



BIENNIAL REPORT

TO THE 88TH LEGISLATURE | FY 2021 - FY 2022

SFR-057/22
December 2022

Mission

The Texas Commission on Environmental Quality strives to protect our state's public health 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 will:

- base decisions on the law, common sense, sound 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;
- ensure meaningful public participation in the decision-making process;
- promote and foster voluntary compliance with environmental laws and provide flexibility in achieving environmental goals; and
- hire, develop, and retain a high-quality, diverse workforce.



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Report Requirements

TCEQ's Biennial Report to the Legislature is published every December prior to a regular legislative session, as required by the Texas Water Code, Section 5.178. This submission to the 88th Legislature also contains other information and reports that are required by statute and were last published in December 2020 in the Biennial Report to the 87th Legislature (SFR-57/20):

- Description of cooperative research efforts, page 27 [Water Code Section 5.1193].
- Waste exchange information, page 44 [Texas Health and Safety Code Section 361.0219(c)].
- Revenue spending from solid waste disposal and transportation fees, page 51 [THSC Sections 361.014(a) and (b)].
- Assessment of complaints received, page 53 [Water Code Section 5.1773].
- Permit time-frame reduction process, page 60 [Government Code, Section 2005.007].
- Office of Public Interest Counsel evaluation of performance measures, page 68 [Water Code Section 5.2725].
- Study on water basins without a watermaster, page 78 [Water Code Sections 11.326(g) and (h)].



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Cover Photo: Rio Grande, Big Bend National Park. Credit: iStock.

Page 2 Photo: Santa Elena Canyon, Big Bend National Park. Credit: iStock.



INTRODUCTION

As we reflect on the unprecedented events faced by all Texans in the last biennium, we can't help but proudly acknowledge the way TCEQ has risen to carry out our duties despite the challenges. We celebrated water delivery for Texans along the Rio Grande and the delegation of TCEQ's authority over certain oil and gas activities, we weathered winter storms, and we listened during the Sunset Advisory Commission Review, looking for ways TCEQ can grow and better serve our state.

Over the biennium, TCEQ and Texans alike faced the destruction of Winter Storm Uri. The devastating event triggered power outages, leaving millions in the cold and forcing the shutdown of public water systems and industrial facilities. TCEQ staff worked tirelessly to support water systems in issuing boil water notices, addressing infrastructure issues within their systems, and in monitoring air quality along the Gulf Coast.

Emergencies like Uri temporarily shine a spotlight on our team, but every day, we see their hard work and skill. That's why—in the face of escalating turnover and salaries that lag our sister state agencies by as much as 40%—we took major steps in the last biennium to retain our workforce. TCEQ funded targeted salary increases for key classification positions and provided certain recruitment and retention bonuses. Also, in March 2022, we put our new policy into effect that integrated part-time remote work opportunities, with 86% of staff eligible to participate. However, despite all our efforts to hire and retain staff, we ended Fiscal 2022 with over 400 vacancies (see Appendix E).




We started the biennium with an accomplishment that ensured Texas water right holders along the Rio Grande will receive their water allocation. TCEQ works with our southern neighbor and other partners to ensure water is delivered from Mexico to irrigate crops, supply municipalities, and conduct industrial operations along the Rio Grande. As documented in the International Boundary and Water Commission Minute No. 325, Texas closed out the 5-year cycle, ending 2020 with no shortfall in water delivery from Mexico. Since the beginning of the current cycle Mexico has accrued a large deficit. TCEQ will continue to be engaged with IBWC on this issue.

We engage with a wide array of stakeholders to fulfill our mission. As international negotiations were taking place with Mexico, we were also active nationally, in talks with the United States Environmental Protection Agency related to authority for particular oil and gas activities in Texas. TCEQ requested and received delegation from EPA to issue permits for oil and gas wastewater discharges, effective January 2021. As required by House Bill 2771, 86th Texas Legislature, TCEQ may now issue federal permits for produced water, hydrostatic test water, and gas plant effluent discharges resulting from certain oil and gas activities.

To better serve Texans, our team is continually looking for ways our agency can grow. The Sunset Advisory Commission Review has offered additional opportunities to reflect on TCEQ's performance—and we see there is still work to do. We look forward optimistically to the upcoming legislative session to carry out the recommendations of the Sunset Commission and to address agency needs so we can rise to meet the challenges of this great state.

Despite ongoing workforce challenges, over the last biennium we were able to celebrate many achievements. Because of our dedicated team, TCEQ has continued to fulfill our mission to protect public health and the environment, consistent with sustainable economic development. That said, TCEQ will need to further address retention issues to maintain the same level of service for future years.



*Chisos Mountains,
Big Bend National Park.*

Credit: iStock.

CHAPTER 1

AGENCY HIGHLIGHTS

FY 2021-FY 2022

As the state's environmental agency, the Texas Commission on Environmental Quality has an active presence throughout the state. Agency employees in 16 regional field offices, along with staff in its Austin headquarters, manage a variety of issues and challenges related to air and water quality, water supply, and waste management.

TCEQ takes its mission of preserving Texas' natural resources and protecting public health very seriously and is constantly seeking new ways to improve its operations and various programs. The agency is also committed to a variety of pollution prevention initiatives and to educating Texans about what they can do to help protect the environment.

During the fiscal years of 2021 and 2022, TCEQ tackled an array of disparate challenges, from a calamitous winter storm that exposed vulnerabilities in the state's water infrastructure to a spate of industrial accidents that demanded intensive air quality monitoring in several areas, particularly along the Gulf Coast.

The agency also undertook a series of protocols and measures to ensure a safe re-entry to normal business practices, and the associated risks, when the COVID-19 pandemic receded. As always, TCEQ's priority is maintaining the health and safety of its employees and the public.

These and other activities take place while Texas' population continues to increase, and its economy diversifies and expands. TCEQ has responded with initiatives that reflect changing times and new challenges—including an unprecedented turnover in the agency's workforce—while maintaining its steadfast commitment to protecting public health and the state's natural resources.



Dr. Sabine Lange, TCEQ's chief toxicologist.

LEADERSHIP CHANGES

Chief Toxicologist

SABINE S. LANGE, PH.D., DABT

On Aug. 1, 2022, following the retirement of Dr. Michael Honeycutt, Dr. Sabine Lange was selected as Chief Toxicologist. As the head of TCEQ's Toxicology, Risk Assessment, and Research Division, Dr. Lange oversees health effects risk assessments of air permit applications, air monitoring data, water contamination events, toxicity factor derivation, and remediation risk assessments. She also participates in TCEQ's response to emergencies and is a frequent commentator on a variety of high-profile issues within the news media and regulated community.

Dr. Lange has published numerous articles on a variety of research topics, including toxicology and risk assessment of air pollutants, and risk assessment methods used for derivation of toxicity factors. She also has served on several peer review committees for the U.S. Environmental Protection Agency and is a former member of the Clean Air Scientific Advisory Committee.

A native of Canada, Dr. Lange received a bachelor's degree in biochemistry from the University of Western Ontario in Canada and completed a Ph.D. and post-doctoral training in biochemistry and molecular carcinogenesis at the University of Texas MD Anderson Cancer Center.

COVID-19

Return to Work/Hybrid Approach

It was with a sigh of relief that TCEQ leadership authorized a full reopening of agency offices on March 1, 2022, nearly two years after the outbreak of the COVID-19 virus. Leadership implemented a new workforce policy that incorporated the systemic improvements made through remote work, including more efficient electronic processes, and expanding public participation through virtual platforms. TCEQ's adoption of a sustainable hybrid environment is designed to ensure TCEQ continues to be highly productive and accessible to the public while providing flexibility to our staff and helping TCEQ recruit and retain a diverse, well-qualified workforce.

While the COVID-19 pandemic persists, the agency continues to encourage all employees to remain informed about best practices to remain healthy. TCEQ also periodically provides onsite vaccination clinics where feasible and encourages all employees to consult with their health-care provider about vaccines.

In addition, TCEQ has resumed in-person Commission Agenda meetings and Work Sessions. The commission will continue to provide virtual participation for these meetings.

Trade Fair is Back!

After a two-year hiatus, TCEQ officially welcomed back more than 2,000 registrants to its Environmental Trade Fair and Conference on May 10-11, 2022, in Austin. Over the course of two days, agency staff led more than 100 courses and discussions, in 14 different educational tracks. Topics included air and water permitting, oil and gas, industrial and solid waste management, compliance and enforcement, and remediation programs.

The exhibit hall featured booths and kiosks from more than 300 companies, as well as TCEQ's emergency-response mobile command center and new mobile monitoring equipment, plus the agency's Take Care of Texas program.

Also returning to an in-person event for the first time since 2019 was the annual Governor's Texas Environmental Excellence Awards banquet. At the May 11, 2022, event, TCEQ honored an assortment of finalists and nine award winners for their achievements in environmental preservation and protection.

Since 1993, the TEEA program has honored more than 250 successful environmental projects and activities.

EMERGENCY RESPONSE

Winter Storm Uri

The severe cold weather event, known as Winter Storm Uri, exacted a terrible toll on our state. In February 2021, extreme cold triggered massive power outages statewide, leaving millions of Texans in the



Scenes from the exhibit hall at the 2022 Environmental Trade Fair and Conference in Austin, back after a two-year hiatus due to COVID-19.

cold and dark. To make matters worse, the loss of power and isolated water line breaks due to freezing temperatures meant public water systems across the state were unable to provide adequate treatment and maintain minimum pressure in their lines to safely distribute water to customers.

At its peak, the storm forced nearly 2,000 water systems to issue Boil Water Notices, affecting more than 16 million Texans.

Throughout this crisis, TCEQ staff tirelessly worked to help local officials restore potable water supplies as quickly as possible. Staff aided local officials with their emergency response efforts, provided technical expertise, and posted a toll-free number for local officials seeking labs for bacteriological testing of drinking water samples.

While the experience showed the mettle of TCEQ employees, it also revealed the need to further enhance the resilience of Texas' critical infrastructure. With that in mind, the agency has conducted a thorough [after-action review](#)¹ of the storm and its impact on local water systems. The goal of the initiative is to develop response and recovery actions to mitigate the risks posed by catastrophic weather-related events.

At a May 2022 work session, TCEQ staff presented a series of recommendations to the commissioners on how to improve the resiliency of public water systems and better protect critical public water system components from adverse weather conditions.

In addition to water system activities, TCEQ conducted extensive air monitoring of industrial facilities along the Gulf Coast that shut down during the storm. Regional staff monitored for volatile organic

compounds, carbon monoxide, oxygen, sulfur dioxide, hydrogen sulfide, and other compounds on an as-needed basis in Houston, Beaumont, and Corpus Christi.

TCEQ also deployed mobile air monitoring vans to conduct surveys in industrial areas. In total, the vans conducted 427 air monitoring surveys covering approximately 1,240 miles through communities in Beaumont, Houston, and Corpus Christi. No concentrations of concern were measured.

San Angelo Water Crisis

In early February 2021, the City of San Angelo notified TCEQ of residents' complaints of foul-smelling water within its water system. TCEQ regional staff were dispatched to the area to support city officials, along with personnel from the agency's Austin office. At TCEQ's direction, local officials issued a Do Not Use Advisory for the entire city.

TCEQ assisted the city in an investigation that ultimately pointed to an industrial source of water contamination. Additionally, TCEQ staff coordinated with the Texas Division of Emergency Management and the Texas National Guard's 6th Civil Support Team to assist local officials.

As part of the investigation, San Angelo officials tested water samples throughout its system, some of which revealed elevated levels of benzene. TCEQ also sampled for volatile organic compounds and semi-volatile organic compounds, including benzene.

TCEQ engineers worked with local officials to determine the source of the contamination, ultimately focusing on a faulty backflow device in an industrial



Winter Storm Uri wreaked havoc on public water systems—from broken mains to frozen equipment—causing 1,985 systems to issue boil water notices.

¹ <https://www.tceq.texas.gov/downloads/publications/gi/gi-598.pdf>

zone on the outskirts of the city. City officials were able to isolate portions of its water distribution system that were not contaminated, and subsequently lifted those areas from the original Do Not Use Advisory.

As the state agency tasked with overseeing more than 7,000 public water systems across Texas, TCEQ ensures compliance with agency rules for water treatment, quality, source approval, disinfection, pressure maintenance, distribution, storage, and capacity. In general, TCEQ's role in emergencies is to assist local systems in restoring normal operations so that residents can regain full access to their water as soon as it is safe.

TCEQ requires public water systems to comply with agency standards designed to protect drinking water. If potential hazards in a public water systems' distribution network are not managed properly, backflow (the undesirable reversal of water flow) can allow contaminants to enter the distribution system. In these cases, TCEQ staff are available to provide technical assistance to the public water system to help them address and remediate the contamination.

In addition to maintaining adequate pressure and ensuring proper disinfectant levels throughout their distribution network, public water systems are responsible for implementing and maintaining backflow prevention and cross-connection control programs to prevent contaminants from impairing potable water supply.

Amoeba in the Water

TCEQ assisted public water systems in Lake Jackson and Arlington following the occurrence of an amoeba, *Naegleria fowleri*, in two separate incidents in which two children tragically died after being exposed to the microbe at splash pads.



The first incident occurred in September 2020 in Lake Jackson, Texas; the second, in September 2021, was at a city-owned park in Arlington, Texas.

Public water systems are required to disinfect water before it is available for public consumption. If there is an opportunity for *Naegleria fowleri* to enter a public water system's distribution system, the system must maintain adequate disinfection levels to prevent bacteria and microbes like *Naegleria fowleri* from surviving.

While TCEQ regulates public water systems' distribution networks, including oversight of the treatment and distribution of drinking water, the Texas Department of State Health Services regulates splash pads and interactive water features/fountains. Regulation of splash pads ensures they are properly operated and maintained, which includes periodic sampling of chlorine levels. Inadequate chlorine levels increases the risk of viable microbes like *N. fowleri* surviving.

Public water systems are required to disinfect water prior to it entering the distribution system that carries it through pipes for delivery to consumers. A public water system must be approved by TCEQ for compliance with the rules for water treatment, quality, source approval, disinfection, pressure maintenance, distribution, storage, and capacity.

Managing Water Availability During Drought

TCEQ is engaged to respond to drought. The agency's drought response includes monitoring conditions across the state, expedited processing of drought-related water rights applications, responding to priority calls, and participating in multi-disciplinary task force meetings.



Drought has affected many of the streams in the Brazos River Basin. On the left, a Brazos photo taken in Summer 2015. At right, the same location, but Summer 2022. With the limited flow in 2022, vegetation has had the opportunity to grow in the silt and sand accumulated in the stream bed.

The agency also communicates information about the ongoing drought to state leaders, legislative officials, county judges, county extension agents, holders of water-right permits, and the media.

A 2015 decision by the 13th Court of Appeals in the Farm Bureau case limits the state's power to distribute water during a drought.

Under this ruling, if TCEQ were to receive a priority call requiring suspension or curtailment to protect a senior or superior water right, the agency would be obligated to suspend junior municipal and/or power generation water rights without taking into account concerns about public health or safety.

Unmanned Aerial Systems



TCEQ has developed a program to provide aerial support for TCEQ personnel in the field. The Unmanned Aerial Systems (UASs) program is designed to augment the

agency's use of manned aircraft during investigations, such as aggregate production inspections in rural areas, and during emergency response events.

TCEQ possesses 42 UASs, supported by approximately 50 Federal Aviation Administration Part 107 certified pilots. The UASs and certified pilots are dispersed throughout the 16 TCEQ regional offices and at its Central Office in Austin.

At present, TCEQ uses the Drone Sense software platform to pilot, track, and maintain its UAS fleet. The platform, specifically designed for government and public-safety use, is equipped with flight control software that can be used for multiple brands and models of UASs. Drone Sense also provides flight logging, maintenance logging, and video streaming directly from the UAS cameras.

AIR

El Paso Air Quality

The latest chapter in the back-and-forth legal battle over air quality standards for the El Paso area under the federal Clean Air Act continues. In February 2022, TCEQ submitted documentation to the U.S. Environmental Protection Agency to forestall a possible change in status for the area from "marginal" to the more stringent classification of "moderate."

The crux of TCEQ's position is that eight-hour ozone concentrations in El Paso include international



TCEQ now uses drones to augment manned aircraft during investigations.



Drones give investigators a way to protect public safety while also keeping themselves out of harm's way. Above, a drone captured this photo of a previously unknown freshwater impoundment not readily accessible. Below, a view of a warehouse fire in Houston taken by a drone.



emissions drifting into Texas from Mexico. If it were not for these international emissions, the agency argues, El Paso would continue to meet its current standing for ozone, and so its air quality designation should remain unchanged.

If EPA does not approve TCEQ's preemptive move regarding the inclusion of international emissions, a reclassification of El Paso's ozone attainment designation would require Texas to implement more stringent and costly pollution-reduction measures for the area.

Binational Air Monitoring Fund

Led by Commissioner Bobby Janecka, TCEQ was at the forefront of a binational effort to address air pollution throughout the El Paso Air Basin with the creation of an innovative new source of funding for continuous air-quality monitoring.

The Binational Air Monitoring Fund finances projects to ensure ongoing measurement of air quality within the basin, a desert region defined by the Rio Grande and mountainous terrain that encompasses two countries, three states, several cities, a federally recognized Native American tribe, and some 2.7 million people.

Data derived from continuous air monitoring helps identify sources of emissions, essential to targeting containment strategies and investment in effective pollution controls. The fund will finance air quality projects throughout the region, with particular focus on reestablishing air monitoring stations in Ciudad Juárez, Chihuahua, Mexico, where generation of reliable data has suffered from sporadic funding and inadequate maintenance of equipment.

Texas Emissions Reduction Plan (TERP)



TCEQ's Texas Emissions Reduction Plan (TERP) program continues to be an important tool for reducing air emissions from vehicles and equipment operating in Texas.

TERP also encourages the use of alternative fuels for transportation and supports new and innovative technologies for reducing emissions from stationary sources.

Some of the key program highlights through August 2022:

- Since 2001, the TERP programs have reduced 192,567 tons of NO_x in Texas.

- Since 2001, the Diesel Emissions Reduction Incentive Program has awarded more than \$1 billion in grants to replace or upgrade more than 20,472 vehicles and pieces of equipment.
- Since 2005, the Texas Clean School Bus Program has awarded more than \$48 million in grants for the retrofit or replacement of 7,857 school buses.
- Since 2009, the Texas Clean Fleet Program has awarded more than \$69 million in grants to replace 730 vehicles with hybrid or alternative fuel vehicles.
- Since 2010, the New Technology Implementation Grant Program has awarded more than \$12 million in grants for projects with potential to reduce emissions from stationary sources and projects to store and distribute electricity from renewable sources.
- Since 2012, the Texas Natural Gas Vehicle Grant Program has awarded more than \$54 million in grants to upgrade or replace 1,892 vehicles with natural gas vehicles.
- Since 2012, the Alternative Fueling Facilities Program has awarded more than \$31 million in grants to establish or upgrade 311 natural gas, alternative fueling, or electric charging facilities in the Texas Clean Transportation Zone.
- Since 2014, the Light-Duty Motor Vehicle Purchase or Lease Incentive Program has awarded more than \$15 million in rebates for the purchase or lease of 6,574 electric and natural gas vehicles.
- Since 2015, the Seaport and Rail Yard Areas Emissions Reduction Program has awarded more than \$28 million in grants to replace 343 drayage trucks and pieces of cargo-handling equipment operating at seaports and rail yards in Texas.
- Since 2018, the Port Authority Studies and Pilot Programs has awarded more than \$2 million in grants for port authorities to conduct studies and implement pilot programs for incentives to encourage cargo movement that reduces emissions.
- Since 2021, the Governmental Alternative Fuel Fleet Program has awarded \$6 million in grants for state agencies and political subdivisions to upgrade, replace, or expand their vehicle fleets to alternative fuel, and to purchase, lease, or install refueling infrastructure for those vehicles.

Sunset Commission Report

TCEQ is under review for the 2022-23 review cycle of the Sunset Advisory Commission. The process included TCEQ submitting a Self-Evaluation Report, meetings between Sunset staff and TCEQ staff, and requests for information by Sunset staff. In the Self-Evaluation Report, TCEQ reported major issues concerning funding for small water systems, revenue shortfall in the Waste Management Account, workforce challenges, virtual meetings, and electronic access to permit documents.

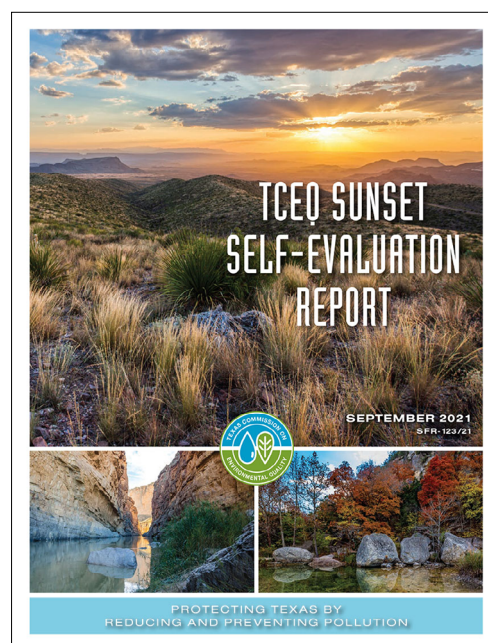
During this process, between October 2021 and March 2022, TCEQ met with Sunset staff more than 50 times and responded to more than 250 requests for information. In addition, Sunset staff conducted site visits at TCEQ regional offices in Austin, Houston, San Antonio, and the Dallas/Fort Worth area.

Based on this information and discussions with other interested parties, including the public, the Sunset staff issued its report, which included five issues and 20 recommendations requiring management action and statutory changes. Sunset staff recommended continuation of the agency for an additional 12 years.

Sunset staff identified transparency and meaningful public input as areas that need improvement. Some related recommendations for this include a statutory clarification to require TCEQ to hold public meetings before and after draft permit issuance, and management actions requiring the commission to vote in a public meeting on key foundational policy decisions and to develop a guidance document explaining how it makes affected person determinations.

Another issue identified by Sunset staff provides that TCEQ's compliance monitoring and enforcement processes need improvements to hold regulated entities consistently and equitably accountable. For example, Sunset staff recommended that TCEQ's compliance history rating formula consider all evidence of noncompliance, and decrease emphasis on site complexity. It also directed the agency to consider all violations when classifying an entity as a repeat violator, to require annual confirmation of operational status of entities with temporary or open-ended permits, and to reclassify recordkeeping violations based on the potential risk and severity of the violation.

