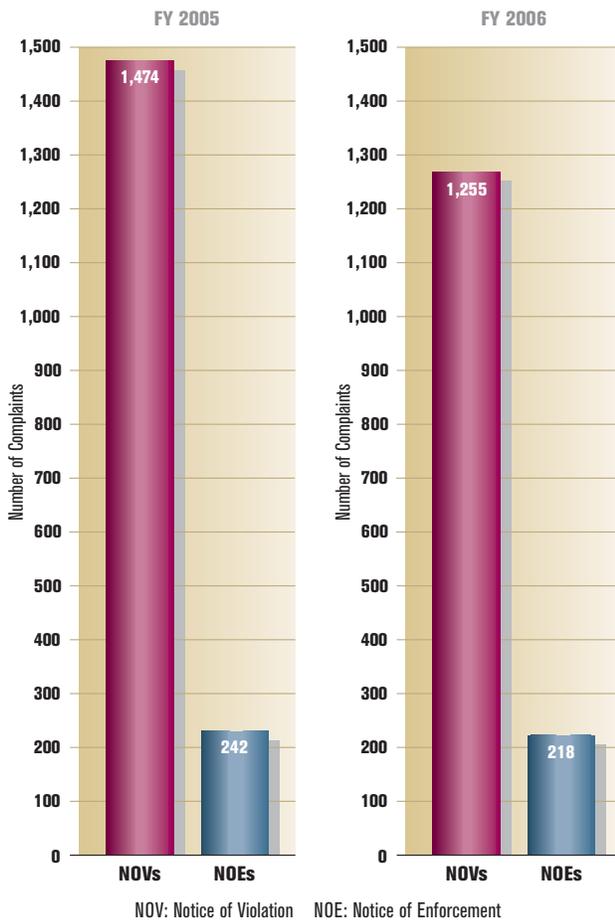
Another analysis is by the type of investigation conducted to address each complaint—the program type. Air complaints in CCEDS are not subdivided by program type, but waste and water media each have several subcategories of programs.

Waste program types include petroleum storage tanks, industrial and hazardous waste, municipal solid waste, and Stage II vapor recovery.

Water program types include animal feeding operations, dam safety, Edwards Aquifer, on-site sewage facilities, public water supply, sludge transporters and land applications, storm water, water rights, and wastewater.

Figure A-9 shows the number of complaint investigations that were conducted in each program type. In fiscal 2005, there were 3,210 air complaint investigations; in fiscal 2006, there were 2,564 investigations. In fiscal 2005, air complaint investigations represented almost 50 percent of the total complaints investigated, as in previous years. This percent fell in fiscal 2006 to 41 percent due to the discontinuation of the Houston air pollution grant and the loss of that data in CCEDS.

Figure A-8
**Complaints Resulting
 in NOVs & NOEs,
 Statewide**
FY 2005 – FY 2006



Waste program investigations accounted for 20.3 percent of complaint investigations in fiscal 2005 and 20.5 percent in fiscal 2006. Water investigations accounted for 30.6 percent in fiscal 2005 and 38.6 percent in fiscal 2006.

Conclusions

The complaint data for fiscal years 2005 and 2006 are generally typical of complaints received and investigated in previous years, although fiscal 2006 data show a drop-off in the number of complaints.

This reflects the discontinuation of Houston’s local air program contract and the fact that the complaints received and investigated by the city are no longer included in the TCEQ data system. Complaints received by the city of Houston are still being investigated, with enforcement actions initiated by city staff.

Evaluation of statewide complaints received by media indicate about the same number of water complaints, compared to the last two-year reporting period, and somewhat fewer air and waste complaints. As for percentages of the total, the portion of water and waste complaints remained about the same, while the portion of air complaints decreased, primarily due to the loss of Houston data.

As in the last two-year report, about 80 percent of the complaints received were classified as requiring investigation within 30 days of receipt.