Sunset staff also identified water resources as an area that needed statutory changes, including: removal of the abolishment clause in the E-flows advisory group and its science advisory committee so that they could remain



TCEQ submitted the agency's Sunset self-evaluation report in September 2021.

in existence, adding a requirement that the E-flows Advisory Group adopt a biennial statewide work plan for adaptive management updates of environmental flow standards, and a requirement that TCEQ hold its annual meeting regarding priority groundwater management area studies in a public setting. Sunset staff further made a management recommendation that TCEQ conduct a comprehensive study of its water usage data and initiate cancellation proceedings for water right permits with nonuse over 10 years.

Sunset staff presented their recommendations during a meeting of Sunset Advisory Commission members, at which TCEQ had an opportunity to respond and address the members' questions. At the same meeting, the public and interest groups also presented their comments and concerns to the Sunset Commission members. Final recommendations by the Sunset Advisory Commission will be presented in November 2022.

In the upcoming session, the Legislature will consider these recommendations and make final decisions. While awaiting further direction from the Sunset Advisory Commission meeting in November, as well as any direction from the Legislature in the form of statutory changes made in the upcoming legislative session, the agency is in the process of implementing certain management actions.

CHAPTER 2

AGENCY ACTIVITIES

FY 2021-FY 2022

ENFORCEMENT

Environmental Compliance

In a typical year, TCEQ conducts about 108,000 routine investigations and investigates about 4,700 complaints to assess compliance with environmental laws.

The TCEQ enforcement process begins when a violation is discovered during an investigation at a regulated entity's location, through staff review of records at agency offices, or because of a complaint from the public that TCEQ subsequently verifies is a violation. Enforcement actions may also be triggered after submission of citizen-collected evidence.

When environmental laws are violated, TCEQ has the authority in administrative cases to levy penalties up to the statutory maximum (up to \$25,000 for some programs) per day, per violation. TCEQ can also refer cases to the Office of the Attorney General (OAG) for civil prosecution. These civil judicial cases also carry penalties of up to \$25,000 per day, per violation.

In fiscal 2021, TCEQ issued 1,006 administrative orders in which respondents were assessed over \$7.5 million in penalties and over \$2.4 million for Supplemental Environmental Projects (SEP) (see below). The average number of days from initiation of an enforcement action to completion (order approved by the commission) was 351 days.

In fiscal 2022, TCEQ issued 1,038 administrative orders, which required payments of over \$7.9 million in penalties and over \$2.8 million for SEPs. The average number of days from initiation of an enforcement action to completion was 405 days. Orders approved by the commission that have become effective are posted on TCEQ's website, as are pending orders not yet presented to the commission.

In fiscal 2021, the OAG obtained 21 judicial orders in cases referred by TCEQ or in which TCEQ was a party. These judgments resulted in more than \$16.5

million in civil penalties. In fiscal 2022, 24 OAG judgements resulted in more than \$6.8 million in civil penalties.

You can find additional enforcement statistics in TCEQ's annual enforcement report at www.tceq.texas.gov/goto/aer.

Supplemental Environmental Projects

Rather than being assessed a monetary penalty, regulated entities may be able to direct some of the penalty dollars towards a SEP that would be beneficial for the community where the environmental offense occurred. Such a project must reduce or prevent pollution, enhance the environment, or raise public awareness of environmental concerns.

Table 1. TCEQ Enforcement Orders

Fiscal Year	Number of Orders	Assessed Penalties	Orders with SEPs	SEP Funds
2021	1,006	\$11.7 million	139	\$2.4 million
2022	1,038	\$12.9 million	139	\$2.8 million

A regulated entity that meets program requirements may propose a SEP from TCEQ's list of preapproved projects or a custom SEP if the proposed project is environmentally beneficial and the party that would be performing the project was not already obligated or planning to perform the activity before the violation occurred. Additionally, the activity covered by a SEP must go beyond what is already required by state and federal environmental laws.

Local governments cited in enforcement actions

may use SEP money to achieve compliance with environmental laws or to remediate the harm caused by the violations in the case by proposing a compliance SEP. TCEQ may offer this option to governmental authorities such as school districts, counties, municipalities, and water districts.

Except for a compliance SEP, a SEP cannot be used to remediate a violation or any environmental harm that is caused by a violation, or to correct any illegal activity that led to an enforcement action.

Compliance History

Each year, TCEQ rates the compliance history of every owner or operator of a facility that is regulated under certain state environmental laws. An evaluation standard has been used to assign a rating to approximately 430,000 entities regulated by TCEQ that are subject to the compliance history rules. The ratings take into consideration prior enforcement orders, court judgments, consent decrees, criminal convictions, and notices of violation, as well as investigation reports, notices, and disclosures submitted per the Texas Environmental, Health, and Safety Audit Privilege Act. Agency-approved environmental management systems and participation in agency-approved voluntary pollution-reduction programs are also considered.

You can find more information about this process at www.tceq.texas.gov/goto/history.

COMPLIANCE HISTORY RULE UPDATE

As a result of several large emergency industrial



Cypress trees along the Spring Creek Greenway.

Credit: iStock.

accidents over the past few years that caused significant impacts to public health and the environment, the commission approved a revision to the compliance history rules. The executive director may now initially designate a site’s compliance history classification as “under review” and then later reclassify it to “suspended” if exigent circumstances exist due to a significant emergency event at the site. This could include major explosions or fires that cause significant community disruption or commitment of emergency response resources by federal or state governmental authorities. This is codified in Title 30, Texas Administrative Code, Section 60.4 and became effective on June 23, 2022.

Table 2. Compliance-History Designations

Classifications	SEPTEMBER 2021		SEPTEMBER 2022	
	Number of Entities Subject to Compliance-History Rules	Percent	Number of Entities Subject to Compliance-History Rules	Percent
High	39,224	8.76	38,690	8.28
Satisfactory	8,471	1.89	8,656	1.85
Unsatisfactory	961	0.21	9672	0.21
Unclassified	398,970	89.14	418,967	89.66
Total	447,626	100	467,285	100

Note: Statistical overview of customer or regulated entity number affiliations as of Sept. 1, 2022. Statistics reflect data available at the time of the mass classification and do not include adjustments due to correction requests or appeals for the 2022 rating year.

Critical Infrastructure

The Critical Infrastructure Division (CID) combines elements that are critical to TCEQ's responsibilities under the Texas Homeland Security Strategic Plan. The division seeks to ensure that regulated critical infrastructures—essential to the state and its residents—maintain compliance with environmental regulations, and to support these critical infrastructures during disasters. Support during disasters includes not only responding to disasters, but also aiding in recovery from them.

In fiscal 2021 and fiscal 2022, CID's programs included: Homeland Security, Dam Safety, Radioactive Materials Compliance and Chemical Reporting, and Emergency Management Support. Beginning in fiscal 2023, the division will include a new centralized Emissions Event Review Program.

HOMELAND SECURITY

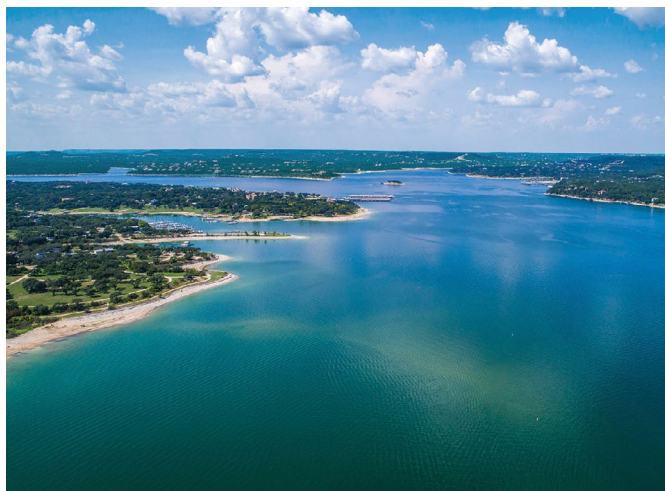
The Homeland Security Program coordinates communications during disaster response with federal, state, and local partners; conducts assessments of threats to the state's critical infrastructure; and participates in the state's counterterrorism task forces. The program provides agency representation at the State Operations Center during disasters and reviews and provides input on statewide plans coordinated by the Texas Division of Emergency Management and the Texas Department of Public Safety.

DAM SAFETY

The Dam Safety Program monitors and regulates private and public dams in Texas. The program periodically inspects dams that pose a high or significant hazard and issues recommendations and reports to the dam owners to help them maintain safe facilities. The program ensures that these facilities are constructed, maintained, repaired, or removed safely. High- or significant-hazard dams are those for which loss of life could occur if the dam should fail.

Dams are exempted from the program's regulation if they meet all the following criteria:

- Are privately owned,
- Are classified either "low hazard" or "significant hazard,"
- Have a maximum capacity of less than 500 acre-feet,
- Are within a county with a population of less than 350,000, and
- Are outside city limits.



Aerial view of Lake Travis. Credit: iStock.

As of July 29, 2022, a total of 3,228 dams are exempted.

In fiscal 2021, Texas had 4,051 state-regulated dams, including 1,505 high-hazard dams and 305 significant-hazard dams. The remaining dams were classified as low hazard. In fiscal 2022, Texas had 4,106 state-regulated dams, including 1,525 high-hazard dams and 307 significant-hazard dams.

In fiscal 2022, 80% of all high- and significant-hazard dams had been inspected during the past five years. About 978 of the inspected dams are in either "fair" or "poor" condition. After the inspections, many dam owners make repairs if they can identify a funding source.

RADIOACTIVE MATERIALS COMPLIANCE AND CHEMICAL REPORTING

Radioactive Materials Compliance Program

This program focuses on the safety and security of radioactive materials waste in Texas. Investigators conduct radioactive-materials compliance inspections statewide and are members of the state radiological emergency-response team. The investigators are responsible for inspections at regulated facilities including uranium mining or recovery, waste processing or storage, radioactive by-product handling or disposal, low-level radioactive waste disposal, and Underground Injection Control (UIC) permit sites. The following radioactive material license inspections and UIC permit inspections were conducted and approved:

- Fiscal 2021: 10 radioactive material license inspections; 6 UIC permit inspections
- Fiscal 2022: 10 radioactive material license inspections; 2 UIC permit inspections

Texas Compact Waste Facility

The Radioactive Materials Compliance Program is responsible for compliance at the disposal site for low-level radioactive waste in Andrews County. Waste Control Specialists LLC (WCS) operates the Texas Compact Waste Facility under TCEQ-issued Radioactive Material License R04100 and was authorized to accept radioactive waste for disposal in April 2012.

The Radioactive Materials Compliance Program maintains two full-time resident inspectors at the WCS site to inspect and approve the disposal of each waste shipment. The following volume of shipments of low-level radioactive waste was inspected and successfully disposed of in the Texas Compact Waste Facility:

- Fiscal 2021: 190 shipments
- Fiscal 2022: 203 shipments

Tier II Chemical Reporting Program

The Texas Tier II Chemical Reporting Program is the state repository for hazardous-chemical inventories—called Texas Tier II reports—which are required under the Emergency Planning and Community Right-to-Know Act.

Texas Tier II reports contain detailed information on chemicals that meet or exceed specified reporting thresholds at any time during a calendar year. The Tier II reporting system identifies facilities and owner-operators and collects detailed data on hazardous chemicals stored at reporting facilities within the state. The following volume of facility reports was received in the online reporting system:

- Fiscal 2021: 8,307 reports with 80,912 facilities
- Fiscal 2022: 8,849 reports with 87,172 facilities

EMERGENCY MANAGEMENT SUPPORT

TCEQ's 16 regional offices form the basis of the agency's support for local jurisdictions addressing emergency and disaster situations. During a disaster, Disaster-Response Strike Teams (DRSTs), organized in each regional office, serve as TCEQ's initial and primary responders within their respective regions. Team members come from various disciplines and have been trained in the National Incident Management System, Incident Command System, and TCEQ disaster-response protocols.

TCEQ's Emergency Management Support Team (EMST), based in Austin, joins the regional DRSTs during disaster responses. The EMST is also responsible for maintaining preparedness, assisting

with developing the DRSTs in each region by providing disaster-preparedness training, and maintaining sufficiently trained personnel so that response staff can rotate during long-term emergency events.

The EMST also coordinates the BioWatch program, a federally funded initiative aimed at early detection of bioterrorism agents.

New Emissions Event Review Program

Beginning in fiscal 2023, this new program will investigate all reported emissions in the state. This centralized approach will improve investigative consistency across all regions and industrial sectors and allow for greater efficiency by having staff dedicated to a specific type of investigation. The teams within the section will be divided into specific industry sectors including petrochemical (examples: chemical plants, refineries), oil and gas, and other sources (example: carbon black). The centralized section will also help ensure that there is clear guidance for evaluating affirmative defense claims and an agency-wide approach to provide transparent and consistent evaluations.

ACCREDITED LABORATORIES

TCEQ only accepts regulatory data from laboratories accredited according to standards set by the National Environmental Laboratory Accreditation Program (NELAP) or from laboratories exempt from accreditation, such as a facility's in-house laboratory.

The analytical data produced by these laboratories are used in TCEQ decisions relating to permits, authorizations, compliance actions, enforcement actions, and corrective actions, as well as in characterizations and assessments of environmental processes or conditions.

All laboratories accredited by TCEQ are held to the same quality-control and quality-assurance standards. TCEQ laboratory accreditations are recognized by other states using NELAP standards and by some states that do not operate accreditation programs of their own.

In fiscal 2022, there were 245 laboratories accredited by TCEQ.

Sugar Land Laboratory

The TCEQ Sugar Land Laboratory is accredited by NELAP. The laboratory:

- Supports monitoring operations for TCEQ's air, water, and waste programs, as well as river

authorities and other environmental partners, by analyzing surface water, wastewater, sediments, sludge samples, and airborne particulate matter for a variety of environmental contaminants.

- Supports the agency by analyzing samples collected as part of investigations conducted by TCEQ's 16 regional offices.
- Develops analytical procedures and performance measures for accuracy and precision.
- Maintains a highly qualified team of analytical chemists, laboratory technicians, and technical support personnel.
- Generates scientifically valid and legally defensible test results under its NELAP-accredited quality system.

Analytical data are produced using methods approved by EPA. The standards used for these methods are traceable to national standards, from institutions such as the National Institute of Standards and Technology and the American Type Culture Collection.

With the near-instant transmission of electronic data, TCEQ can now upload results directly to the agency's Sugarland Lab database.

EDWARDS AQUIFER PROTECTION PROGRAM

As a karst aquifer, the Edwards Aquifer is one of the most permeable and productive groundwater systems in the U.S. The regulated portion of the aquifer crosses eight counties in south-central Texas, serving as the primary source of drinking water for more than 2 million people in the San Antonio area. This replenishable system also supplies water for farming and ranching, manufacturing, mining, recreation, and



Pedernales Falls. Credit: iStock.

the generation of electric power using steam.

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

Because of the unusual nature of the aquifer's geology and biology—and its role as a primary water source—TCEQ requires an Edwards Aquifer protection plan for any regulated activity proposed within the recharge, contributing, or transition zones. Regulated activities include construction, clearing, excavation, or anything that alters the surface or possibly contaminates the aquifer and its surface streams. In regulated areas, best management practices for treating stormwater are mandatory during and after construction.

Each year, TCEQ receives hundreds of plans that its Austin and San Antonio regional staff review. TCEQ reviewed 772 plans in fiscal 2021 and 835 plans in fiscal 2022.

In addition to reviewing plans for development within the regulated areas, agency personnel conduct compliance investigations to ensure that best management practices are appropriately used and maintained. Staff also perform site assessments before the start of regulated activities to ensure that aquifer-recharge features are adequately identified for protection.

AIR QUALITY

Changes to Standards for Criteria Pollutants

Federal clean-air standards, or the National Ambient Air Quality Standards (NAAQS), cover six criteria air pollutants: ozone, particulate matter (PM), carbon monoxide, lead, nitrogen dioxide, and sulfur dioxide (SO₂). The federal Clean Air Act (FCAA) requires EPA to review the standard for each criteria pollutant every five years to ensure that it achieves the required level of health and environmental protection.

- On March 18, 2019, EPA published its decision to retain the current NAAQS for SO₂ without revision, effective April 17, 2019.
- On Dec. 18, 2020, EPA published its decision to retain, without changes, the current NAAQS for PM for both the primary and secondary standards. On June 10, 2021, EPA announced that it will reconsider the December 2020 decision to retain the NAAQS for PM.

Table 3. Ozone-Compliance Status for the 2008 Eight-Hour Standard

Area of Texas	Current Classification	Current Attainment Deadline	Proposed Classification	Proposed Attainment Deadline
HGB (eight-county area)	Serious Nonattainment	July 20, 2021	Severe Nonattainment	July 20, 2027
DFW (10-county area)	Serious Nonattainment	July 20, 2021	Severe Nonattainment	July 20, 2027
All Other Texas Counties	Attainment/Unclassifiable	Not Applicable	Not Applicable	Not Applicable

Note: The HGB 2008 ozone nonattainment area comprises the counties of Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller. The DFW 2008 ozone nonattainment area comprises the counties of Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, and Wise.

A proposed EPA rule is anticipated in 2022 with a final rule in 2023.

- On Dec. 31, 2020, EPA published its decision to retain the current eight-hour ozone NAAQS. On Oct. 29, 2021, EPA announced that it will reconsider the 2020 decision to retain the current NAAQS for ozone. EPA is targeting the end of 2023 to complete this reconsideration.
- EPA is in the process of reviewing the current NAAQS for lead with a proposed rule anticipated in early 2025 and a final rule in early 2026.

As TCEQ develops plans to address air quality issues, it revises the State Implementation Plan (SIP) and submits these revisions to EPA.

Ozone Standards

2008 OZONE STANDARD

On May 21, 2012, EPA published final designations for the 2008 eight-hour ozone standard of 0.075 parts per million. The Dallas-Fort Worth (DFW) area was designated “nonattainment,” with a “moderate” classification, and the Houston-Galveston-Brazoria (HGB) area was designated “nonattainment,” with a “marginal” classification. The HGB area did not attain the 2008 eight-hour ozone standard by its marginal attainment deadline and was reclassified to moderate nonattainment effective Dec. 14, 2016.

The DFW and HGB moderate nonattainment areas were required to attain the 2008 eight-hour ozone standard by July 20, 2018, with a 2017 attainment

year, which is the year that the areas were required to measure attainment of the applicable standard. Because neither area attained by the end of 2017, EPA reclassified both the DFW and HGB 2008 eight-hour ozone moderate nonattainment areas to “serious” effective Sept. 23, 2019. The attainment date for serious nonattainment areas was July 20, 2021, with a 2020 attainment year. Serious classification attainment demonstrations and reasonable further progress SIP revisions were developed for both areas and submitted to EPA before the Aug. 3, 2020, deadline. On June 30, 2021, the commission adopted a rulemaking to address the EPA’s Oil and Natural Gas Control Techniques Guidelines in the HGB area.

The DFW and HGB serious nonattainment areas did not attain by the end of 2020; however, the HGB area was eligible for a one-year attainment date extension. On April 6, 2021, TCEQ submitted a one-year attainment date extension request. On April 13, 2022, EPA proposed to reclassify both the DFW and HGB areas to “severe” and deny the HGB area extension request. EPA also proposed TCEQ submit federally required severe classification SIP revisions 18 months after reclassification. Attainment would be required by the end of 2026 to meet a July 20, 2027, attainment date for the DFW and HGB areas.

2015 OZONE STANDARD

Background

In October 2015, EPA finalized the 2015 eight-hour ozone standard of 0.070 parts per million. On Nov. 16, 2017, EPA designated a majority of Texas

as “attainment/unclassifiable” for the 2015 eight-hour ozone NAAQS with an effective date of Jan. 16, 2018. On June 4, 2018, EPA published final designations for the remaining areas, except for the eight counties that compose the San Antonio area. Consistent with state designation recommendations, EPA finalized nonattainment designations for a nine-county DFW marginal nonattainment area and a six-county HGB marginal nonattainment area. EPA designated all the remaining counties, except those in the San Antonio area, as attainment/unclassifiable. The designations were effective Aug. 3, 2018.

San Antonio Area

On July 25, 2018, EPA designated Bexar County as nonattainment, and the seven other San Antonio area counties—Atascosa, Bandera, Comal, Guadalupe, Kendall, Medina, and Wilson—as attainment/unclassifiable, effective Sept. 24, 2018.

In August 2018, the state of Texas and TCEQ sued EPA, challenging EPA’s nonattainment designation for Bexar County in the 5th U.S. Circuit Court of Appeals. Environmental petitioners also sued EPA for its designation of attainment/unclassifiable for the seven other San Antonio area counties—Atascosa, Bandera, Comal, Guadalupe, Kendall, Medina, and Wilson. The litigation was consolidated in the 5th Circuit. The court

issued its opinion on Dec. 23, 2020, finding that EPA has discretion to make changes it “deems necessary” to the governor’s initial designations and that EPA used a permissible, multi-factor analysis to determine not to add surrounding counties to the Bexar County nonattainment area.

On June 10, 2020, the commission adopted an emissions inventory SIP revision for the 2015 eight-hour ozone NAAQS for the HGB, DFW, and Bexar County nonattainment areas. TCEQ submitted it to EPA on June 24, 2020. EPA published final approval of the emissions inventories for the HGB, DFW, and Bexar County areas on June 29, 2021, and published final approval of the nonattainment new source review and emissions statements portions of the SIP revision on Sept. 9, 2021.

On July 1, 2020, the commission adopted the FCAA, Section 179B, demonstration SIP revision to demonstrate that the Bexar County marginal nonattainment area would attain the 2015 eight-hour ozone standard by its attainment deadline were it not for anthropogenic emissions emanating from outside the U.S. TCEQ submitted it to EPA on July 13, 2020.

DFW, HGB, and San Antonio Area Status

The attainment deadline for the DFW and HGB marginal nonattainment areas was Aug. 3, 2021,

Table 4. Ozone-Compliance Status for the 2015 Eight-Hour Standard

Area of Texas	Current Classification	Current Attainment Deadline	Proposed Classification	Proposed Attainment Deadline
HGB (six-county area)	Marginal Nonattainment	Aug. 3, 2021	Moderate Nonattainment	Aug. 3, 2024
DFW (nine-county area)	Marginal Nonattainment	Aug. 3, 2021	Moderate Nonattainment	Aug. 3, 2024
San Antonio (Bexar County)	Marginal Nonattainment	Sept. 24, 2021	Moderate Nonattainment	Sept. 24, 2024
El Paso (El Paso County)	Marginal Nonattainment	Aug. 3, 2021	Not Applicable	Not Applicable
All Other Texas Counties	Attainment/ Unclassifiable	Not Applicable	Not Applicable	Not Applicable

Note: The HGB 2015 ozone nonattainment area comprises the counties of Brazoria, Chambers, Fort Bend, Galveston, Harris, and Montgomery. The DFW 2015 ozone nonattainment area comprises the counties of Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Tarrant, and Wise.

Types of Sources

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



POINT SOURCES

Examples include industrial facilities such as refineries and cement plants



AREA SOURCES

Examples include dry cleaners, gasoline stations, and residential heating



ON-ROAD MOBILE SOURCES

Cars and trucks



NON-ROAD MOBILE SOURCES

Examples include construction equipment, locomotives, and marine vessels

which was not met. The attainment deadline for the Bexar County marginal nonattainment area was Sept. 24, 2021, which was not met. On April 13, 2022, EPA proposed to reclassify the DFW, HGB, and Bexar County areas to moderate and disapprove the Bexar County 179B Demonstration SIP Revision. EPA is proposing Jan. 1, 2023, as the deadline for TCEQ to submit federally required moderate classification SIP revisions. Attainment for all three areas would be required by the end of 2023 to meet the attainment dates of Aug. 3, 2024, for the DFW and HGB areas and Sept. 24, 2024, for the Bexar County area.

El Paso Area

In August 2018, the City of Sunland Park, New Mexico, and environmental petitioners challenged EPA's attainment/unclassifiable designation for El Paso County in the D.C. Circuit Court of Appeals. On July 10, 2020, the court granted EPA's request for voluntary remand, but did not vacate, the El Paso County attainment designation, requiring EPA to issue a revised El Paso County designation as expeditiously as practicable [*Clean Wisconsin v. EPA*, 964 F.3d 1145 (D.C. Circuit 2020)]. On Nov. 30, 2021, EPA published a final nonattainment designation for the 2015 ozone NAAQS for El Paso County. EPA expanded the Sunland Park nonattainment area to include all of El Paso County and the area was renamed the "El Paso-Las Cruces, Texas-New Mexico nonattainment area." El Paso County was classified as marginal nonattainment with a retroactive attainment date of Aug. 3, 2021, and the designation became effective Dec. 30, 2021. A SIP revision to address marginal nonattainment area requirements is due to EPA by Dec. 30, 2022.

On Feb. 28, 2022, TCEQ submitted the FCAA,

Section 179B demonstration to EPA for the El Paso County portion of the El Paso–Las Cruces, Texas–New Mexico nonattainment area. The demonstration documented that El Paso County would have attained the 2015 eight-hour ozone NAAQS by the Aug. 3, 2021, attainment date "but for" emissions emanating from outside the U.S. The EPA approval of the 179B demonstration would prevent El Paso County from being reclassified from marginal to moderate nonattainment for the 2015 ozone NAAQS.

On June 15, 2022, the commission approved proposal of the 2015 Eight-Hour Ozone NAAQS emissions inventory SIP Revision for the El Paso County portion of the El Paso–Las Cruces, Texas–New Mexico nonattainment area. The proposed SIP revision satisfies FCAA emission inventory reporting requirements for El Paso County for the 2015 ozone NAAQS and also includes a certification statement to confirm that the emissions statements and nonattainment new source review requirements have been met for El Paso County. Commission adoption of the emissions inventory SIP revision is currently scheduled for Nov. 16, 2022.

Permian Basin

EPA is considering a discretionary redesignation for portions of the Permian Basin in New Mexico and Texas for the 2015 ozone NAAQS based on current monitoring data from New Mexico and other air quality factors. If the area is redesignated to nonattainment, TCEQ will be required to submit a SIP revision to bring the area into attainment. The potential redesignation and the nonattainment area boundaries, still unknown, are expected to cover counties in New Mexico and Texas.

In anticipation of the potential redesignation,



Rio Grande near Santa Elena Canyon. Big Bend National Park. Credit: iStock.

on June 27, 2022, Gov. Greg Abbott sent a letter to President Joe Biden stating that EPA's discretionary action would jeopardize oil production in Texas. On July 27, 2022, EPA responded to Gov. Abbott's letter on behalf of President Biden and indicated that any redesignations from attainment to nonattainment would follow the requirements of FCAA, Section 107(d)(3). Per those requirements, EPA would notify the governor of the redesignation, the affected states would have an opportunity to provide feedback, and EPA would issue a final decision no less than 240 days from the date the agency notifies the governor. On Aug. 23, 2022, Gov. Abbott responded with a letter to the president outlining flaws with EPA's potential discretionary redesignation, noting the accelerated timing of actions by EPA, and reiterating points from the June 27, 2022, letter.

Transport Rule

In addition to the SIP revisions for areas designated nonattainment for the 2015 ozone standard, TCEQ submitted a transport SIP revision on Aug. 18, 2018, demonstrating that emissions from Texas sources do not contribute significantly to nonattainment or maintenance of the 2015 ozone standard in any other state.

On Feb. 22, 2022, EPA proposed to disapprove Texas' transport SIP based on its own modeling analysis. On April 6, 2022, EPA proposed to replace Texas' transport SIP with a Federal Implementation Plan, known as the Transport Rule. The proposed Transport Rule would establish an allowance-based ozone season (May through September) trading program with nitrogen oxide (NO_x) emissions budgets for fossil fuel-fired power plants in 25 states, including Texas. The rule

would also establish NO_x emissions limitations for certain other industrial stationary sources in 23 states, including Texas. The proposed control measures for the identified electric generating unit and non-electric generating unit sources apply to both existing units and any new, modified, or reconstructed units meeting the proposal's applicability criteria.

On June 21, 2022, TCEQ submitted comments to EPA on the proposed Transport Rule. The comments included a request that EPA approve TCEQ's 2018 SIP revision and remove Texas from the Transport Rule.

2010 SO₂ STANDARD

EPA revised the SO₂ NAAQS in June 2010, adding a one-hour primary standard of 75 parts per billion. In July 2013, EPA designated 29 areas in 16 states, which did not include Texas, as nonattainment for the 2010 standard. On March 2, 2015, a U.S. district court order set a deadline for EPA to complete an additional three rounds of designations for the SO₂ NAAQS.

Effective Jan. 12, 2017, portions of Freestone and Anderson counties (Big Brown), portions of Rusk and Panola counties (Martin Lake), and a portion of Titus County (Monticello) were designated nonattainment. In October 2017, Luminant (Vistra Energy) filed notices with the Electric Reliability Council of Texas stating its plans to retire the Big Brown and Monticello power generation plants. TCEQ voided permits for these two plants on March 30, 2018.

On Aug. 22, 2019, EPA proposed error corrections to revise the designations of portions of Freestone, Anderson, Rusk, Panola, and Titus counties from nonattainment to unclassifiable; however, the error correction was never finalized. On April 27, 2020, Sierra Club filed suit against EPA, because EPA did not issue findings of failure to submit attainment demonstrations for the three nonattainment areas. EPA published its finding of failure to submit for these three nonattainment areas on Aug. 10, 2020, effective Sept. 9, 2020.

On Feb. 9, 2022, the commission adopted the Rusk-Panola 2010 SO₂ NAAQS Attainment Demonstration SIP Revision and associated agreed order to address the finding of failure to submit. TCEQ submitted the SIP revision to EPA on Feb. 28, 2022. On Feb. 23, 2022, the commission adopted the Redesignation Request and Maintenance Plan SIP Revision for the Freestone-Anderson and Titus SO₂ NAAQS Nonattainment Areas to request redesignation to attainment and address remaining requirements from the finding of failure to submit. TCEQ submitted the SIP revision to EPA on March 3, 2022.

On March 26, 2021, EPA published nonattainment designations for portions of Howard, Hutchinson, and Navarro counties that were effective April 30, 2021. SIP revisions for the nonattainment areas are due to EPA by Oct. 30, 2022. The commission approved proposed SO₂ attainment demonstration SIP revisions for Howard, Hutchinson, and Navarro counties and the associated proposed Title 30, Texas Administrative Code, Chapter 112 rulemaking on April 13, 2022. Commission adoption of the SIP and rule revisions is currently scheduled for Oct. 5, 2022.

Evaluating Health Effects

In a variety of ways, TCEQ toxicologists meet their goals of identifying chemical hazards, evaluating potential exposures, assessing human health risks, and communicating risk to the general public and stakeholders. Perhaps most notably, TCEQ relies on health- and welfare-protective values developed by its toxicologists to ensure that both permitted and monitored airborne concentrations of pollutants stay below levels of concern. So far, TCEQ has derived final toxicity values for 324 pollutants. Numerous federal agencies and academic institutions have recognized Texas for these values and many other states and countries use them.

TCEQ toxicologists use the health- and welfare-protective values they derive—called air monitoring comparison values (AMCVs). AMCVs are used to evaluate the public-health risk of millions of measurements of air pollutant concentrations that are collected from the ambient air monitoring network throughout the year.

When necessary, TCEQ also conducts health-effects research on particular chemicals with limited or conflicting information. In fiscal 2020 and 2021, TCEQ and its contractors completed specific work evaluating associations between particulate matter less than 2.5 micrometers (PM^{2.5}) and adverse health effects, as well as research to understand health risks in communities with neighboring industrial facilities, such as refineries. This work can inform the review and assessment of state and federal air quality regulations, and the health risks to humans from exposure to air, water, or soil samples collected during investigations and remediation. It can also aid in communicating health risks to the public.

Finally, TCEQ toxicologists communicate risk and toxicology with state and federal legislators and their committees, EPA, other government agencies,

the press, and judges during legal proceedings. This often includes input on EPA rulemaking, including the NAAQS, through written comments, meetings, and scientific publications.

Air Pollutant Watch List

TCEQ toxicologists oversee the Air Pollutant Watch List activities that result when ambient pollutant concentrations exceed protective levels. TCEQ routinely reviews and conducts health-effects evaluations of ambient air monitoring data from across the state by comparing air toxic concentrations to their respective AMCVs or state standards. TCEQ evaluates areas for inclusion on the Air Pollutant Watch List where monitored concentrations of air toxics are persistently measured above AMCVs or state standards.

The purpose of the watch list is to reduce air toxic concentrations below levels of concern by focusing TCEQ resources and heightening the awareness of interested parties in areas of concern.

TCEQ also uses the watch list to identify companies with the potential for contributing to elevated ambient air toxic concentrations and then develop strategic actions to reduce emissions. An area's inclusion on the watch list results in more stringent permitting, priority in investigations, and in some cases, increased monitoring.

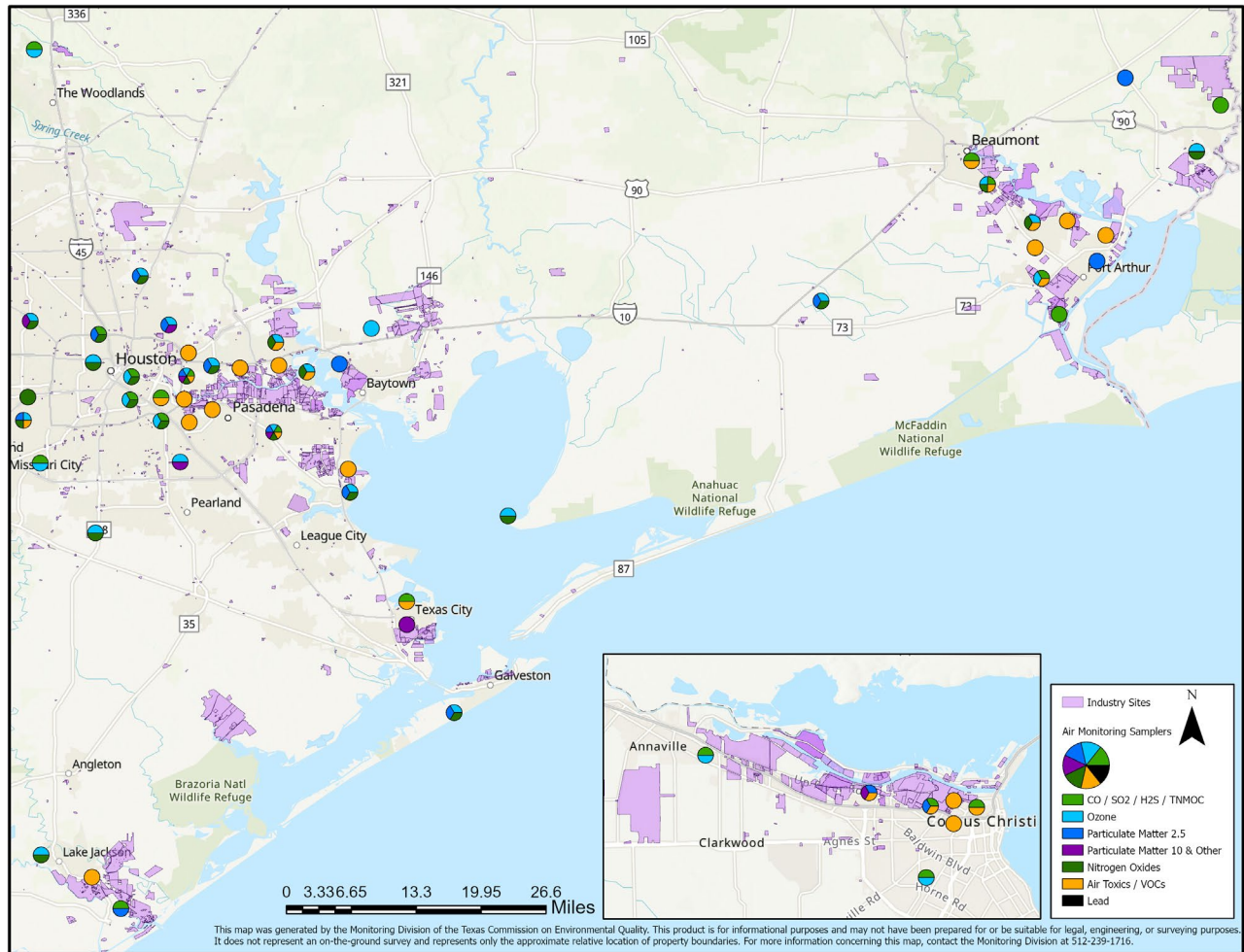
Four areas of the state are currently on the watch list. TCEQ continues to evaluate the current and historical Air Pollutant Watch List areas to determine whether improvements in air quality have occurred and are maintained. TCEQ has also identified areas in other parts of the state with monitoring data that are close or slightly above AMCVs, and is working proactively with nearby companies to reduce air toxic concentrations, preventing the need for listing these areas on the watch list.

You can find the Air Pollutant Watch List at www.tceq.texas.gov/toxicology/apwl.

Air Monitoring

TCEQ monitors air quality across the state using a network of stationary air monitors, mobile monitoring assets, and handheld monitors. Ambient air quality monitoring allows the agency to determine compliance with federal air quality standards, evaluate air pollution trends, study air pollution formation and behavior, assess localized air quality concerns, and provide support during environmental emergencies and natural disaster recovery.

Figure 1. Coastal Area Air Monitoring Stations



While ambient air monitors can measure the impact on air quality from a variety of sources in an area, they are not intended to measure emissions or determine compliance from individual sources or facilities.

STATIONARY MONITORING

TCEQ's stationary air monitoring network consists of over 170 monitoring stations serving over 25 million Texans. Designed to meet federal air monitoring requirements, the stationary network includes more than double the number of monitors required by federal rule, in addition to numerous state-initiated ones. As illustrated in figures 1 and 2, monitors are predominantly located in population centers, with increased coverage in metropolitan areas with greater industrial activity.

MONITORING VANS

Augmenting the stationary network are a fleet of three Strategic Mobile Air Reconnaissance Technology (SMART) vans capable of continuous, real-time

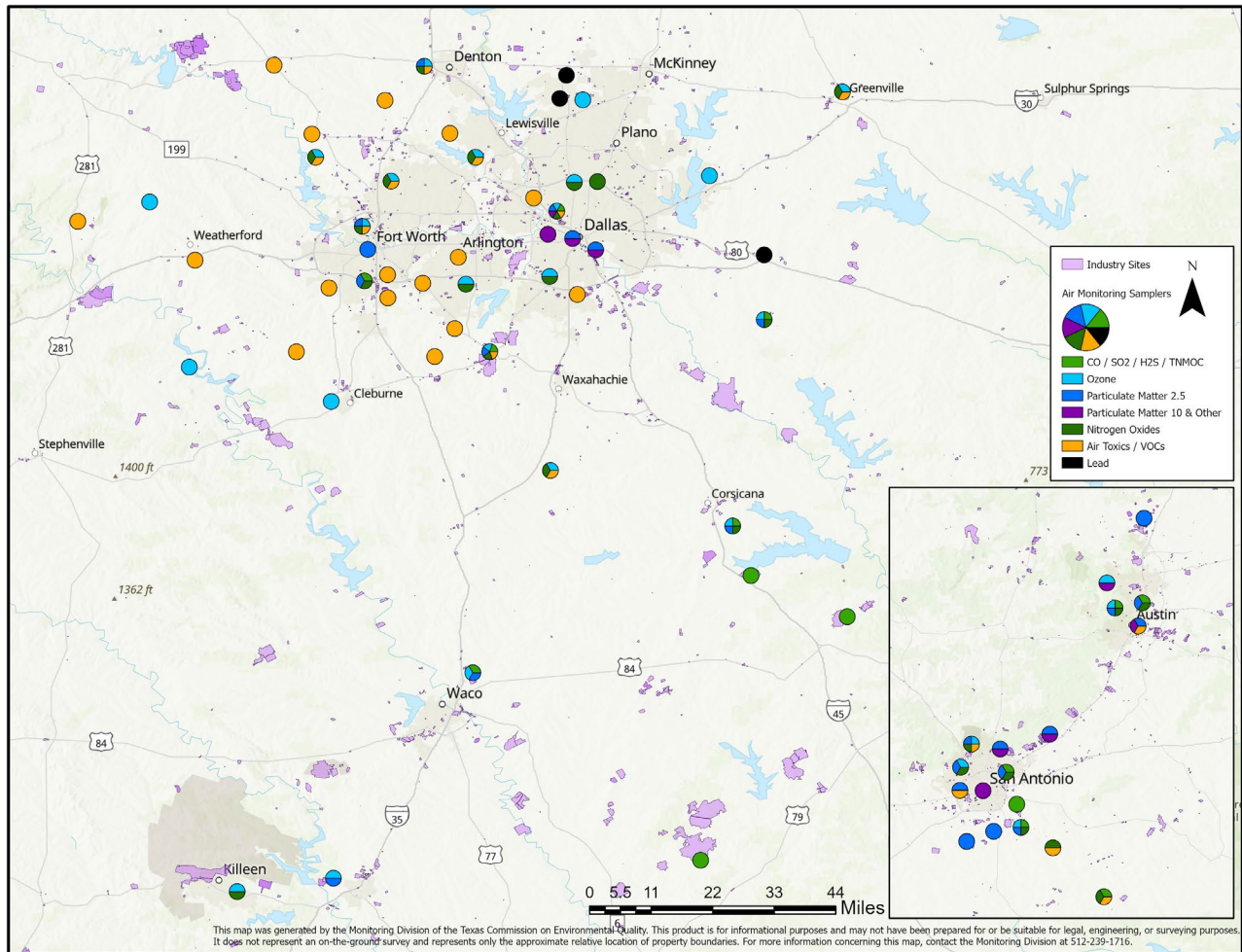
measurement of a wide range of target pollutants while in transit. These monitoring vans use on-board instruments and GPS mapping to provide:

- net upwind and downwind measurements;
- in-transit surveys to identify pollution hot spots;
- identification of odorous compounds;
- plume tracing using wind speed, wind direction, and optical gas imaging of potential sources; and
- data for assessing regulatory and health impacts.

Housed in Austin, these three monitoring vans can travel anywhere in Texas to conduct short-term, air monitoring assessments in support of regional investigations, special air quality projects, environmental emergencies, and natural disaster recovery.

In addition to the Austin-based SMART vans, TCEQ's Beaumont, Houston, and Corpus Christi regions each house a rapid assessment survey vehicle capable of continuous, real-time measurement and mapping of fourteen target compounds. Expanding on this concept, TCEQ will also deploy additional rapid

Figure 2. Dallas-Fort Worth and Central Texas Air Monitoring Stations



assessment survey vehicles in its Dallas-Fort Worth and Midland-Odessa regions in fiscal 2023.

HANDHELD MONITORING

Handheld air monitoring equipment and optical gas imaging cameras allow TCEQ to assess air quality at the source level in response to complaints, environmental emergencies, and natural disasters. Using these tools, investigators routinely conduct air reconnaissance to identify potential sources impacting air quality for further evaluation and enforcement. They target areas of concern, such as the Gulf Coast's industrial ports and near oil and gas refineries.

Methane Rule for Crude Oil and Natural Gas Sources

On Nov. 15, 2021, EPA published the proposed New Source Performance Standards (NSPS) under FCAA Subsection 111(b). The proposed rulemaking would update, strengthen, and expand the current NSPS for

methane and volatile organic compounds emitted from crude oil and natural gas sources that had begun construction, modification, or reconstruction after Nov. 15, 2021, and includes standards for emission sources not previously regulated.

Also, on Nov. 15, 2021, EPA published the proposed emissions guidelines under FCAA Subsection 111(d) for the crude oil and natural gas sector, including the production, processing, transmission, and storage segments. The proposed rulemaking would establish emissions guidelines for states to use in developing, submitting, and implementing state plans that are required to establish standards of performance for methane emissions from crude oil and natural gas sources existing as of Nov. 15, 2021.

EPA is expected to issue a supplemental rulemaking proposal in October 2022 that will provide regulatory text and may expand on or modify these requirements for NSPS and emissions guidelines in response to public input. The final rule is expected May 2023.

Regional Haze

Guadalupe Mountains and Big Bend national parks are identified by the federal government for visibility protection, along with 154 other national parks and wilderness areas. Regional Haze is a long-term air quality program requiring states to develop plans to meet a goal of natural visibility conditions by 2064. In Texas, the primary visibility-impairing pollutants are NO_x , SO_2 , and PM. Requirements for the Regional Haze Program include a Regional Haze SIP revision that is due to EPA every 10 years and a progress report due every five years, to demonstrate progress toward natural conditions.

The first Texas Regional Haze SIP revision was submitted to EPA in 2009. In 2016, EPA finalized a partial disapproval of that plan and proposed a Federal Implementation Plan (FIP) that would have required emissions control upgrades or emissions limits at eight coal-fired power plants in Texas. In July 2016, Texas and other petitioners challenged the FIP action in the 5th Circuit Court of Appeals, contending that EPA acted outside its statutory authority. In 2017, EPA asked the court to remand the FIP back to EPA and sought a stay of the litigation pending review of the FIP, which was granted by the court. In July 2022, the court directed EPA to issue a status report with a timeline with specific dates for when the agency will complete the voluntary remand. EPA's July 15, 2022, status report indicated that it will complete action on the remand by Dec. 31, 2023.