Figure A-9
**Complaint
 Investigations by
 Program Type**
FY 2005 – FY 2006

Program Type	FY 2005	FY 2006
Animal Feeding Operations	73	83
Air	3,210	2,564
Petroleum Storage Tanks	323	266
Dam Safety	3	1
Edwards Aquifer	69	57
Industrial and Hazardous Waste	239	321
Municipal Solid Waste	722	642
On-Site Sewage Facilities	302	262
Public Water Supply	480	700
Sludge	68	84
Stage II Vapor Recovery	43	50
Storm Water	577	626
Water Rights	17	83
Wastewater	407	513

Appendix A

Consistent with the TCEQ's goal to achieve voluntary compliance with its rules, almost 80 percent of complaints were resolved with no Commission action.

As indicated in this analysis, about 20 percent of the complaint investigations resulted in NOVs, which are typically resolved through corrective actions by the

facility or the individual being regulated. About 3 percent of the complaints investigated resulted in more formal enforcement action, including agreed orders, contested case hearings, and referrals to the Texas Attorney General for legal action.

Appendix B

Permit Time-Frame Reduction Process

One of the main responsibilities of the TCEQ is to issue permits and other authorizations for the control of air pollution, the management of hazardous and nonhazardous waste, and the safe operation of water and wastewater utilities. More than 8,000 various permit applications are received each year.

The TCEQ has undertaken a major effort to improve the efficiency of the permitting process. The Permit Time-Frame Reduction Project was established to reduce the average period of time required to review and process major environmental permits that are uncontested.

Implementation of many measures has resulted in a reduction in the amount of time required to obtain an environmental permit from the TCEQ—in some instances by as much as 300 days.

The improvements have also significantly streamlined the paperwork requirements for permit applicants.

The Texas Government Code in Section 2005.007 requires a biennial report on the TCEQ’s permit application system. One of the purposes is to show the periods adopted for processing each type of permit issued, and any changes enacted.

The report also includes a statement of the minimum, maximum, and median time periods for processing each type of permit, from the date received to the final permitting decision. Finally, the report describes specific actions taken to simplify and improve the permit applications, as well as the processing and paperwork requirements.

Permit Processing

Since the inception of the Permit Time-Frame Reduction Project in March 2002, the agency has made significant progress in improving efficiencies and reducing the permitting backlog.

By the end of fiscal 2006, the backlog of uncontested permits had been cut from 1,150 permits to 109 (see Figure B-1).

Two categories were created for tracking the permit “time frames,” the period of time estimated for completing all the steps in the permitting process. The categories of permit applications are:

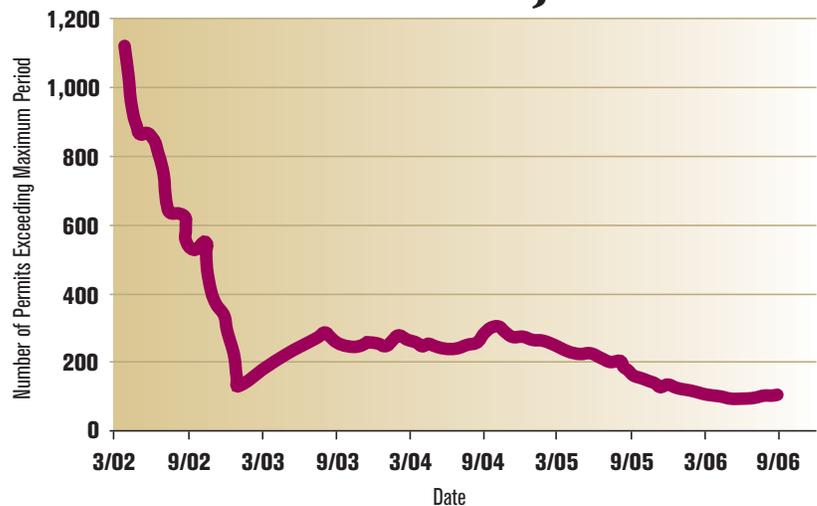
Priority 1. These projects require agency action before applicants may begin operations. This category encompasses uncontested authorizations for new activities, such as new permits and amendments to existing permits for new operations.

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

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

Figures B-2 to B-5 show the status of Priority 1 and Priority 2 projects—at the end of the fiscal 2006—

Figure B-1
Progress of Permit Time-Frame Reduction Project



Appendix B

Figure B-2
Air Permits
Permit Time-Frame Reductions

(as of September 1, 2006; based on rolling 12-month averages)

Priority 1				
Application Type	Average Processing Time (days)	Total under Review	Target Maximum	Number under Review Exceeding Target
New source review (NSR) permit, new	190	121	240	14
NSR permit, amendment	186	286	270	30
NSR permit, existing facility	758	2	365	2
NSR permit, new - federal timeline	269	0	330	0
NSR permit, amendment - federal timeline	441	3	330	2
NSR permit, multiple plants	0	0	330	0
Federal NSR (<i>prevention of significant deterioration, nonattainment</i>), new and major modification	337	32	330	4
Permit by rule	22	151	45	0
Standard permit (<i>without notice</i>) and relocation	29	41	45	2
Concrete batch plant standard permit (<i>with notice</i>)	68	42	150	0
Priority 2				
Site operating permit (SOP), new	1,168	35	330	8
SOP, renewal	351	56	330	5
SOP, revision	170	115	330	1
NSR permit, alteration and other changes	67	132	120	37
NSR permit, renewal	433	331	270	161
General operating permit (GOP), new	63	76	120	70
GOP, renewal	771	55	210	32
GOP, revision	90	91	330	70
Voluntary emission reduction permit and SB 7 permit	1,578	2	330	2

Figure B-3
Waste Permits
Permit Time-Frame Reductions

(as of September 1, 2006; based on rolling 12-month averages)

Priority 1				
Application Type	Average Processing Time (days)	Total under Review	Target Maximum	Number under Review Exceeding Target
Industrial and hazardous waste (IHW), new permit	571	11	450	5
IHW Class 3 permit, modification	435	10	450	0
IHW permit, major amendment	603	4	450	1
IHW combustion permit, new	3,290	1	540	0
IHW combustion Class 3 permit, modification	0	0	540	0
IHW combustion permit, major amendment	3,094	3	540	3
Underground injection control (UIC) permit, new	340	10	390	4
UIC permit, major amendment	257	12	390	0
Municipal solid waste (MSW) permit, new	374	18	360	3
Registered transfer stations	309	1	230	0
Registered gas recovery	0	0	230	0
Priority 2				
MSW permit, major amendment	485	14	360	2
Radioactive material license (RML), new	0	1	480	0
RML permit, major amendment	0	0	480	0
RML permit, renewal	0	0	480	0
IHW permit, renewal	569	12	450	2
IHW permit, combustion renewal	3,193	2	540	1
UIC permit, renewal	366	8	390	1
Registered liquid waste processors	382	1	230	0

Definitions (for Figures B-2 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: 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.

Appendix B

Figure B-4 Water Quality Permits Permit Time-Frame Reductions

(as of September 1, 2006; based on rolling 12-month averages)

Priority 1				
Application Type	Average Processing Time (days)	Total under Review	Target Maximum	Number under Review Exceeding Target
Wastewater permit, new (major facility)	0	0	330	0
Wastewater permit, major amendment (major facility)	476	47	330	7
Wastewater permit, concentrated animal feeding operations (CAFOs)/sludge, new (minor facility)	276	86	330	10
Wastewater permit, CAFOs/sludge, major amendment (minor facility)	289	64	300	9
Sludge, registration and permit	194	6	270	1
Priority 2				
Wastewater permit, renewal (major facility)	482	72	330	18
Wastewater permit, CAFOs/sludge, renewal (minor facility)	249	309	300	27

in the categories of air permits, waste permits, and water quality permits. (Water supply permits do not have Priority 2.)

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

Processing Performance Measures

In addition to permit processing time-frame goals, the TCEQ also maintains established performance measures for each permitting program.

The performance measures for fiscal 2006 were to review 90 percent of the permit applications in each of the program areas within the established time frames.

For fiscal 2006, about 93 percent of all uncontested Priority 1 permits were issued within the agency's

performance goals, as were 64 percent of all uncontested Priority 2 permits. Examples of performance measure results from each environmental media are listed in Figure B-6.