Due to continuing issues with the Cross-State Air Pollution Rule (CSAPR), EPA could not act on best available retrofit technology (BART) requirements for

electric generating units (EGUs). On March 20, 2018, the D.C. Circuit Court of Appeals issued a ruling upholding "CSAPR-better-than-BART" for regional haze.

On Oct. 17, 2017, EPA adopted a FIP to address BART for EGUs in Texas, which included an alternative trading program for SO_2 . EPA will administer the trading program, which includes only specific EGUs in Texas and no out-of-state trading. For NO_x , Texas remains in CSAPR. For PM, EPA determined that no further action was required. On June 29, 2020, EPA finalized the amended BART intrastate trading program FIP for Texas, and the trading program was affirmed as an alternative to BART requirements for certain sources in Texas.

TCEQ submitted Texas' Regional Haze SIP revision for the second planning period to EPA on July 20, 2021, before the July 31, 2021, deadline. The analyses performed for the SIP revision found that the estimated annualized costs of implementing additional controls for the second planning period would be approximately \$200 million and would result in visibility benefits that would be imperceptible to the human eye. Therefore, the commission found that additional emissions controls are unreasonable for the second planning period. This SIP revision is under EPA review.

Major Incentive Programs

TEXAS EMISSIONS REDUCTION PLAN

TCEQ's Texas Emissions Reduction Plan (TERP) provides grants to individuals and entities for projects that will lower NO_x emissions from mobile sources.

Because NO_x is a leading contributor to the formation of ground-level ozone, reducing these emissions is key to complying with the federal ozone standard. Programs under TERP also:

- Encourage using natural gas vehicles and other alternative fuel vehicles, and installing infrastructure to provide fuel for those vehicles.
- Reduce emissions of diesel exhaust from school buses.
- Advance technologies that reduce NO_x and other emissions from facilities and other stationary sources.
- Conduct studies and fund pilot programs that encourage port authorities to reduce emissions caused by moving cargo.

The ten TERP programs are listed on page 26. TCEQ expects to continue to award funds under each of these programs during fiscal 2023.



El Capitan, Guadalupe Mountains National Park.

Credit: iStock.

Diesel Emissions Reduction Incentive (DERI) Program

- Upgrades or replaces heavy-duty vehicles, locomotives, marine vessels, or other pieces of equipment in nonattainment areas and affected counties with newer, cleaner models.
- Over \$1 billion awarded from 2001 through August 2021 to upgrade or replace 20,472 vehicles, locomotives, vessels, and equipment.
- Projected to reduce NO_x emissions by 189,242 tons in the nonattainment areas and other affected counties.

Seaport and Rail Yard Areas Emissions Reduction (SPRY) Program

- Repowers or replaces older drayage trucks and equipment operating at eligible seaports and rail yards in nonattainment areas with newer, cleaner models.
- Over \$28 million awarded from 2015 through August 2022 to replace 343 vehicles and pieces of equipment.
- Projected to reduce NO_x by 952 tons in the nonattainment areas and other affected counties.

Port Authority Studies and Pilot Programs (PASPP)

- Provides grants to port authorities located in the nonattainment areas or affected counties. They use the funds to conduct studies and implement pilot programs to reduce emissions of NO_x and PM caused by moving cargo.
- \$2 million awarded from 2018 through August 2021 for two studies and pilot programs.

Texas Clean Fleet Program (TCFP)

- Assists owners of large fleets in Texas with replacing diesel-powered vehicles with new alternative fuel or hybrid vehicles.
- Over \$69 million awarded from 2009 through August 2021 to replace 730 vehicles.
- Projected to reduce NO_x emissions in the counties of the Clean Transportation Zone by 699 tons.

Texas Natural Gas Vehicle Grants Program (TNGVGP)

- Replaces or repowers diesel- or gasoline-powered vehicles with new or used natural gas vehicles or new natural gas engines.

- Over \$54 million awarded from 2009 through August 2021 to replace or repower 1,148 vehicles.
- Projected to reduce NO_x emissions in the counties of the Clean Transportation Zone by 1,674 tons.

Alternative Fueling Facilities Program (AFFP)

- Helps to ensure that alternative fuel vehicles have access to fuel and builds the foundation for a self-sustaining market for alternative fuels in Texas.
- Over \$31 million awarded from 2012 through August 2021 for constructing or expanding 311 alternative fueling facilities, including 102 natural gas fueling facilities, 182 electric charging stations, and 27 fueling facilities for other alternative fuels.

Texas Clean School Bus (TCSB) Program

- Reduces the exposure of children across Texas to diesel exhaust in and around school buses by replacing or retrofitting older school buses.
- Over \$48 million awarded from 2008 through August 2022, including over \$4 million in federal funds, to retrofit or replace 7,857 buses.

New Technology Implementation Grant (NTIG) Program

- Reduces emissions from facilities and other stationary sources.
- Over \$16 million awarded from 2010 through August 2021 for 10 projects.

Light-Duty Motor Vehicle Purchase or Lease Incentive Program (LDPLIP)

- Supports purchases of light-duty vehicles operating on natural gas, propane, or electricity.
- Over \$15 million awarded from 2014 through August 2022 for purchasing or leasing 6,574 vehicles, including 6,309 rebates for plug-in electric and plug-in hybrid electric vehicles, and 265 rebates for natural gas vehicles.

Governmental Alternative Fuel Fleet (GAFF) Program

- Supports state agencies and political subdivisions across Texas in upgrading, replacing, or expanding their vehicle fleets to alternative fuel, and purchasing, leasing, or installing refueling infrastructure for those vehicles.

- \$6 million awarded in 2021 for replacing 80 school buses and installing one fueling facility.

The TERP Biennial Report to the Texas Legislature (TCEQ publication SFR-079/20) provides further details on the program's grants and activities.

TEXAS VOLKSWAGEN ENVIRONMENTAL MITIGATION PROGRAM

In December 2017, Gov. Greg Abbott selected TCEQ as the lead agency responsible for administering funds received from the Volkswagen State Environmental Mitigation Trust. A minimum of \$209 million dollars will be made available for projects that mitigate the additional NO_x emissions from vehicles using defective devices to pass emissions tests.

From 2019 through August 2022, TCEQ awarded over \$80 million under the Texas Volkswagen Environmental Mitigation Program for replacing 1,265 vehicles including school buses, transit buses, refuse trucks, local delivery vehicles, and port drayage vehicles. Replacing these vehicles is projected to reduce NO_x emissions in the nonattainment areas and other affected counties by 1,471 tons. TCEQ also awarded over \$31 million for purchasing and installing 635 electric vehicle charging units.

TCEQ expects to award additional funds under the program in fiscal 2023.

Environmental Research and Development

TCEQ supports scientific research to study air quality in Texas. The Air Quality Research Program (AQRP) is administered by The University of Texas at Austin and funded by TCEQ. AQRP funds projects that build on research from the previous biennium.

AQRP and TCEQ sponsored ship-based ozone and meteorological measurements in Galveston Bay and the Gulf of Mexico to improve the understanding of coastal air quality. The collected data will assess the importance of offshore emission sources and the role of meteorological transport patterns on air quality in the Houston area.

Other important air quality research carried out through AQRP has included the following:

- Projects that examine the impact of biomass burning and wind-blown agricultural dust on air quality in Texas, including fires outside Texas and the U.S.



Sunset at Galveston Island. Credit: iStock.

- Measuring atmospheric chemistry and meteorology from the coastal area of Corpus Christi inland to San Antonio.
- Evaluating satellite data to potentially improve emission inventories.

In addition to research carried out through the AQRP, TCEQ used grants and contracts to support ongoing air quality research. Notable projects have included:

- Supporting the Tracking Aerosol Convection Experiment – Air Quality field campaign in Houston to study ozone formation, evaluate models, and verify emission inventories.
- Analyses of fire impacts on Texas air quality using different modeling and measurement methods, with an emphasis on identifying exceptional events that may affect air quality.
- Updating inventories for emissions from commercial marine vessels, aircraft, locomotives, rail yards, and compressor engines.
- Improving the chemical and meteorological processes of the ozone modeling system.
- Assisting with sulfur dioxide modeling for attainment demonstrations.
- Monitoring studies in El Paso to understand contributions to various pollutants from within and outside the U.S.

The latest findings from these research projects help the state understand and appropriately address some of the challenging air quality issues faced by

Texans. These challenges are increasing—in part due to changes in air quality standards—and addressing them will require continued research.

This knowledge helps ensure that Texas adopts attainment strategies that are achievable, sound, and based on the most current information.

WATER QUALITY

Developing Surface Water Quality Standards

TEXAS SURFACE WATER QUALITY STANDARDS

Under the federal Clean Water Act, every three years TCEQ is required to review and, if appropriate, revise the Texas Surface Water Quality Standards. These standards are the basis for establishing discharge limits in wastewater permits, setting instream water quality goals for total maximum daily loads, and establishing criteria to assess instream attainment of water quality.

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

Major revisions to water quality standards for 2022 will include:

- Revisions to statewide toxic criteria to incorporate new data on toxicity effects and address revised EPA procedures.
- Revisions and additions to site-specific toxic criteria to incorporate local water quality data into criteria for select water bodies.
- Revisions and additions to the uses, criteria, and descriptions of individual water bodies based on new data and results of recent use-attainability analyses (UAAs).
- Additions of site-specific recreational uses for select water bodies based on the results of recent recreational UAAs.

EPA must approve the revised standards before they can be applied to activities related to the federal Clean Water Act. Although federal review of portions of the 2010, 2014, and 2018 standards has yet to be completed, TCEQ completed the 2021 triennial standards review and the 2022 rule revisions are anticipated to be approved in September 2022.

USE-ATTAINABILITY ANALYSES

The Surface Water Quality Standards Program also coordinates and conducts use-attainability analyses to develop site-specific uses for aquatic life and recreation. The UAA assessment is often used to re-evaluate designated or presumed uses when the existing standards may need to be revised for a water body. As a result of aquatic-life UAAs, site-specific aquatic-life uses and dissolved-oxygen criteria are expected to be adopted in the 2022 revision of the standards for individual water bodies.

In 2009, TCEQ developed recreational UAA procedures to evaluate and more accurately assign levels of protection for water recreational activities such as swimming and fishing. Since then, the agency has initiated more than 156 UAAs to evaluate recreational uses of water bodies that have not attained their existing criteria. Using results from recreational UAAs, TCEQ will include site-specific contact recreation criteria for select individual water bodies in the 2022 Texas Surface Water Quality Standards revision.

Also see major revisions to water quality standards above.



A **use-attainability analysis** is a scientific assessment of the physical, chemical, biological, or recreational characteristics of a water body.

Monitoring Water Quality

Surface water quality is monitored across the state in relation to human-health concerns, ecological conditions, and designated uses. The resulting data form a basis for policies that promote the protection and restoration of surface water in Texas. Special projects contribute water quality monitoring data and information on the condition of biological communities. This provides a basis for developing and refining criteria and metrics used to assess the condition of aquatic resources.

CLEAN RIVERS PROGRAM

The Clean Rivers Program administers and implements a statewide framework set out in Texas

Water Code, Section 26.0135. This state program works with 15 regional partners (river authorities and others) to collect water quality samples, derive quality-assured data, evaluate water quality issues, and provide a public forum for prioritizing water quality issues in each Texas river basin. This program provides 60 to 75% of the data available in the state's surface water quality database used for water-resource decisions, including revising water quality criteria, identifying the status of water quality, and supporting the development of projects to improve water quality.

COORDINATED ROUTINE MONITORING

Each spring, TCEQ staff meets with various water quality organizations to coordinate monitoring efforts for the upcoming fiscal year. TCEQ prepares the guidance and reference materials, and the Texas Clean Rivers Program partners coordinate the local meetings. Participants use the available information to select stations and parameters that will enhance the overall coverage of water quality monitoring, eliminate duplication of effort, and address basin priorities.

The coordinated monitoring network, which consists

of about 2,000 active stations, is one of the most extensive in the country. Coordinating the monitoring among the various participants ensures that available resources are used as efficiently as possible.

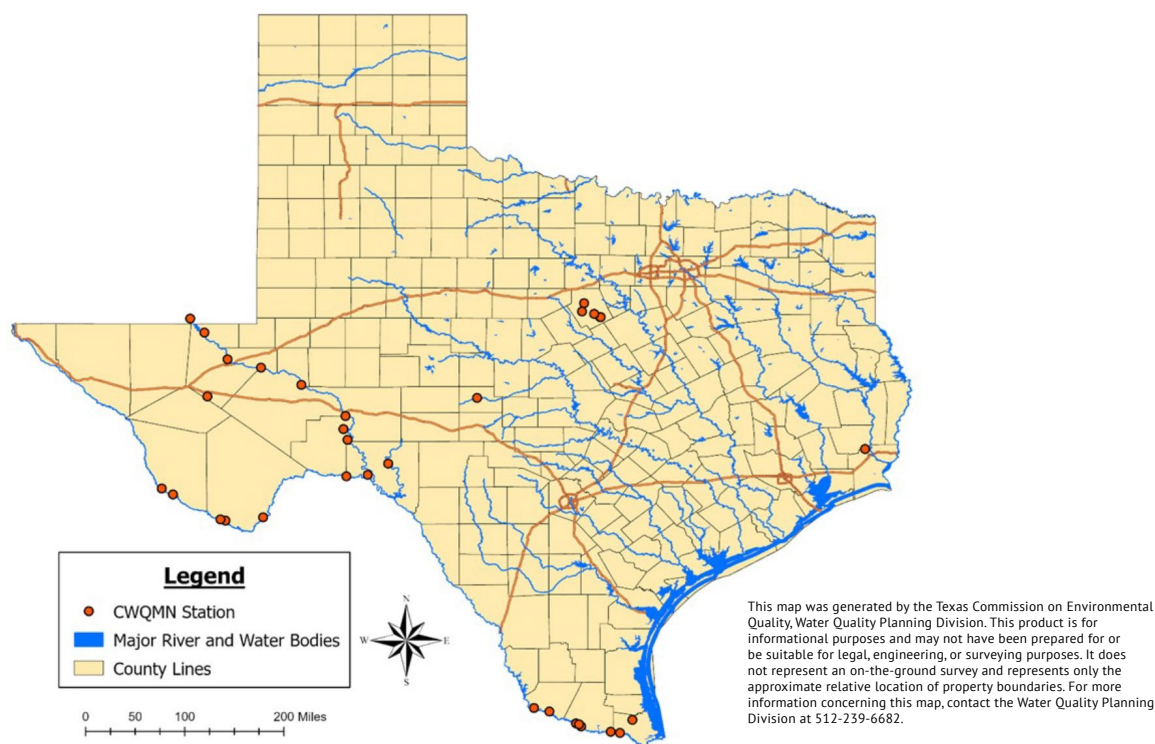
CONTINUOUS WATER QUALITY MONITORING

TCEQ has developed—and continues to refine—a network of continuous water quality monitoring sites on priority water bodies. The agency maintains 30 to 40 sites in its Continuous Water Quality Monitoring Network (CWQMN). At these sites, instruments measure basic water quality conditions every 15 minutes.

TCEQ and other organizations may use CWQMN monitoring data to make decisions about water-resource management to target field investigations, evaluate the effectiveness of water quality management programs such as TMDL implementation plans and watershed-protection plans, characterize existing conditions, develop and calibrate water quality models, define stream segment boundaries, and evaluate spatial and temporal trends. The data are posted on TCEQ's website.

The CWQMN data is used to guide decisions on how to better protect certain segments of rivers or

Figure 3. TCEQ Continuous Water Quality Monitoring Stations – July 2022



In July 2022, TCEQ had 32 active stations around the state as part of the Continuous Water Quality Monitoring Network. Instruments at these sites measure basic water quality conditions every 15 minutes. The data is used to make decisions about managing water resources and water quality. The number and locations of sites may vary from year to year.

lakes. For example, TCEQ developed a network of 15 CWQMN sites on the Rio Grande and the Pecos River, primarily to monitor levels of dissolved salts to protect the water supply in Amistad Reservoir. The Pecos River CWQMN stations also supply information on the effectiveness of the Pecos River Watershed Protection Plan. The U.S. Geological Survey operates and maintains these stations through cooperative agreements with TCEQ.

Assessing Water Quality

Every even-numbered year, TCEQ assesses water quality to determine which water bodies meet the surface water quality standards for their designated uses, such as contact recreation, support of aquatic life, or drinking-water supply. Data associated with 200 different water quality parameters are reviewed to conduct the assessment. These parameters include physical and chemical constituents, as well as measures of biological integrity.

The assessment is published on TCEQ's website and submitted as a draft to EPA as the Texas Integrated Report for Clean Water Act Sections 305(b) and 303(d) found at www.tceq.texas.gov/waterquality/assessment.

The Integrated Report evaluates conditions during the assessment period and identifies the status of the state's surface waters in relation to the Texas Surface Water Quality Standards. Waters that do not regularly attain one or more of the standards may require action by TCEQ and are placed on the 303(d) List of Impaired Water Bodies for Texas (part of the report). EPA must approve this list before its implementation by TCEQ's water quality management programs.

Because of its large number of river miles, Texas can monitor only a portion of its surface water bodies. The major river segments and those considered at highest risk for pollution are monitored and assessed regularly. EPA approved the 2022 Integrated Report in July of that year. In developing the report, water quality data was evaluated from 2,409 sites on 1,601 water bodies. The draft 2024 Integrated Report is under development.

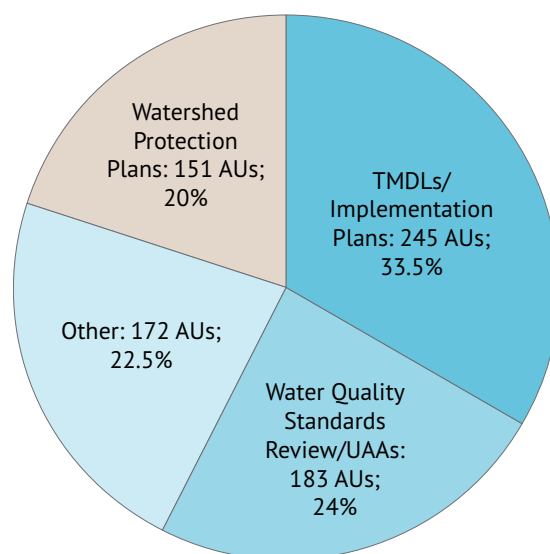
Restoring Water Quality

WATERSHED ACTION PLANNING

Water quality planning programs in Texas have responded to the challenges of maintaining and improving water quality by developing strategies to address water quality issues in the state. Watershed

Figure 4. Management Strategies for Restoring Water Quality

An assessment unit (AU) is the smallest geographic area used when evaluating surface water quality.



Total AUs with an assigned restoration strategy: 705

- Watershed Protection Plans, 145 AUs, 20%
- Water Quality Standards Review/UAs, 162 AUs, 23%
- TMDLs/Implementation Plans, 245 AUs, 35%
- Monitoring, 153 AUs, 22%

Source: WAP database and the 2020 Texas Integrated Report.

Action Planning (WAP) is a process for coordinating, documenting, and tracking the actions necessary to protect and improve the quality of the state's streams, lakes, and estuaries. The major objectives are to:

- Fully engage stakeholders to determine the most appropriate action to protect or restore water quality.
- Improve access to state agencies' decisions about water quality management and increase the transparency of that decision-making.
- Improve the accountability of state agencies responsible for protecting and improving water quality.

TCEQ, the Texas State Soil and Water Conservation Board (TSSWCB), and the Texas Clean Rivers Program partners lead the WAP process. Involving stakeholders, especially at the watershed level, is key to the success of the process.

Water impairments can be addressed in a variety

of ways. The selection of an appropriate restoration strategy is coordinated with stakeholders through the WAP process. Figure 4 reflects the 2020 Texas Integrated Report. TCEQ is currently in the process of evaluating strategies following EPA's approval of the 2022 Texas Integrated Report.

TOTAL MAXIMUM DAILY LOAD PROGRAM

The TMDL Program is one of the agency's mechanisms for improving the quality of impaired surface waters. A TMDL is the total amount (or load) of a single pollutant that a receiving water body can assimilate within a 24-hour period and still maintain water quality standards. A rigorous scientific process is used to arrive at practicable targets for the pollutant reductions in TMDLs.

This program works with the agency's water quality programs, other governmental agencies, and watershed stakeholders during the development of TMDLs and related implementation plans.

Bacteria TMDLs

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

Of the 1,051 AUs listed in the 2022 Texas Integrated Report of Surface Water Quality, about one-third are for bacterial impairments to recreational water uses.

The TMDL Program has developed an effective strategy for developing TMDLs that protect recreational safety. The strategy relies on the engagement and consensus of the communities in the affected watersheds. Other actions are also taken to address bacteria impairments, such as recreational use–attainability analyses that ensure that the appropriate contact-recreation use is in place, as well as watershed-protection plans developed by stakeholders and primarily directed at nonpoint sources.

Implementation Plans

While a TMDL analysis is being completed, stakeholders are engaged in the development of an Implementation Plan (I-Plan), which identifies the steps necessary to improve water quality. These I-Plans outline five to ten years of activities, indicating who will carry them out, when they will be done, and

how improvement will be gauged. The time frames for completing I-Plans are affected by stakeholder resources and when stakeholders reach consensus. Each plan contains the stakeholders' commitment to meet periodically to review progress. The plan is revised to maintain sustainability and to adjust to changing conditions.

Programmatic and Environmental Success

Since 1998, TCEQ has been developing TMDLs to improve the quality of impaired water bodies on the federal 303(d) List, which identifies surface waters that do not meet one or more quality standards. In all, the agency has adopted 410 TMDLs for 300 AUs in the state.

From July 2020 to July 2022, the commission adopted 36 TMDLs to address instances where bacteria, dissolved oxygen, or pH had impaired the use of the water bodies. The TMDLs developed and the number of AUs covered were: Carancahua Bay (1); Adams Bayou, Cow Bayou, and Tributaries (23); Walnut Creek (1); Harris County Flood Control Ditch D-138 (1); Horsepen Creek (1); Corpus Christi Bay Beaches (2); Caney Creek (2); Arenosa Creek (1); Hillebrandt Bayou (1); Lavaca River (1); and Sandy Creek and Wolf Creek (2). During that time, the commission also approved two I-Plans—for Carancahua Bay and Arenosa Creek.

The Greater Trinity River Bacteria TMDL I-Plan is an example of successful community engagement to address bacteria impairments. Stakeholders drove the process – with active public participation – to develop the I-Plan. A broad spectrum of authorities and interests took part, including government, agriculture, business, conservation groups, and the general public. The I-Plan identifies nine strategies for activities that address five TMDL projects. Seven AUs in the I-Plan are now meeting their contact recreation uses in the 2022 Integrated Report.