Greater Efficiencies

In recent years, the agency has identified a number of streamlining measures to improve the efficiencies of permit processing and to reduce paperwork requirements. Some of those measures were:

Expand the options for more standardized permitting through the use of general permits, standard permits, and permits by rule. General permits are available for qualified water and wastewater discharges. Since March 2002, the TCEQ has tripled the number of general permits, for a total of nine. The agency also authorized about 31,260 active facilities, with most

Figure B-5
Water Supply Permits
Permit Time-Frame Reductions

(as of September 1, 2006; based on rolling 12-month averages)

Priority 1				
Application Type	Average Processing Time (days)	Total under Review	Target Maximum	Number under Review Exceeding Target
Water rights permit, new	159	27	300	2
Water rights permit, amendment with notice	225	24	300	1
Water rights permit, amendment without notice	137	14	180	0
Water district application, expedited	62	28	60	1
Water district application, major	126	42	180	0
Water district application, minor	62	62	120	0
Water district application, creation and conversion	170	32	180	0
Certificate of convenience and necessity (CCN), new and amendment	210	77	180	5
CCN, transfer	363	80	365	3

permit coverage provided within 48 hours of receipt of the Notice of Intent. In addition, the agency increased the use of standard permits in the air program. In March 2002, TCEQ had three standard permits, with an average processing time of 56 days per application. In fiscal 2006, there were eight standard permits, with an average processing time of 27 days (these permits do not require public notice). In March 2002, 15 permit-by-rule authorizations required registration, with an average processing time of 67 days. Through changes in rule and operating procedures, the agency eliminated the registration process for five of these permits, shortening the processing time to 27 days.

Issue permits with conditional approval and require the submission of certain information within a specified time frame after permit issuance.

Expand online permitting options for applicants.

The agency is in the first phase of developing an online permitting system for high-volume permits and authorizations, including storm water general permits and certain air permit-by-rule authorizations. The first phase will take effect by the end of December 2006. The second phase, which is scheduled for 2007, will focus on more complex authorizations, including petroleum storage tank registrations and dry cleaner registrations.

Develop an electronic payment system, in coordination with Texas Online, so that TCEQ customers can pay any invoiced fee and most permit application fees online. The agency's e-pay system processed more than 15,600 transactions during the 2005 and 2006 fiscal years, for a total of \$3.4 million.

Appendix B

Figure B-6 Performance Measure Results FY 2006

Air Permit Time-Frames

New source review permits:

- New permit processing goal is 240 days; TCEQ averaged 190 days.
- Major amendment processing goal is 270 days; TCEQ averaged 186 days.
- Permit-by-rule processing goal is 45 days; TCEQ averaged 22 days.

Waste Permit Management Time-Frames

Underground injection control permits:

- New permit processing goal is 390 days; TCEQ averaged 340 days.
- Major amendment processing goal is 390 days; TCEQ averaged 257 days.

Municipal solid waste permits:

- New permit processing goal is 360; TCEQ averaged 374 days.
- Major amendment processing goal is 360 days; TCEQ averaged 485 days.

Industrial hazardous waste permits:

- New permit processing goal is 450 days; TCEQ averaged 571 days.
- Amendment processing goal is 450 days; TCEQ averaged 603 days.

Note: The average time frame for these industrial hazardous waste and municipal solid waste permits is inflated due to the fact that only a minimal number were issued during the 12-month averaging period. These applications typically generate a significant amount of public interest, which sometimes significantly delays issuance of the permit.

Water Quality Permit Time-Frames

Industrial and municipal wastewater permits:

- New permit processing goal is 330 days; TCEQ averaged 276 days.
- Major amendment processing goal is 300 days; TCEQ averaged 289 days.

General permits:

- Authorization processing goal is within 48 hours of receiving the Notice of Intent (examples of general permits issued are concentrated animal feeding operations, concrete batch plants, and storm water construction); the TCEQ achieved this goal.

Water Supply Permit Time-Frames

Water rights permits:

- New permit processing goal is 300 days; TCEQ averaged 159 days.
- Amendments with notice processing goal is 300 days; TCEQ averaged 225 days.
- Amendments without notice processing goal is 180 days; TCEQ averaged 137 days.

Water districts:

- Creation/conversion processing goal is 180 days; TCEQ averaged 170 days.