NONPOINT SOURCE PROGRAM

The Nonpoint Source (NPS) Program administers the provisions of Section 319 of the federal Clean Water Act. Section 319 authorizes grant funding for states to develop projects and implement NPS pollution management strategies to maintain and improve water quality conditions.

TCEQ, in coordination with TSSWCB, manages NPS grants to carry out the long- and short-term goals identified in the Texas NPS Management Program. The NPS Program's annual report documents progress in meeting these goals.

The NPS grant from EPA is split between TCEQ (to address urban and non-agricultural NPS pollution) and TSSWCB (to address agricultural and silvicultural NPS pollution). TCEQ receives \$3 to \$4 million annually. About 60% of overall project costs are federally reimbursable; the remaining 40% comes from state or local matching. In fiscal 2022, TCEQ received \$3.9 million, which was matched with \$2.7 million, for a total of \$6.6 million.

TCEQ annually solicits applications to develop projects that contribute to the Texas NPS Management Program. Typically, the program receives, reviews, and scores 20 to 30 applications each year. Because the number of projects funded depends on the amount of each contract, the number of contracts awarded fluctuates. Ten projects were funded in fiscal 2021, and 10 in fiscal 2022. Half of the federal funds awarded must be used to implement watershed-based plans, comprising activities that include public outreach and education, low-impact development, constructing and implementing best management practices, and inspecting and replacing on-site septic systems.

The NPS Program also administers provisions of Section 604(b) of the federal Clean Water Act. These funds are derived from State Revolving Fund appropriations under Title VI of the act. Using a legislatively mandated formula, money is passed through to councils of governments for water quality planning. The program received \$734,000 in funding from EPA in fiscal 2021 and \$734,000 in fiscal 2022.

Bay and Estuary Programs

The estuary programs are non-regulatory, community-based programs focused on conserving the sustainable use of bays and estuaries in the Houston-Galveston and Coastal Bend bays regions through implementation of comprehensive conservation management plans that are developed locally. Plans for Galveston Bay and the Coastal Bend bays were established in the 1990s and updated in 2019 and 2020, respectively, by a broad-based group of stakeholders and bay user groups. These plans strive to balance the economic and human needs of the regions.

Two different organizations execute the plans: the Galveston Bay Estuary Program (GBEP), which is a program of TCEQ, and the Coastal Bend Bays and Estuaries Program (CBBEP), which is a nonprofit authority established for that purpose. TCEQ partially funds the CBBEP.



Great Egret at Padre Island. Credit: iStock.

Additional coastal activities at TCEQ include:

- Participating in the Gulf of Mexico Alliance, a partnership linking Alabama, Florida, Louisiana, Mississippi, and Texas. TCEQ contributes staff time to implement the Alliance's Governors' Action Plan, focusing on water resources and improved coordination among the states.
- Serving on the Coastal Coordination Advisory Committee and participating in the state's Coastal Management Program to improve the management of the area's natural resources and to ensure long-term ecological and economic productivity of the coast.
- Working with the General Land Office to carry out the federally approved Coastal Nonpoint Source Program, which is required under the Coastal Zone Act Reauthorization Amendments.

GALVESTON BAY ESTUARY PROGRAM

GBEP provides ecosystem-based management that strives to balance economic and human needs with available natural resources in Galveston Bay and its watershed. Toward this goal, the program fosters cross-jurisdictional coordination among federal, state, and local agencies and groups, and cultivates diverse public-private partnerships to implement projects and build public stewardship.

GBEP priorities include:

- coastal habitat conservation
- public awareness and stewardship
- water conservation
- nonpoint and point source abatement
- monitoring and research

During fiscal 2021 and 2022, GBEP worked with partners to conduct ecosystem-based monitoring and research to inform resource managers and fill data gaps. The program collaborated with local stakeholders to create watershed-protection plans and carry out water quality projects. They launched the first web-based format of the State of the Bay report, which summarizes monitoring data, research findings, management actions, and historical resource uses—and developed the interactive Regional Monitoring Database where users can view, explore, and download management and research data on Galveston Bay. GBEP also developed an Implementation Tracking Viewer, to track projects by the program and its partners.

In fiscal 2021 and 2022, 6,103.5 acres of coastal wetlands and other important habitats were protected, restored, and enhanced. An additional 820 acres will be placed under conservation by the end of calendar 2022. Since 2000, GBEP and its partners have protected, restored, and enhanced a total of 39,996.49 acres of important coastal habitats.

Through collaborative partnerships established by the program, approximately \$7.22 in private, local, and federal contributions was leveraged for every \$1 the state dedicated to the program in fiscal 2021 and 2022.

COASTAL BEND BAYS AND ESTUARIES PROGRAM

During fiscal 2021 and 2022, CBBEP implemented 84 projects, including habitat restoration and protection, outreach and educational programs, and studies that promote bay and estuary watershed planning. Based in the Corpus Christi area, CBBEP is a voluntary partnership that works with industry,



Roseate Spoonbill at Galveston Bay. Credit: iStock.

environmental groups, bay users, local governments, and resource managers to improve the health of the bay system. In addition to receiving program funds from local governments, private industry, TCEQ, and EPA, CBBEP seeks funding from private grants and other governmental agencies. In the last two years, CBBEP secured \$17,699,788 in additional funds to leverage TCEQ funding.

CBBEP priority issues focus on human uses of natural resources, freshwater inflows, maritime commerce, habitat loss, water and sediment quality, and education and outreach. One of CBBEP's goals under their comprehensive conservation and management plan is to address 303(d)-listed segments so that they meet state water quality standards.

Other areas of focus:

- Conserving and protecting wetlands and wildlife habitat through partnerships with private landowners.
- Restoring the Nueces River Delta for the benefit of fisheries, wildlife habitat, and freshwater conservation.
- Environmental education and awareness for more than 7,900 students and teachers annually at the CBBEP Nueces Delta Preserve by delivering educational experiences and learning through discovery and scientific activities.
- Enhancing colonial-waterbird rookery islands by implementing predator control, habitat management, and other actions to help stem the drop in populations of nesting coastal birds in the Coastal Bend and the Lower Laguna Madre.
- Supporting the efforts of the San Antonio Bay Partnership to better characterize the San Antonio Bay system and to develop and implement management plans that protect and restore wetlands and wildlife habitats.

Wastewater Permitting

The Texas Pollutant Discharge Elimination System (TPDES) Program issues site-specific permits to discharge wastewater or stormwater into water in the state. These permits include effluent limitations that ensure that the discharge doesn't degrade water quality in the receiving stream. There are two types of permits: an individual permit is tailored to an individual facility, whereas a general permit covers a group of dischargers with similar qualities within a given geographic location.

INDUSTRIAL AND MUNICIPAL
INDIVIDUAL PERMITS

Industrial wastewater permits are issued for the discharge of wastewater generated from industrial activities. TCEQ issued 121 industrial wastewater permits in fiscal 2021 and 127 in fiscal 2022. Municipal wastewater permits are issued for the discharge of wastewater generated from municipal and domestic activities. TCEQ issued 373 municipal wastewater permits in fiscal 2021 and 530 in fiscal 2022. TCEQ has 23 active individual permits for municipal stormwater.

GENERAL PERMITS

General permits provide a streamlined authorization process for certain discharges of wastewater or stormwater. TCEQ has developed 15 general permits. Applications for stormwater general permits make up a significant portion of the general permit workload. The agency has developed an online application for all stormwater general permits and some of the wastewater general permits to accommodate the growing workload.

STORMWATER PERMITS

TCEQ has three general permits for stormwater based on the source of the stormwater: industrial facilities, construction activities, and municipal entities. The multi-sector general permit regulates stormwater discharges from industrial facilities. The construction general permit regulates stormwater runoff associated with construction activities. The municipal separate storm sewer system (MS4) general permit authorizes 515 entities.

DRINKING WATER SYSTEMS

The TCEQ Public Drinking Water Program is responsible for ensuring that Texas citizens receive a safe and adequate supply of drinking water and carries out this responsibility by implementing the Safe Drinking Water Act. All public water systems must be approved by TCEQ prior to beginning operations, provide documentation to show that they meet state and federal requirements, and evaluate the quality of the drinking water.

Ensuring Safe Drinking Water

Of the approximate 7,100 public water systems (PWSs) in Texas, about 4,640 are community systems, mostly operated by cities. These systems serve about 97% of Texans. The rest are non-community systems—such as those at schools, churches, factories, businesses, and state parks.

TCEQ offers online data tools so that the public can find information on the quality of locally produced drinking water. Texas Drinking Water Watch (www.tceq.texas.gov/goto/dww) houses analytical results from the compliance sampling of PWSs. The Source Water Assessment Viewer (www.tceq.texas.gov/gis/swaview) shows the location of the sources of drinking water and any potential sources of contamination, such as an underground storage tank.

All PWSs must monitor the levels of contaminants present in treated water and verify that each contaminant does not exceed its maximum contaminant level, action level, or maximum residual disinfection level—the highest level at which a contaminant is considered acceptable in drinking water for the protection of public health.

In all, state and federal regulations have set standards for 102 contaminants in the major categories of

Table 5. Stormwater Permits

	AUTHORIZATIONS ISSUED		APPLICATIONS RECEIVED (monthly average)		APPLICATIONS RECEIVED (total)	
	FY21	FY22	FY21	FY22	FY21	FY22
Industrial	2,316	8,997	81	165	2,353	8,993
Construction	8,691	10,089	725	841	8,694	10,094
Municipal	1	1	1	0	10	1

Note: Industrial includes no-exposure certifications.

microorganisms, disinfection by-products, disinfectants, organic and inorganic chemicals, and radionuclides. TCEQ evaluates approximately 165,000 analytical results each month to determine compliance with these standards. The most significant microorganism is coliform bacteria, particularly E. Coli. The most common chemicals of concern in Texas are disinfection by-products, arsenic, fluoride, and nitrate.

TCEQ collects more than 59,981 water samples each year just for chemical compliance. TCEQ contractors collect most of the chemical samples and submit them to an accredited laboratory for analysis. The analytical results are sent to TCEQ and the PWSs.

Each year, TCEQ holds a free symposium on public drinking water, which typically draws more than 1,000 participants. The agency also provides technical assistance to PWSs to ensure that consumer confidence reports are developed correctly and include all required information.

ASSISTING PWSs

TCEQ strives to ensure that all water and wastewater systems have the capability to operate successfully. TCEQ contracts with the Texas Rural Water Association to assist utilities with financial, managerial, and technical expertise. About 1,009 assignments were made through this contract in fiscal 2021, and 1,076 assignments in fiscal 2022.

REVIEWING ENGINEERING PLANS AND SPECIFICATIONS

PWSs are required to submit engineering plans and specifications for new water systems or for improvements to existing systems to ensure that each system is capable of meeting safe drinking water standards. The plans must be reviewed before construction can begin. TCEQ completed compliance reviews of 2,477 engineering plans for PWSs in fiscal 2021 and 2,517 in fiscal 2022.

ENFORCING COMPLIANCE

EPA developed the Enforcement Response Policy and the Enforcement Targeting Tool for violations under the Safe Drinking Water Act. TCEQ uses this tool to identify PWSs with health-based or repeated violations and show a history of violations of multiple rules. This strategy brings the systems with the most significant violations to the top of the list for enforcement action, with the goal of returning those systems to compliance as quickly as possible.

Additionally, any PWS that fails to have its water tested or reports test results incorrectly faces a monitoring or reporting violation. When a PWS has significant or repeated violations of state regulations, the case is referred to TCEQ’s enforcement program.

More than 98.8% of the state’s population is served by a PWS producing water that is in compliance with the National Primary Drinking Water Standards.

REVIEWING WATER DISTRICT APPLICATIONS

The agency reviews applications to create general-law water districts and reviews bond applications for water districts to fund water, sewer, and drainage projects. The agency reviewed 574 water-district applications in fiscal 2021 and 595 in fiscal 2022.

Table 6. Violations of Drinking-Water Regulations

	Fiscal 2021	Fiscal 2022
Enforcement Orders	245	243
Assessed Penalties	\$610,704	\$859,163
Offsets by SEPs	\$39,392	\$34,355

Note: The numbers of public-water-supply orders reflect enforcement actions from all sources in the agency.

Ensuring Adequate Drinking Water Supply

EXPLORING NEW SUPPLIES THROUGH ALTERNATIVE TREATMENT

The population of Texas is expected to reach almost 46 million by the year 2060. Planning well in advance is critical to sustaining increasing water needs in a state that experiences prolonged droughts, floods, and other challenges. Recognizing this, more and more public water systems are beginning to propose the use of less-conventional sources of water that often require complex innovative treatment.

TCEQ’s engineers and scientists use their expertise to help guide public water systems in selecting effective innovative treatment technologies, and to ultimately grant approvals for those technologies while ensuring that the treated water is safe for human consumption. Some examples of challenging water sources that require such technologies are groundwater with elevated levels of nitrates, radionuclides, or other contaminants; saline or brackish groundwater;

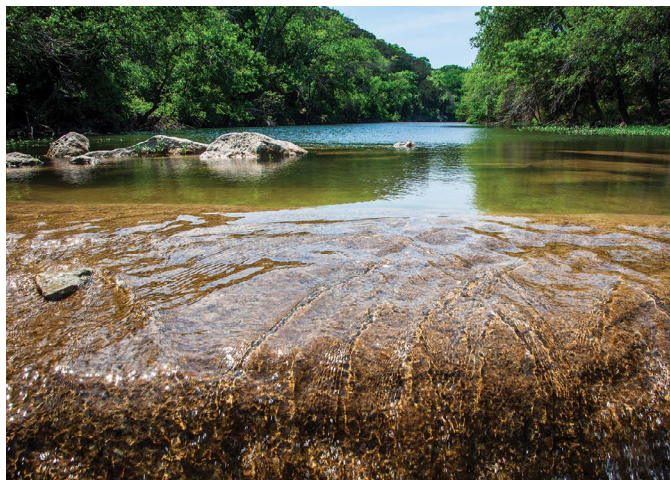
seawater; and effluent from municipal wastewater treatment plants reclaimed for direct potable reuse.

DISASTER PREPAREDNESS

TCEQ's disaster preparedness program assists public water systems and affected utilities in providing a safe, adequate, and continuous supply of drinking water to their customers before, during, and after a disaster by using an all-hazards approach. Affected utilities across the state are required to implement a TCEQ-approved emergency preparedness plan that lays out how they will provide drinking water to customers during an extended power outage.

TCEQ's website provides information on natural-disaster preparedness, drinking water and floods, homeland security for public water systems, regulatory guidance, and mutual-aid assistance through the Texas Water/Wastewater Agency Response Network (TXWARN). TCEQ's Water Security Contract provides educational workshops and seminars to public water systems across the state on topics such as risk assessments, emergency response planning, hazard mitigation funding, disaster relief funding, emergency management resources, and drought.

TCEQ's Drought Team coordinates public drinking water drought-response activities. The team issues updates on the status of drought conditions and continues to monitor a targeted list of public water systems that have a limited supply of water. In addition, the multi-agency Emergency Drinking Water Task Force, which was formed to respond to drought emergencies at public water systems, meets regularly to discuss the systems being tracked and opportunities for outreach, funding, and assistance.



Barton Creek Greenbelt. Credit: iStock.

WATER AVAILABILITY

Managing Surface Water Rights

TCEQ is charged with managing state surface water in Texas and implements that authority through permitting and enforcement of surface water rights. The use of water for domestic or livestock purposes is considered a superior water right that does not require a permit. TCEQ is responsible for protecting senior and superior water rights, and for ensuring that water right holders divert state water only according to their permits.

Texas water law specifies that in times of shortage, permitted water rights will be administered based on the priority date of each water right, also known as the prior appropriation doctrine—that is, the earliest in time is senior. Also, exempt domestic and livestock uses are superior to permitted rights.

Among permitted water right holders, those that received their authorization first (senior water rights) are entitled to take their water before water right holders that received their authorization on a later date (junior water rights). Both senior and superior water right holders not able to take their authorized water can call on TCEQ to enforce the priority doctrine (known as a priority call).

Under the *TCEQ v. Texas Farm Bureau* decision, if suspension is necessary to satisfy a priority call by a senior or superior water right holder, TCEQ will not be able to exempt any junior water rights. This includes exemptions based on public health, safety, or welfare concerns for junior water rights used for municipal purposes or power generation.

MANAGING WATER AVAILABILITY DURING DROUGHT

TCEQ responds to extreme drought through the following activities:

- Monitoring conditions across the state.
- Expedited processing of drought-related water rights applications.
- Priority call response.
- Participating in multi-disciplinary task force meetings.

TCEQ also conveys information about drought to state leaders, legislative officials, county judges, county extension agents, holders of water right permits, and the media.

Water Rights Permitting

Water flowing in Texas creeks, rivers, lakes, and bays is state water. The right to use this water may be acquired through appropriation via permitting as established in state law. An authorization (a permit or certificate of adjudication) is required to divert, use, or store state water or to use the bed and banks of a watercourse to convey water. However, there are several specific uses that are exempt from the requirement for a water right permit, such as domestic and livestock purposes. For any new appropriation of state surface water, the Texas Water Code requires that TCEQ determine whether water is available in the source of supply. Once obtained, a surface water authorization is perpetual, except for some temporary and term authorizations.

TCEQ reviews permit applications for new appropriations of state water for administrative and technical requirements related to conservation, water availability, and the environment. In addition to new appropriation requests, the agency also reviews amendment applications and other applications including bed-and-bank authorizations, reuse, and temporary water rights. In fiscal 2021 and 2022, the agency processed 1,505 water rights actions, including new permits, amendments, water-supply contracts, and transfers of ownership.

Major changes to state water policy (example: developing environmental flow standards), drought, complex applications, and other projects can shift

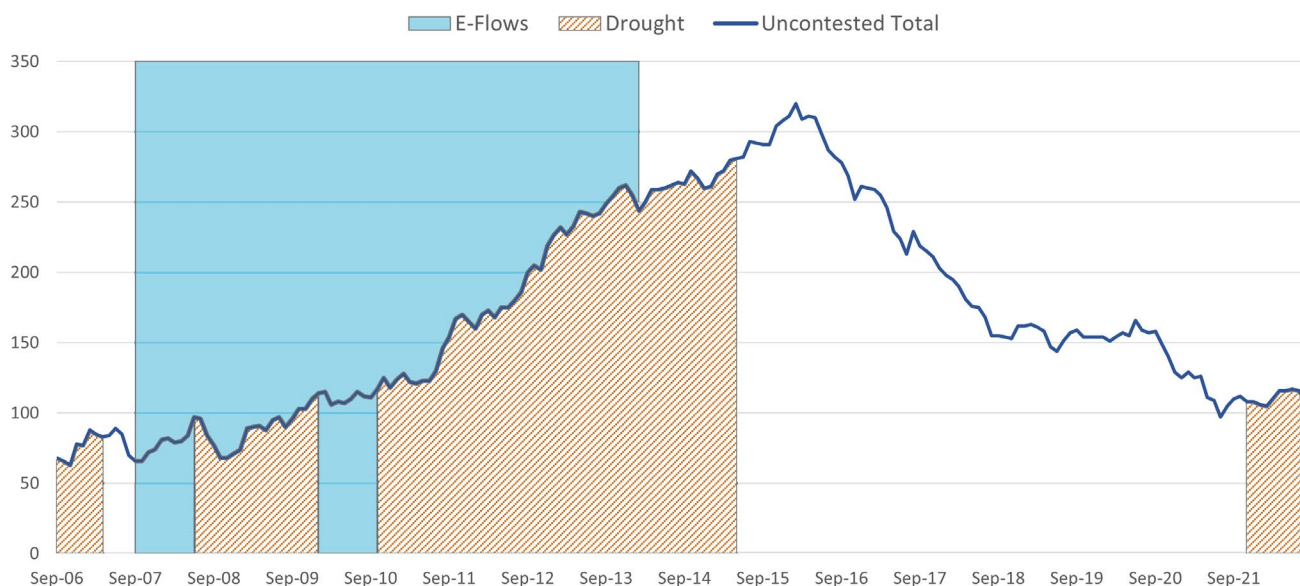
TCEQ water rights permitting staff from permitting activities. Beginning in 2007, several of these factors affected water rights processing. The result was an increase in pending permit applications, 355, by early 2016. That number has since been reduced to 109 as of September 2022. Figure 5 shows the number of pending applications for water right permits from November 2014 to August 2022 and TCEQ's recalibration efforts.

In 2022, TCEQ began requiring pre-application meetings after finding that this practice resulted in more complete applications. Time extensions granted to applicants to respond to requests for information are limited and there are return policies to address unresponsive applicants. Applying Lean management tools and practices—incorporating continuous improvement—to water rights permitting helped streamline, and identify and solve problems with, the process. In addition, TCEQ has conducted outreach to help water right holders remain in compliance with statutory requirements for reporting water use. Whenever possible, TCEQ has reached out to water rights stakeholders and increased its presence and availability at water conferences and other events.

FAST TRACK PERMITTING

Not all water right applications require the same level of technical review. The Fast Track Program streamlines less complex water right applications through a modified Lean process. This program has been very successful and, as of September 2022, the average processing time for Fast Track applications was 199 days.

Figure 5. Pending Uncontested Water Rights Applications, September 2006–September 2022



Applications for Certain Amendments (House Bill 1964)

In 2019, the 86th Texas Legislature passed HB 1964, streamlining the water rights permitting process for simple amendments to a water right that do not affect other water rights or the environment [Texas Water Code Subsection 11.122(b-3)]. As of September 2022, the average processing time for these applications was 81 days.

TEXAS WATER RIGHTS VIEWER

In September 2019, TCEQ launched the Texas Water Rights Viewer. This GIS-based tool houses water rights information making it easily available to the public in a spatial format. It includes copies of water right permits, water right ownership data, and water-use data. Prior to the viewer, obtaining much of this data required an in-person search of TCEQ records or a Public Information Request.

Since 2019, TCEQ has continued to improve the functionality of the viewer and add additional features and data.

CHANGES OF OWNERSHIP AND WATER USE REPORTS

TCEQ processes ownership changes in support of water rights permitting statewide. Current ownership information ensures that water right permit holders receive proper notice information, critical to achieve the desired effect of actions taken to meet a priority call during drought.

TCEQ also requires updated water use reports to support modeling efforts and enforcement of water rights. TCEQ sends reports to water right permit holders outside of watermaster areas on Jan. 1 of each year and the updated reports are due back to TCEQ on the following March 1. The return rate for these reports was approximately 66% for fiscal 2021, but this represents over 95% of the permitted water in the state.

WATER CONSERVATION AND DROUGHT CONTINGENCY PLANS

Under Texas Water Code, Chapter 11, and Title 30, Texas Administrative Code, Chapter 288, every five years, certain water right holders and other entities must develop, implement, and submit updated Water Conservation Plans (WCPs) (including Water Conservation Implementation Reports) and Drought

Contingency Plans (DCPs) to TCEQ. The most recent deadline to submit updated WCPs and DCPs to TCEQ was May 1, 2019.

ENVIRONMENTAL FLOWS

In 2007, the Texas Legislature passed two landmark measures relating to the development, management, and preservation of water resources, including the protection of instream flows and freshwater inflows. The measures changed how the state determines the flow that needs to be preserved in the watercourse for the environment, requiring the consideration of both environmental and other public interests.

TCEQ adopted rules for environmental flow standards for Texas' rivers and bays through three rulemakings. The third rulemaking for these standards was completed in February 2014. TCEQ's ongoing goal is to protect the flow standards—along with the interests of senior water-rights holders—in the water rights permitting process for new appropriations and amendments that increase the amount of water to be taken, stored, or diverted.

Evaluations of River Basins without a Watermaster

Under Section 11.326 of the Texas Water Code, TCEQ is required every five years to evaluate river basins that do not have a watermaster program to determine whether a watermaster should be appointed. Agency personnel are directed to report their findings and make recommendations to the commission.

In 2011, TCEQ developed a schedule for these evaluations, plus criteria for developing recommendations. TCEQ has completed one five-year cycle of evaluations. In September 2022, the agency will have completed the first year of the third five-year cycle of evaluations. In 2021, TCEQ evaluated the Cypress Creek and Sulphur River Basins and in 2022, the Upper Brazos River Basin (upstream of Possum Kingdom Lake), San Jacinto-Brazos Coastal Basin, Brazos-Colorado Coastal Basin, Colorado River Basin, and the Colorado-Lavaca Coastal Basins.

The commission did not create a watermaster program on its own motion at the conclusion of any evaluation year. To date, TCEQ has expended approximately \$1,120,660 on these evaluations.

For more information, see Appendix D, "Evaluation of Water Basins in Texas without a Watermaster."

Texas Interstate River Compacts

Texas is a party to five interstate river compacts that apportion the waters of the Canadian, Pecos, Red, Rio Grande, and Sabine rivers between the appropriate states. Interstate compacts form a legal foundation for the equitable division of the water of an interstate stream with the intent of settling each state's claim to the water.

RIO GRANDE COMPACT

The Rio Grande Compact, ratified in 1939, divided the waters of the Rio Grande among the signatory states of Colorado, New Mexico, and Texas from its source in Colorado to Fort Quitman, Texas. The Compact did not contain specific wording about the apportionment of water in and below Elephant Butte Reservoir.

However, the Compact was drafted and signed against the backdrop of the 1915 Rio Grande Project and a 1938 U.S. Bureau of Reclamation contract that referred to a division of 57% to New Mexico and 43% to Texas, based on the relative amounts of project acreage originally identified in each state.

The project provides the means for delivery of apportioned water and serves the reach of the Rio Grande below Elephant Butte Reservoir to El Paso, Texas, along with canals and diversion works in both New Mexico and Texas. Two districts receive project water: Elephant Butte Irrigation District, in New Mexico, and El Paso County Water Improvement District No. 1, in Texas. The latter supplies the City of El Paso with about half of its water.

In 2008, after 20 years of negotiations, the two districts and the Bureau of Reclamation completed an operating agreement for the Rio Grande Project. The agreement acknowledged the 57/43 percent division of water and established a means of accounting for the project allocation. The agreement was a compromise to resolve major issues about the impact of large amounts of groundwater development and pumping in New Mexico that affected water deliveries to Texas.

But significant compliance issues continue with New Mexico's water use associated with the Rio Grande Compact. In 2011, New Mexico took action in federal district court to invalidate the 2008 operating agreement. In response to the lawsuit and in coordination with the Legislative Budget Board and the Attorney General's Office, the Rio Grande Compact Commission of Texas hired outside counsel and technical experts with

Figure 6. Rio Grande Watershed



specialized experience in interstate water litigation to protect Texas' share of water.

In January 2013, Texas petitioned the U.S. Supreme Court to allow it to file its complaint against New Mexico. That complaint held that unrestricted and extensive groundwater pumping in New Mexico has interfered with and intercepted Rio Grande flows apportioned to Texas. Texas seeks an injunction to stop this excessive pumping and prohibit New Mexico from interfering with the delivery of apportioned Rio Grande water to Texas. Texas also seeks damages.

In 2014, the U.S. Supreme Court appointed a Special Master to manage the case and carry out actions on its behalf. The U.S. Supreme Court can then assess the Special Master's rulings, rather than conduct the trial itself. The Special Master limited the New Mexico crossclaims in the case to issues that mirrored the Texas complaint. The parties then proceeded with extensive discovery and several attempts at settlement discussions, which were unsuccessful.

Because of COVID-19 and related issues, the trial was

split into two parts. The first part, conducted remotely, was limited to the testimony of historians and fact witnesses. That portion of the trial came to a close at the end of 2021. The parties requested to again try to resolve the litigations short of trial, and mediation began in December 2021. The second phase of the trial primarily involving expert witnesses was originally scheduled to begin on March 3, 2022. That date was vacated by the Court to allow settlement discussions to proceed.

Texas proposed a resolution of the litigation that was accepted in concept by all parties and has acted as a foundation for work done since then. Most of what has occurred has been technical and discussions on how to address compliance over a period of years. The Special Master vacated an October 2022 trial date that had been set if mediation was not successful and indicated that if there was no settlement by Sept. 23, 2022, he would set an early trial date based upon respective calendars, suggesting early January 2023.

INTERNATIONAL TREATIES

Two international treaties have a major impact on water supplies available to Texas. The 1906 convention between the U.S. and Mexico apportions the waters of the Rio Grande Basin above Fort Quitman, Texas, while the 1944 treaty between the U.S. and Mexico apportions the waters of the basin below Fort Quitman.

Mexico continues to under-deliver water to the U.S. under this treaty. Mexico does not treat the U.S. as a water user and only relies on significant rainfalls to make deliveries of water.

This stands in contrast to the U.S. acting in good faith to always supply Mexico its annual allocation from the Colorado River. The Colorado River and the Rio Grande are both covered by the same treaty. Efforts continue to address this problem through the Texas congressional delegation.

Mexico's failure to deliver 1944 treaty water and its overall water-management strategies have negative impacts on Texas, especially in the Lower Rio Grande Valley below Falcon Dam. Mexican drains of irrigation tailwater—including the Morillo Drain, which continues to function below the capacity specified by the minutes of the 1944 treaty—negatively affect salinity levels in the Rio Grande below Falcon Dam. Salinity levels above 1,000 mg/L compromise crops and municipal water systems. The Rio Grande Watermaster monitors salinity levels and provides notifications to stakeholders when salinity in the Rio Grande below Falcon Dam is elevated.

A related issue concerns the accounting of waters in the Rio Grande at Fort Quitman. While the 1906 convention clearly granted to the U.S. 100% of all waters between El Paso and Fort Quitman, the International Boundary and Water Commission has allocated the waters equally between the U.S. and Mexico.

Groundwater

TCEQ is responsible for:

- delineating and designating priority groundwater management areas (PGMAs);
- creating groundwater conservation districts (GCDs) in response to landowner petitions or through the PGMA process; and
- administering the Texas Groundwater Protection Committee (TGPC).

In 2023, TCEQ and the Texas Water Development Board will submit a joint legislative report that details activities in fiscal biennium 2021-2022 relating to PGMAs and the creation and operation of GCDs.

GCDs, each governed by a locally selected board of directors, are the state's preferred method of groundwater management. Under the Texas Water Code, GCDs are authorized and required to issue permits for water wells, develop a management plan, and adopt rules to implement the plan. The plan and the "desired future conditions" for a groundwater management area must be readopted and approved at least once every five years. TCEQ actively monitors and ensures GCD compliance to meet requirements for adoption and re-adoption of management plans.

TCEQ also has responsibility for supporting the activities of the interagency TGPC. Texas Water Code, Sections 26.401-26.408, enacted by the 71st Texas Legislature (1989), established a goal of non-degradation of the state's groundwater resources for all state programs. The same legislation created the TGPC to bridge gaps between existing state groundwater programs and to optimize groundwater quality protection by improving coordination among agencies involved in such activities.

Three of the TGPC's principal mandated activities are:

- Developing and updating a comprehensive groundwater protection strategy for the state.
- Publishing an annual report on groundwater monitoring activities and cases of documented contamination associated with activities regulated by state agencies.

- Preparing and publishing a biennial report to the Texas Legislature describing these activities, identifying gaps in programs, and recommending actions to address those gaps.

WASTE MANAGEMENT

Disposal of Low-Level Radioactive Waste

In 2009, TCEQ issued a license to Waste Control Specialists LLC authorizing the operation of a facility for disposal of low-level radioactive waste (LLRW) in Andrews County, Texas.

The Texas Low-Level Radioactive Waste Disposal Compact is an interstate compact between Texas and Vermont. LLRW generated in the Texas Compact may be disposed of in the Compact Waste Facility (CWF). The CWF can also accept non-compact wastes provided that the importation is approved by the Texas Low-Level Radioactive Waste Disposal Compact Commission. A separate, adjacent facility, the Federal Waste Facility (FWF), authorized by the same license as the CWF, may accept LLRW and mixed waste (which is waste that contains both a hazardous and a radioactive constituent) from federal facilities. Upon eventual closure of the FWF, the facility will be owned by the U.S. Department of Energy (DOE).

After TCEQ authorized operations to begin at the CWF, that location received its first waste shipment in April 2012. TCEQ then authorized operations to begin at the FWF, and that location received its first waste shipment in June 2013. Since operations began at both sites, more than 700,000 cubic feet of waste have been safely disposed of, and over \$66 million in disposal and processing fees have been collected as revenue for the state through the third quarter of fiscal 2022.

LLRW is produced predominantly by nuclear utilities, academic and medical research institutions, hospitals, industry, and the military. It typically consists of radioactively contaminated trash, such as:

- paper
- rags
- plastic
- glassware
- syringes
- protective clothing (gloves, coveralls)
- cardboard
- packaging material
- organic material
- used, sealed radioactive sources

Nuclear power plants contribute the largest portion of LLRW in the form of spent ion-exchange resins and filters, contaminated tools and clothing, and irradiated metals and other hardware. LLRW does not include high-level waste and spent nuclear fuel.

By law, TCEQ is responsible for setting rates for the disposal of LLRW at the compact facility. In November 2013, TCEQ adopted a final disposal rate by rule and published the notice in the *Texas Register*. TCEQ has reviewed and revised the disposal rate as necessary, or at the request of the compact facility operator and the compact generators.

DISPOSAL OF RADIOACTIVE BY-PRODUCT MATERIAL

Licensed in 2008, the Waste Control Specialists LLC site has been open for by-product disposal since 2009. By-product material that can be disposed of by the facility is defined as tailings or wastes produced by, or resulting from, extracting or concentrating uranium or thorium from ore.

Since 2009, the facility has disposed of one by-product waste stream containing 3,776 canisters of waste generated by the DOE's Fernald facility in Ohio.

Underground Injection Control

Underground Injection Control (UIC) is a federally authorized program that was established under the authority of the federal Safe Drinking Water Act. The program's purpose is to protect underground sources of drinking water from degradation that is caused by unsafe injection of fluids underground. EPA delegated Texas as primary enforcement authority for UIC in 1982 and jurisdiction is shared between TCEQ and the Railroad Commission of Texas (RRC). There are six classes of injection wells. TCEQ's jurisdiction covers Class I, III, IV, and V injection wells.

- Class I wells are used for deep injection of hazardous and non-hazardous wastes.
- Class III wells are used to extract minerals other than oil and gas, and are regulated by TCEQ or RRC, depending on the type of well.
- Class IV wells are only authorized by TCEQ or EPA in special circumstances regarding environmental cleanup operations.
- Class V wells are used for many different activities and are regulated by either TCEQ or RRC, depending on the type of well.

URANIUM PRODUCTION

Uranium is produced in Texas through in situ leaching. Uranium is leached directly out of an underground uranium-bearing formation and pumped in a solution to the surface for processing.

The conventional method used in the past for uranium production created impoundments for disposal of by-product waste. These impoundment sites have all been capped, are no longer accepting waste, and will be transferred to the DOE upon license termination.

Currently, Texas has five uranium mining licenses comprising seven sites and two licensed uranium-processing facilities.

Managing Industrial and Hazardous Waste

The Resource Conservation Recovery Act (RCRA) establishes a system for controlling hazardous waste from the time it is generated until its disposal. EPA has delegated the primary responsibility to TCEQ of implementing RCRA in Texas.

TCEQ reviews and approves plans, evaluates complex analytical data, and writes new and modified industrial and hazardous waste (IHW) permits and registrations. Texas has 170 permitted IHW treatment, storage, and disposal facilities, and 17 coal combustion residual disposal facilities.

During fiscal 2021 and 2022, TCEQ issued 42 IHW permit renewals, performed approximately 1,146 industrial waste-stream audits, and oversaw remediation of 265 sites.

Managing Municipal Solid Waste

With growing demands on Texas' waste-disposal facilities, TCEQ evaluates the statewide outlook for landfill capacity and strives to reduce the overall amount of waste generated.

In fiscal 2021 (the most recent data available), there were 199 active municipal solid waste landfills in the state. Over 38.2 million tons of waste were disposed of, an increase of 3.9% from fiscal 2019. In fiscal 2021, the average per capita disposal rate was 7.09 pounds per person per day.

At the end of fiscal 2021, overall municipal solid waste capacity was over 2 billion tons, representing 53 years of remaining disposal capacity statewide. The net capacity increased approximately 89 million tons,

or about 4.6%, compared with the capacity in fiscal 2019. Throughout the state, the existing trend is for regional landfills to serve the state's more-populous areas, while less-populous areas in West Texas are served by small, arid-exempt landfills that accept less than 40 tons per day.

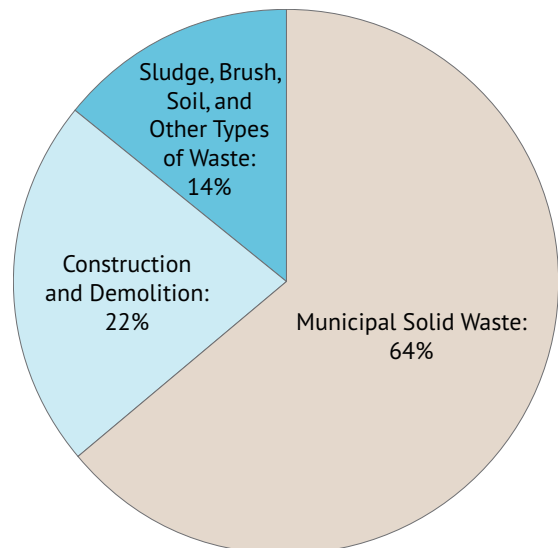
To assist regional and local solid waste planning initiatives—such as addressing adequate landfill capacity—TCEQ provides solid waste planning grants to each of the 24 regional councils of governments (COGs). The planning initiatives are based on goals specified in each COG's regional solid waste management plan.

For the fiscal 2020-21 grant period, the COGs received about \$10.9 million from TCEQ, which they then distributed to other recipients for projects such as recycling activities, illegal dump cleanups, household hazardous waste collection events, and education and outreach.

The Regional Solid Waste Grants Program Funding Report, Fiscal Year 2020/2021, includes data collected by TCEQ from the 24 COGs, and details the regional solid waste grant activities for that two-year period. The report will be available on TCEQ's website in January 2023.

Figure 7. Municipal Solid Waste

Texas had 199 active municipal solid waste landfills in fiscal 2021. Municipal solid waste disposal reached about 38.2 million tons.



Superfund

Superfund is the federal program that enables state and federal environmental agencies to address properties contaminated by hazardous substances. EPA has the legal authority and resources to clean up sites where contamination poses the greatest threat to human health and the environment.

TCEQ either takes the lead or supports EPA in cleaning up Texas sites that are on the National Priorities List (NPL). The NPL is EPA's ranking of national priorities among known or threatened releases of hazardous substances, pollutants, or contaminants.

In addition, Texas has a state Superfund program to address sites that are ineligible for the federal Superfund program. This program is the state's safety net for addressing contaminated sites. TCEQ uses state funds for cleanup at sites in the Texas Superfund Registry if no responsible parties can or will perform the cleanup. TCEQ also takes legal steps to recover the cleanup expenses.

After a site is proposed for the state Superfund program, either the responsible party or TCEQ proceeds with a remedial investigation, during which the agency determines the nature and extent of the contamination. A feasibility study follows to identify possible cleanup remedies. A public meeting is held to explain the proposed remedy and to accept public comments. TCEQ then selects an appropriate remedial action.

In fiscal 2021, Texas had 110 active sites in the state and federal Superfund programs. Two new sites were proposed or listed—one on the NPL and one on the Texas Superfund Registry—during the fiscal year. A remedial action was completed at one state Superfund site in Bell County.

In fiscal 2022, no new sites were proposed or listed on the NPL or Texas Superfund Registry, for a total of 110 active sites. Two remedial actions were completed, one at a federal Superfund site in Bexar County and one at a state Superfund site in Nueces County.

Petroleum Storage Tanks

TCEQ oversees the cleanup of contamination of groundwater and soil due to leaking petroleum storage tanks (PSTs). Since the program began in 1987, the agency has received reports of 28,953 leaking PST sites—primarily at gasoline stations.

By the end of fiscal 2022, cleanup had been completed at 27,812 sites, and corrective action was underway at 1,141 sites.

Of the total reported PST releases, about half have affected groundwater.

Leaking PSTs are often discovered when a tank owner or operator upgrades or removes tanks, an adjacent property owner is affected, or the tank leak-detection system signals a problem. Some leaks are detected during construction or utility maintenance. Most tank-system leaks are due to corrosion, incorrect installation, or damage during construction or repairs.

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 measures to prevent spills and overfills.

Tank owners and operators are required to clean up releases from leaking PSTs, beginning with a site assessment that may include drilling monitoring wells, and taking soil and groundwater samples. TCEQ oversees the remediation.

Under state law, cleanups of leaking tanks that were discovered and reported after Dec. 23, 1998, are paid by the owners' environmental liability insurance or other financial-assurance mechanisms, or from their own funds.

The PST State Lead Program cleans up sites where the responsible party is unknown, unwilling, or financially unable to do the work—and in situations in which an eligible site was transferred to State Lead by July 2011. State and federal funds pay for the corrective actions. Except for the eligible sites placed in the program by the July 2011 deadline, the state allows cost recovery from the current owner or any previous responsible owner.

Voluntary Cleanups

The Texas Voluntary Cleanup Program (VCP) gives incentives for pollution cleanup by releasing future property owners from liability once a previously contaminated property is cleaned up to the appropriate risk-based standard.

Since 1995, VCP has provided regulatory oversight and guidance for 3,043 applicants and has issued 2,631 certificates of completion.

In the last two years, the program received 142 applications and issued 141 certificates. Recipients of the certificates report that the associated release of liability helps with property sales, including transactions that would not have otherwise occurred due to real or perceived environmental impacts. As a result, many underused or unused properties may be restored to economically beneficial use.

The key benefit of VCP 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.

VCP is funded by an initial \$1,000 fee submitted with each application. TCEQ invoices participants for oversight costs beyond the initial fee.

Under the Innocent Owner/Operator Program, TCEQ also implements the law providing liability protection to property owners whose land has been affected by contamination that migrated onto their property from an off-site source. In the last two years, TCEQ issued 71 certificates under this program.

Dry Cleaners

Since 2003, TCEQ has been responsible for collecting fees for a remediation fund designed to help pay for the cleanup of contaminated dry cleaner sites. The fees come from the annual registration of dry cleaning facilities and drop stations, property owners, prior property owners, and solvent fees from solvent distributors.

In 2007, the Texas Legislature established registration requirements for current and prior property owners who wish to claim benefits from the remediation fund—and authorized a lien against current and prior property owners who fail to pay registration fees due during corrective action.

In addition, the use of perchloroethylene was prohibited at sites where the agency has completed corrective action.

In fiscal 2021, there were 1,954 dry cleaner registrations and more than \$2.3 million in invoiced fees; in fiscal 2022, there were 1,019 registrations and approximately \$2.5 million in invoiced fees.

Waste Reduction

HAZARDOUS WASTE

TCEQ provides technical advice and collaborates to offer innovative approaches and in-person workshops for improving environmental performance through pollution prevention planning.

All together, these efforts resulted in reducing hazardous waste by more than 390,000 tons and toxic chemicals by more than 140,000 tons during fiscal biennium 2021-2022.

RENEWING OLD AND SURPLUS MATERIALS

Texas established the Resource Exchange Network for Eliminating Waste (RENEW) in 1988 to promote reusing or recycling industrial waste.

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

RENEW is a free, easy-to-use service. Listings are grouped under “Materials Available” and “Materials Wanted” for anyone offering or seeking raw materials.

Through the RENEW website, www.renewtx.org, participants can list and promote opportunities for exchanging at national and regional levels.

In fiscal 2021 and 2022, 143 users signed up to use RENEW, and 244 new listings were posted.

COMPLIANCE ASSISTANCE

TCEQ provides technical assistance, education, and pollution prevention programs to encourage environmental improvements. Programs are focused on agency priorities and align with agency regulatory systems.

Small Business and Local Government Assistance

In fiscal 2021 and 2022, the agency’s Program Support and Environmental Assistance Division (PSEAD) responded to 16,551 requests for assistance from small businesses and local governments. TCEQ staff presented compliance information to small businesses and local governments at webinars with over 2,834 attendees. Assistance focuses on providing up-to-date information that helps the regulated community understand and comply with environmental rules.

PSEAD’s Site Visit Program provided resources to meet the requirements of the federal Energy Policy Act (EACT) with a focus on abandoned petroleum storage tanks (PSTs). The program conducted 142 site visits in fiscal 2021, and 159 site visits in fiscal 2022, at potentially abandoned PST facilities. The abandoned PST screening process was developed in fiscal 2020 to establish when a PST can be considered abandoned and removed from the EACT investigation cycle. This

process also provides guidance to other parts of the agency for determining what additional assistance or action may be necessary to mitigate risks from these abandoned PSTs.

During fiscal 2021, the Site Visit Program, using a grant from EPA, conducted 13 comprehensive site assessments at potentially abandoned PST facilities in counties affected by Hurricane Harvey to determine whether releases had occurred. Comprehensive assessments are only done at sites that granted TCEQ access through Access Agreements. Since Phase II of the program began in fiscal 2019, the agency has conducted a total of 44 comprehensive site assessments, with 15 sites showing evidence of a release. Cleanups were initiated at these 15 facilities and completed at 10 facilities between fiscal 2019 and 2022. In fiscal 2022, monitoring continued at the remaining five facilities.

Workshops and Webinars

In fiscal 2021 and 2022, PSEAD hosted workshops and webinars to educate the regulated community. Licensed water operators received continuing education units for participating in public water supply (PWS) webinars, including:

- Four online compliance and permitting webinars for the Oil and Gas industry with 336 attendees (fiscal 2021).
- Two Transient Noncommunity (TNC) Reporting and Recordkeeping webinars for owners or operators of small transient noncommunity PWSs. Participants received printed copies of the TNC Compliance Notebooks (RG-549) upon request. In total, the webinars had 99 attendees (fiscal 2021).
- Six “Asset Management for Small PWS” webinars for water system owners, operators, managers, utility board members, and elected officials to understand the importance of asset management and maintaining the system. The webinars had 249 attendees (fiscal 2021).
- Six “Revised Total Coliform Rule (RTCR)” webinars for public water system owners and operators to explain the rule requirements. The webinars had 363 attendees (fiscal 2021).
- Four webinars on Developing an Emergency Preparedness Plan (EPP) to help affected water utilities understand the requirements of Senate Bill 3 and EPPs. In total, the webinars had 265 attendees (fiscal 2022).

- Four webinars for the New Industrial and Hazardous Waste Rules. In total, the webinars had 562 attendees (fiscal 2022).
- Eight PST compliance webinars to help owners and operators prepare for their upcoming EACT investigations. In fiscal 2021, four webinars had 591 total attendees. In fiscal 2022, four webinars had 369 total attendees. For both years participants received printed copies of the Underground Storage Tank Compliance Notebook upon request.

TCEQ’s External Relations Division also offers educational opportunities and technical assistance through coordinated workshops, seminars, and educational events, including the annual Environmental Trade Fair and Conference in downtown Austin. During the last two years, the agency sponsored seven online events and one hybrid event to provide technical information to 1,670 attendees. And the Trade Fair saw 3,830 attendees for the in-person event held in fiscal 2022. No Trade Fair was held in fiscal 2021 due to COVID-19.

The Critical Infrastructure Division also offers technical assistance, guidance, and educational opportunities to the regulated community through web-based help forms, on the division’s webpage, and at regularly scheduled training events and workshops.

In fiscal 2021 and 2022, the division’s Tier II Chemical Reporting Program responded to 9,619 requests for assistance and offered 49 Tier II Workshops and presentations with over 3,521 attendees. The Dam Safety Program conducted workshops on emergency action plans and dam maintenance for 298 attendees in fiscal 2021 and 208 attendees in fiscal 2022.



Frio River, Garner State Park. Credit: iStock.

CHAPTER 3

LEGISLATION FROM THE 87TH SESSION

FY 2021-FY 2022

During the regular legislative session in 2021, state lawmakers considered 562 bills that had the potential to affect the programs and activities of the Texas Commission on Environmental Quality.

Of those, 147 bills were passed and became law. The new laws triggered a variety of activities at TCEQ: new rules, operational or procedural changes, revised guidance documents, or internal administrative actions. Some of the newly enacted laws are summarized in this chapter.

REGULATION OF THE INJECTION AND GEOLOGIC STORAGE OF CARBON DIOXIDE IN TEXAS (HB 1284)

House Bill 1284, introduced by Rep. Chris Paddie, amended Chapter 27 of the Texas Water Code (TWC), Chapter 382 of the Texas Health and Safety Code (THSC), Chapter 121 of the Texas Natural Resources Code, and Chapter 202 of the Texas Tax Code. These amendments did the following:

- Gave the Texas Railroad Commission (RRC) sole jurisdiction over onshore and offshore injection and geologic storage of carbon dioxide.
- Gave RRC authority to establish by rule standards for monitoring, measurement, and verification status of the carbon dioxide in a carbon dioxide repository.
- Removed TCEQ certification and rulemaking requirements from the Texas Tax Code.
- Specified that “The Railroad Commission may not issue a permit under this subchapter for the



Lighthouse formation, Palo Duro Canyon. Credit: iStock.

conversion of a previously plugged and abandoned Class I injection well, including any associated waste plume, to a Class VI injection well.”

- Required that a person applying to RRC for a permit under this subchapter also include a letter of determination from TCEQ. The letter must conclude that drilling and operating an anthropogenic carbon dioxide injection well for geologic storage—or constructing or operating a geologic storage facility—will not impact any Class I injection well and any associated waste plume, or any other injection well authorized by TCEQ.
- Removed TCEQ jurisdiction over the injection of carbon dioxide produced by a clean coal project into a zone below the base of usable quality water and that is not productive of oil, gas, or geothermal resources.

HB 1284 became effective June 9, 2021. TCEQ adopted rules implementing the bill on June 3, 2022, effective June 9, 2022, to amend Chapter 331 of Title 30, Texas Administrative Code (30 TAC).

TEXAS EMISSIONS REDUCTION PLAN PROGRAMS, FUND, AND ACCOUNT (HB 4472)

House Bill 4472, introduced by Rep. Brooks Landgraf, amended THSC to do the following:

- Require TCEQ to remit not less than 35% of the Texas Emissions Reduction Plan (TERP) Trust Fund to the state highway fund for the Texas Department of Transportation (TxDOT) to administer congestion mitigation projects.
- Require TxDOT to report emissions reductions and other information related to congestion mitigation projects to TCEQ.
- Redirect the transfer of the Motor Vehicle Certificate of Title Fee revenue from the Texas Mobility Fund to the TERP Trust Fund.
- Set the minimum percentage of annual hours of operation required for TERP-funded marine vessels or engines at 55% under the Diesel Emissions Reduction Incentive (DERI) program.
- Remove the requirement that flaring and other oil and gas site emissions reduction projects capture waste heat to generate electricity solely for on-site service under the New Technology Implementation Grant (NTIG) program.
- Add NTIG projects that reduce flaring emissions and other site emissions to the list of projects that TCEQ must give preference to when awarding grants.
- Allow use of NTIG funds for the lease of necessary equipment and the costs for operating and maintaining the grant-funded system.

HB 4472 became effective Sept. 1, 2021. TCEQ was required to conduct rulemaking and adopt revisions to the DERI guidelines to set the minimum percentage of annual hours of operation required for TERP-funded marine vessels or engines at 55%. The commission adopted rules implementing the bill on June 1, 2022. TCEQ



Monahans Sandhills State Park. Credit: iStock.

is accepting public comment on the DERI guideline revisions and anticipates adoption of the guidelines in October 2022.

TCEQ was also required to adopt revisions to the NTIG guidelines to incorporate the statutory changes. The commission adopted the guideline revisions on June 29, 2022.

EMERGENCY PREPAREDNESS PLANS AND THE TEXAS ENERGY RELIABILITY COUNCIL (SB 3)

Senate Bill 3, introduced by Sen. Charles Schwerner, added new TWC Section 13.1394, which requires the implementation of Emergency Preparedness Plans (EPPs) statewide.

An EPP documents how an affected utility will maintain a water pressure of 20 psi throughout the distribution system when the power has been off for more than 24 hours during an emergency, and it contains emergency contact information. An affected utility is a retail public utility, exempt utility, or provider or conveyor of potable or raw-water service that furnishes water service to more than one customer.

Affected utilities were required to submit their EPP to TCEQ by March 1, 2022. They were also required to implement their EPP by July 1, 2022, or upon final approval by TCEQ.

In addition, SB 3 required TCEQ to become a member of the Texas Energy Reliability Council. The council is to ensure that the energy and electric industries in the

state meet human needs, address critical infrastructure concerns, and enhance coordination and communication in the energy and electric industries in the state.

SB 3 became effective May 8, 2021. TCEQ has:

- developed a template for the EPP;
- provided financial, managerial, and technical assistance to affected utilities that request assistance; and
- reviewed EPP submissions, implementation extension requests, and waiver submissions.

TCEQ will begin the rulemaking process in September 2022.

SAFETY OF ABOVEGROUND STORAGE VESSELS (SB 900)

Senate Bill 900, introduced by Sen. Carol Alvarado, with a companion bill filed by Rep. Chris Paddie, amended TWC Subsection 26.341(b) and added new TWC Sections 26.3442, 26.3443, and 26.3444. These amendments require TCEQ to establish a new Aboveground Storage Vessel Safety (ASVS) Program (originally called “Performance Standards for Safety at Storage Vessels” in the bill), with the objective of protecting groundwater and surface water resources in the event of an accident or natural disaster. The bill identifies new safety elements that TCEQ must include in the ASVS Program and defines the universe of regulated entities.

SB 900 became effective Sept. 1, 2021. By Sept. 1, 2023, TCEQ must adopt rules and establish the ASVS Program to include the safety performance standards of affected storage vessels.

Also as part of the ASVS Program, TCEQ is to establish a fee structure that is sufficient to cover program costs for:

- implementation of a registration program for affected facilities;
- review of initial, amended, and ten-year certifications;
- inspection of certified facilities; and
- enforcement of compliance with applicable standards, rules, and orders of the agency.

TCEQ rules for the ASVS Program will be adopted in new 30 TAC Chapter 338.

DIRECT POTABLE REUSE GUIDANCE (SB 905)

Senate Bill 905, introduced by Sen. Charles Perry and Sen. Drew Springer, amended THSC Chapter 341, Subchapter C, by adding a new section requiring TCEQ to develop a regulatory guidance manual on the regulations applicable to the direct potable reuse of reclaimed municipal wastewater.

SB 905 became effective Sept. 1, 2021, and TCEQ expects to complete guidance by October 2022.



Sunrise at Caddo Lake. Credit: iStock.

CHAPTER 4

AGENCY RESOURCES

FY 2021-FY 2022

This chapter outlines the agency's workforce and financial resources. The Texas Commission on Environmental Quality has over 2,800 full-time employees, with more than 30% working outside of the Austin headquarters. The agency has 16 regional offices, as well as five satellite offices throughout Texas.

These field offices give TCEQ a statewide presence, enabling its staff to communicate firsthand with municipalities, businesses and industry, and community groups in all quarters of Texas.

TCEQ's budgetary needs are based on the demands of state and federal laws concerned with protecting human health and the environment. The operating budget totaled \$378.3 million in fiscal 2021 and \$335.2 million in fiscal 2022. Most of the budget is supported by revenues collected from fees.

TCEQ posts its quarterly expenditures online. The data is reported in broad categories, such as salaries, travel, utilities, and maintenance. The webpage also links to an expenditure database, called "Where the Money Goes," on the state comptroller's website. These online postings are in response to the Texas Legislature's call for greater accountability in state government.

WORKFORCE

Size and Job Categories

In fiscal 2021, the agency was authorized to have 2,829.3 full-time-equivalent (FTE) positions, and the average number of FTEs utilized was 2,652.2. In fiscal 2022, the authorized FTEs were 2,811.8; TCEQ averaged 2,516.3 during that time.

TCEQ staff is composed largely of professionals trained in science, technology, engineering, computer science, and related fields. In fiscal 2022, professionals represented 66.98% of the workforce; technical and administrative support staff made up 20.65%; and

officials and administrators (managers) filled 12.27% of positions. These percentages reflect almost no change in the distribution of job categories within the agency from fiscal 2021, with professionals down only 0.11%, technical and administrative support staff up 0.10%, and no change in officials and administrators (managers).

Equal Employment

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

The agency is committed to recruiting, selecting, and retaining a multitalented, culturally diverse workforce that is representative of the state's available labor force. In accordance with the Texas Labor Code, Chapter 21, all employees are trained on equal-employment practices to make them aware of state and federal employment laws and regulations.

With regard to race and ethnicity, the agency's workforce composition in fiscal 2022 was categorized as 59.02% white, 10.60% black, 19.25% Hispanic, and 11.13% other ethnicities (including Asian, Pacific Islander, American Indian, and Alaskan Native). With regard to gender, women continue to be in the majority at TCEQ: female employees represented 55.17% of the workforce; males, 44.83%.

Ethnicity and Gender

Each state agency must analyze its workforce by ethnicity and gender. TCEQ compares its workforce to the state civilian workforce using data provided by the Civil Rights Division of the Texas Workforce Commission. The TWC's report on equal-employment-opportunity hiring practices, which is published at the beginning of each legislative session, uses data sets

based on the percentage of blacks, Hispanics, and females—by job category—within the civilian labor force in Texas.

In fiscal 2022, TCEQ exceeded the percentage of the available black labor force in the job category of administrative support by 11.09%. The agency's female workforce exceeded the available female labor force in top management (officials and administrators/managers) by 11.75%, as well as in administrative support, by 7.61%.

Recruitment and Retention

In fiscal 2022, staff turnover was 19.26%, 7.06% above fiscal 2021. While TCEQ's turnover is below the overall statewide average for full- and part-time classified employees, the upward trend is of concern and TCEQ has worked to address it with recruitment and retention programs.

TCEQ administers multiple hiring programs tailored to meet the agency's unique hiring needs. As an example, the Engineer Hiring Program is designed for individuals who hold a professional engineering license (P.E.).

Express Hire allows supervisors to extend a conditional offer of employment at recruiting events, and Transitions Hiring expedites hiring and provides a diverse applicant pool for entry-level positions requiring a college degree.

The agency recruits widely, including at colleges and universities throughout the state, and uses recruitment bonuses to attract candidates for mission critical positions.

TCEQ also manages the Mickey Leland Environmental Internship Program. MLEIP encourages the participation of minorities and women pursuing environmental, engineering, science-related, and public-administration careers in summer internship opportunities. Intern familiarity with the agency's mission and working environment often spurs their future interest in full-time employment at the agency.

Retention strategies include employee recognition and administrative-leave awards, wellness programs, flexible and hybrid work schedules, and retention bonuses for staff classified in mission-critical occupations experiencing significant turnover.

Another retention tool is the agency's facilitation of employee movement internally. In addition to an employee's ability to apply for posted positions, TCEQ offers a Lateral Transfer Opportunity Program. Lateral transfers facilitate career enhancement, allowing for



Comal River. Credit: iStock.

mastery of other subject matter without impacting classification or pay.

As staff look toward leadership and management opportunities, the Leadership and Management Excellence Program offers training to eligible employees that promotes the alignment of their leadership and management development with TCEQ's organizational goals.

However, despite all our efforts to hire and retain staff, we ended Fiscal 2022 with over 400 vacancies (see Appendix E).

FINANCES

In fiscal 2021, the agency's approved operating budget was \$378.3 million. Of that, \$312.4 million was appropriated from dedicated fee revenue, \$38.7 million from federal funds, and \$16.4 million from general revenue. Other sources provided the remaining \$10.7 million.

In fiscal 2022, the approved operating budget totaled \$335.2 million. Of that, \$264.3 million was appropriated from dedicated fee revenue, \$39.9 million from federal funds, and \$20.8 million from general revenue. Other sources supplied the remaining \$10.2 million.

Pass-through funds accounted for 34% of the agency's operating budget in fiscal 2021 and 22% in fiscal 2022. Pass-through funds primarily support grants, remediation, and reimbursements for agency programs. Such programs included the Clean Rivers

Program, Municipal Solid Waste Programs, and Petroleum Storage Tank and Superfund cleanups. Compared to the 2019-2020 biennium, the share of pass-through funds decreased due to House Bill 3745 of the 86th Legislature, which amended the Health and Safety Code to establish the TERP Fund as a trust fund to be held outside of the appropriation process beginning in fiscal 2022.

Funds other than those passed through are devoted to day-to-day agency operations. Salaries accounted for 46% in fiscal 2021 and 53% in fiscal 2022. Due to the establishment of the TERP Fund, salaries represent a greater share of the agency's overall budget in fiscal 2022; however, the year-over-year change in salary budget represents a 2% increase between fiscal 2021 and fiscal 2022. The remaining operating funds support professional services, supplies, utilities, rent, travel, training, and capital needs.

Issues

The Waste Management Account, primarily funded by the Solid Waste Disposal Fee, supports the Municipal Solid Waste, Industrial Hazardous Waste, Voluntary Cleanup, and Radioactive Materials programs. In 2013, the fee was reduced by 25%, and the percent allocated to the account increased from 50% to 66.7%. For fiscal 2021, the account's obligations, \$42.1 million, exceeded annual revenues, which were approximately \$36.6 million. The agency expects the account's balance, \$16.5 million at the

end of fiscal 2021, to continue to decline, as revenue remains constant and expenditures rise, due to fringe and retirement costs.

Fees

TCEQ collects more than 100 separate fees. The fees listed below each generated revenue of more than \$16 million a year:

- **Texas Emissions Reduction Plan Account** (\$259.4 million in fiscal 2021). The revenue deposited to the TERP Account (5071) through Aug. 31, 2021, consisted of five fees and surcharges assessed on the sale, registration, titling, and inspection of vehicles, as well as a surcharge on the rental or purchase of diesel equipment in the state. The Comptroller of Public Accounts, the Texas Department of Public Safety, and the Texas Department of Motor Vehicles collected the fees on behalf of TCEQ. The deposit of all TERP revenue was moved to the TERP Trust Fund (1201) beginning on Sept. 1, 2021.
- **Texas Emissions Reduction Plan Trust Fund** (\$253.1 million in fiscal 2022). The TERP Trust Fund (1201) consists of revenue from five fees and surcharges assessed on the sale, registration, titling, and inspection of vehicles, as well as a surcharge on the rental or purchase of diesel equipment in the state. The Comptroller of Public Accounts, the Texas



Casa Grande Peak, Big Bend National Park. Credit: iStock.

Department of Public Safety, and the Texas Department of Motor Vehicles collect the fees on behalf of TCEQ.

- **Petroleum-Product Delivery Fee** (\$16.4 million in fiscal 2021, \$17.4 million in fiscal 2022). The fee is assessed on the bulk delivery of petroleum products. The CPA collects and deposits the fee to the Petroleum Storage Tank Remediation Account (0655).
- **Air Emissions Fee** (\$35.1 million in fiscal 2021, \$34.1 million in fiscal 2022). The fee recovers the costs of developing and administering the Title V Operating Permit Program. Revenue is deposited to the Operating Permit Fees Account (5094).
- **Solid-Waste Disposal Fee** (\$33.2 million in fiscal 2021, \$39.5 million in fiscal 2022). The fee is assessed on the operators of municipal solid-waste facilities for the disposal of solid waste. Account 0549 receives 66.7% of the revenue collected; Account 5000 receives 33.3%.
- **Motor-Vehicle Safety-Inspection Fee** (\$47.8 million in fiscal 2021, \$47.6 million in fiscal 2022). The fee, assessed per vehicle, is assessed on the sale of state safety-inspection stickers at inspection stations, auto dealers, and other service providers. Revenue is deposited to the Clean Air Account (0151).



Texas Bluebonnets at Mule Shoe Bend. Credit: iStock.

- **Consolidated Water Quality Fee** (\$28.7 million in fiscal 2021, \$29.2 million in fiscal 2022). The fee is assessed against each permit, issued under the Texas Water Code, Chapter 26, authorizing the treatment and/or discharge of wastewater. It is calculated based on factors including flow volume and type, traditional pollutants, toxicity, and whether a facility is designated as major or minor. The fee revenue is deposited to Water Resource Management Account 0153.
- **Public Health Service Fee** (\$26 million in fiscal 2021, \$26.2 million in fiscal 2022). This fee, based on the number of connections, is assessed on owners or operators of public drinking water supply systems. Revenue is deposited to Water Resource Management Account 0153.
- **Lead Acid Battery Fee** (\$23.5 million in fiscal 2021, \$24.1 million in fiscal 2022). The fee is assessed on the retail sale of lead acid batteries. A fee of \$2.00 is assessed on the purchase of lead acid batteries less than 12 volts—the surcharge on batteries 12 volts and higher is \$3.00. The CPA collects and deposits the revenue to the Hazardous and Solid Waste Remediation Account (0550) on behalf of TCEQ.

Fee Revisions

State legislation passed in 2021 changed TCEQ's fees and funding structure as follows:

- SB 900 created a new program for the certification of aboveground storage vessels. The bill also created a dedicated new general revenue account where the new fees will be deposited. The collection of the new fees will begin on Sept. 1, 2027.
- HB 4472 modified the allocation of revenue deposited to the TERP Trust Fund. TCEQ is now required to transfer 35% of all revenue deposited to the fund to the Texas Department of Transportation. All unexpended and unobligated funds remaining in the trust fund as of Aug. 31 of the second year of each fiscal biennium must be transferred to TxDOT within 30 days.

APPENDIX A

ASSESSMENT OF COMPLAINTS RECEIVED

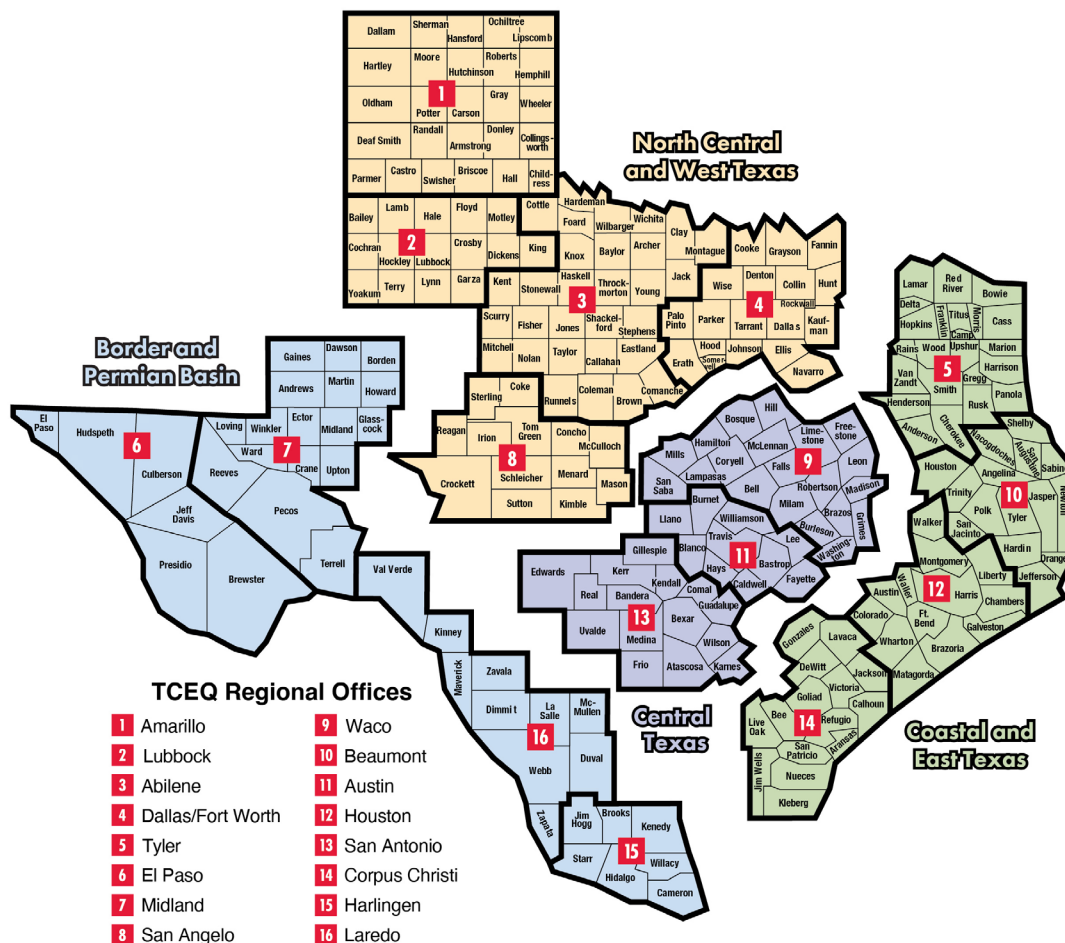
The Texas Commission on Environmental Quality receives thousands of complaints each year from Texans concerned about a situation or event in which a possible environmental, health, or regulatory violation has occurred. TCEQ receives complaints through [an online form](#), a 24-hour toll-free hotline (888-777-3186), email to complaint@tceq.texas.gov (quejas@tceq.texas.gov), or by written correspondence.

TCEQ must analyze complaints received each year based on:

- Complaint type
- Environmental media (air, waste, and water)
- Priority classification
- Regional jurisdiction
- Enforcement action taken
- Commission response

TCEQ also must assess the impact of any changes made in our complaint policy. This analysis is conducted and reported as per Sections 5.1773 and 5.178 of the Texas Water Code.

Figure A-1. TCEQ Areas, Regions, and Sites of Regional Offices



COMPLAINT DATA COLLECTION AND REPORTING

After the Office of Compliance and Enforcement (OCE) receives an environmental complaint, the data from the initial complaint are recorded in the Consolidated Compliance and Enforcement Data System (CCEDS).

If the complaint is within TCEQ jurisdiction, an assigned investigator completes the investigation and documents the findings in CCEDS. Management staff reviews and approves these investigations. Enforcement actions are initiated for any alleged violations. Per TCEQ's Complaint Investigation Manual (GI-602), complaints outside of TCEQ jurisdiction are referred to the governmental authority with jurisdiction.

All the data summarized in this appendix is from CCEDS and includes activity from TCEQ's headquarters and regional offices for fiscal 2021 (Sept. 1, 2020, through Aug. 31, 2021) and fiscal 2022 (Sept. 1, 2021, through Aug. 31, 2022). The data are presented in Figures A-2 through A-7.

COMPLAINTS BY REGION

TCEQ received 9,440 complaints in fiscal 2021, and 10,070 in fiscal 2022. Figure A-2 shows the breakdown by the region where the allegation occurred.

The number of complaints varies according to regional population. In fiscal 2021, 44 percent of all complaints came from the two largest metropolitan areas, the Dallas-Fort Worth region (20 percent) and the Houston region (24 percent). In fiscal 2022, 41 percent of complaints were in the Dallas-Fort Worth region (20 percent) and the Houston region (21 percent).

COMPLAINTS RECEIVED BY ENVIRONMENTAL MEDIA

Total complaints were analyzed by environmental media (air, waste, water, multimedia, and no media) statewide. "No media" refers to complaints that do not fit within one of the established medias (for example, noise). See Figure A-3.

In general, there has been an increase in complaints since fiscal 2020, when fewer were reported due to limited activities during the COVID-19 pandemic. The number of complaints TCEQ staff handled or referred has not returned to pre-pandemic levels.

The media with the most complaints was water

(49% of all complaints received in fiscal 2021 and 44% in fiscal 2022). Wastewater complaints are the most frequently received water complaints (22% of all water complaints in fiscal 2021 and 25% in fiscal 2022) followed by stormwater (21% of all water complaints in fiscal 2021 and 22% in fiscal 2022) and public water supplies (22% of all water complaints in fiscal 2021 and 18% in fiscal 2022). Houston has the most wastewater complaints and Dallas-Fort Worth has the most stormwater complaints.

Between fiscal 2021 and fiscal 2022, air complaints increased and primarily concern odor and dust. Of all air complaints received in fiscal 2021, 46% were about odor and 17% were about dust. In fiscal 2022, 40% were odor related and 22% were dust related. There was an increase in odor complaints related to industrial operations in the Dallas-Fort Worth and coastal regions (Beaumont, Houston, and Corpus Christi) and poultry operations in the Tyler and Beaumont regions. There continued to be an overall decrease in odor complaints from landfills, especially in the Houston region. Dust complaints related to aggregate production operations and new construction increased in the Houston, Dallas-Fort Worth, and San Antonio regions.

Waste complaints also increased between fiscal 2021 and fiscal 2022, primarily in the more densely populated areas of the state such as Austin, Dallas-Fort Worth, Houston, and San Antonio.



Cattail Falls, Big Bend National Park. Credit: iStock.

Figure A-2. Complaints by Region

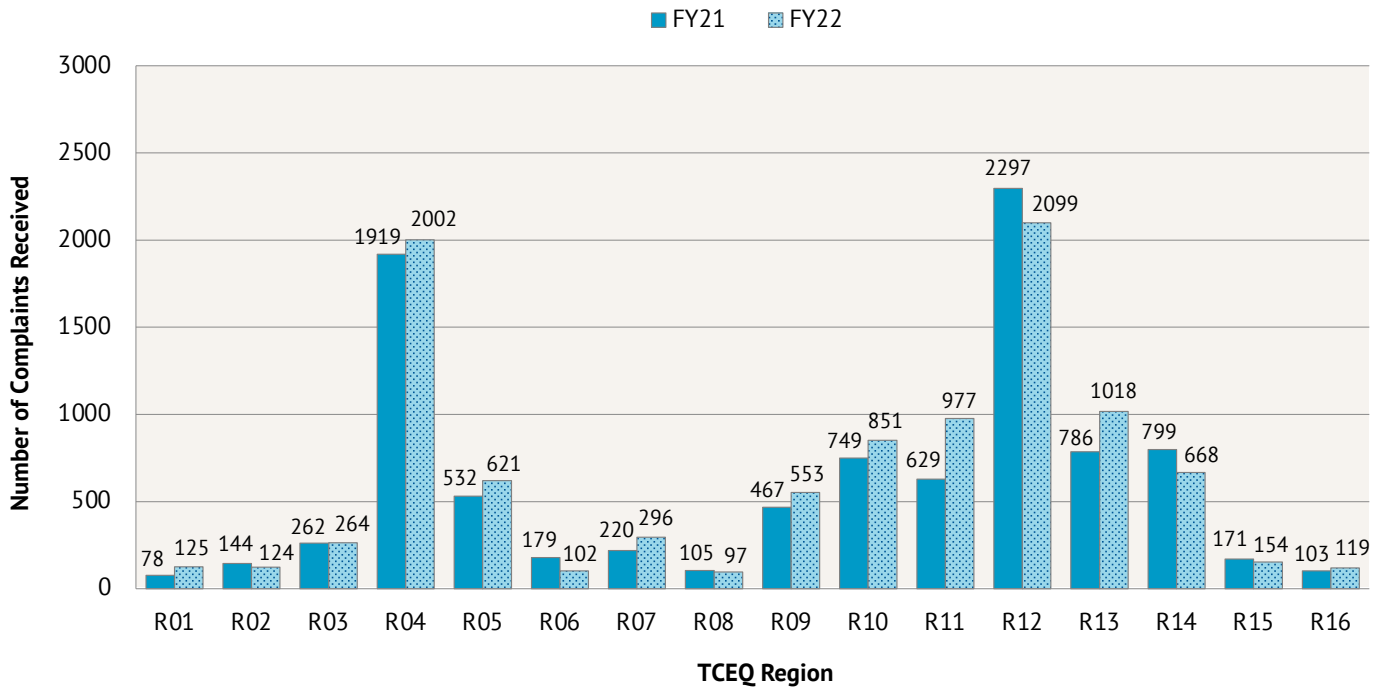


Figure A-3. Complaints by Media Type, Statewide

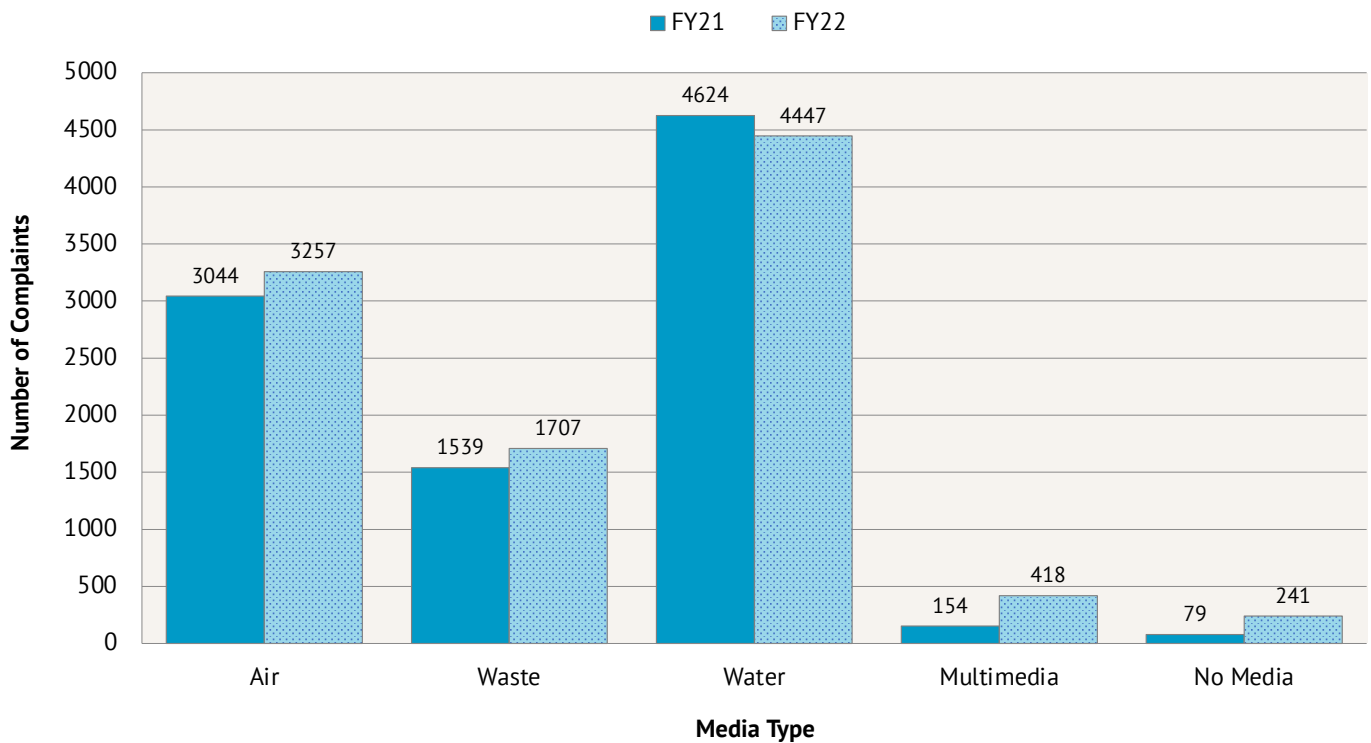
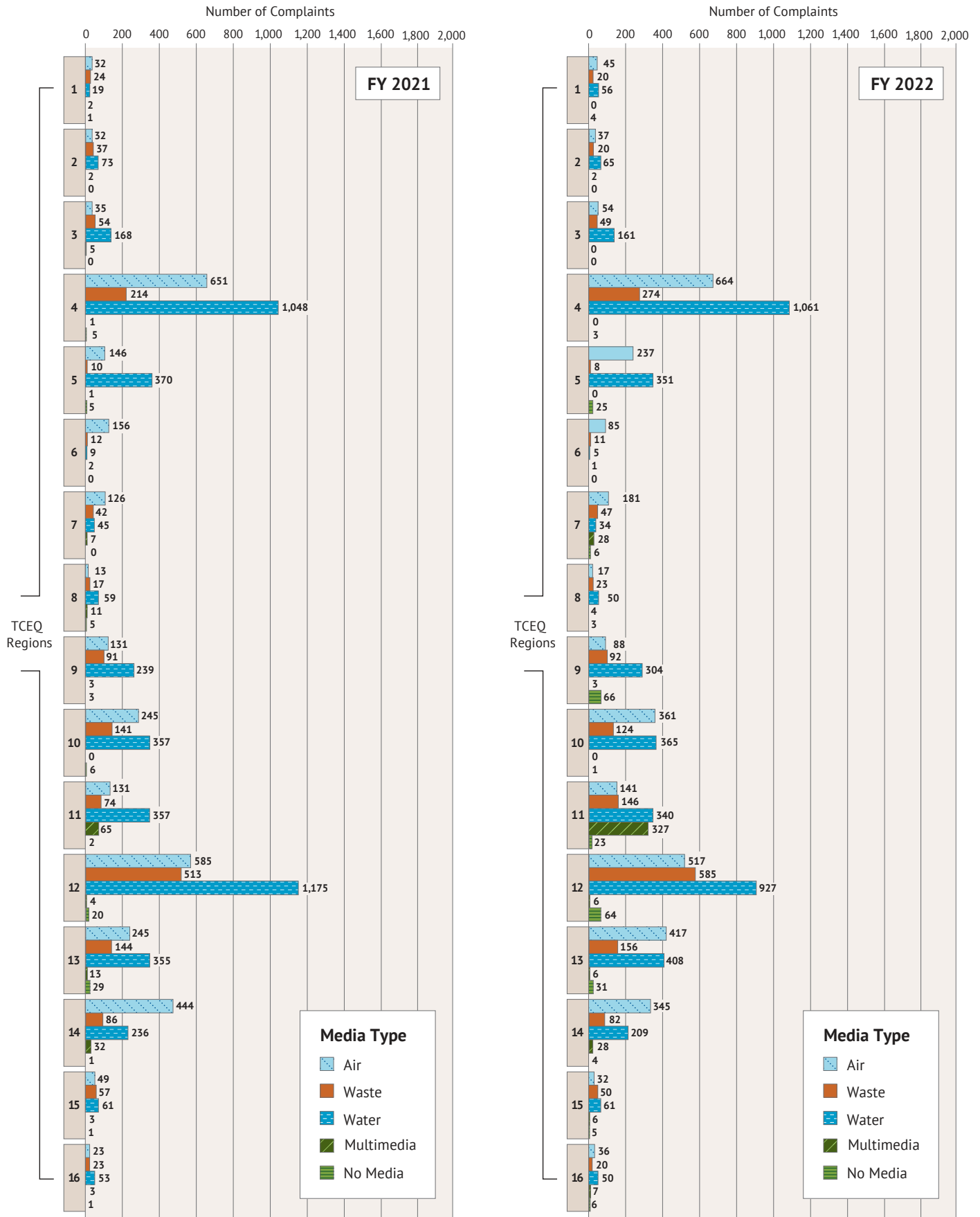


Figure A-4. Complaints by Region & Media Type



COMPLAINTS RECEIVED BY PRIORITY LEVEL

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

- Immediate response required**
 Response time is as soon as possible, but no later than 24 hours from receipt. This classification also includes a category that requires a response within 18 hours for odor complaints involving certain types of poultry operations.
- Respond within one working day**
 As soon as possible, but no later than one working day from receipt.
- Respond within five working days**
 As soon as possible, but no later than five working days from receipt.
- Respond within 14 calendar days**
 As soon as possible, but no later than 14 calendar days from receipt.

- Respond within 30 calendar days**
 As soon as possible, but no later than 30 calendar days from receipt.
- Refer or do not respond**
 This classification is for complaints that, due to jurisdictional issues, are referred to other governmental authorities.
- Other specified time frame**
 This classification is for special projects that occur as on-demand events and complaints in which the complainant or source is unavailable and region management has granted prior approval for extending an investigation. Response time is based on management’s evaluation of the project and the overall staff workload.

The distribution of complaints is shown by priority classification statewide in Figure A-5. Approximately 26% of all complaints received are outside TCEQ jurisdiction and are referred to another governmental authority or closed without an investigation. Of the complaints that are within TCEQ jurisdiction, 5% require immediate response (one working day or less), 18% require response between 1 and 30 days, and the remaining 51% require response in 30 calendar days or more.

Figure A-5. Complaints by Priority, Statewide

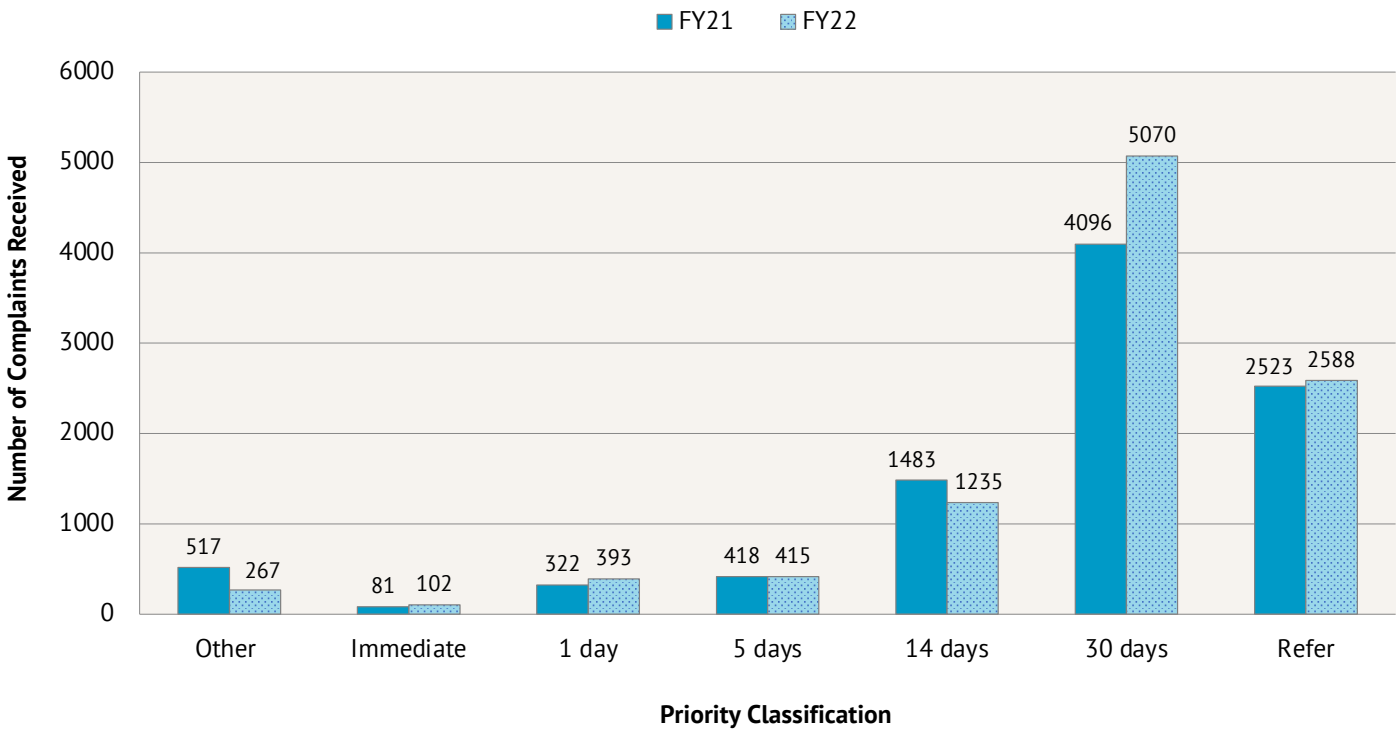
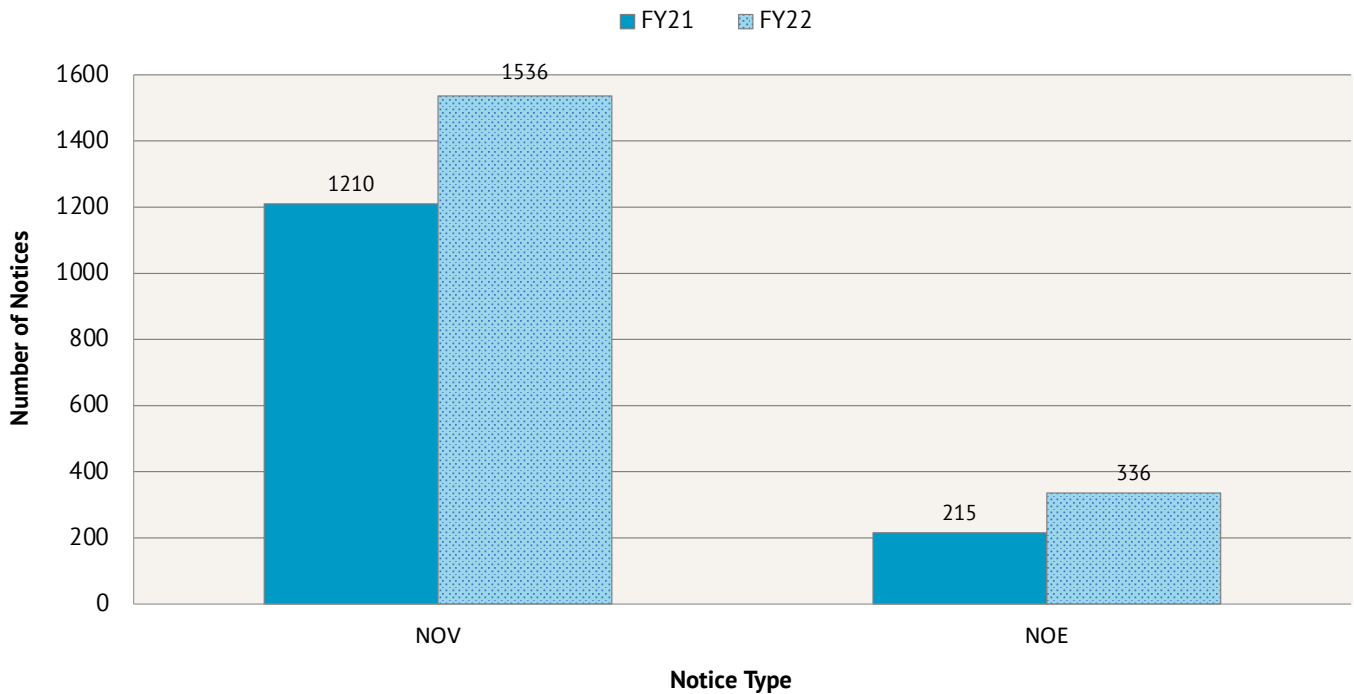


Figure A-6. Complaints Resulting in NOVs & NOEs, Statewide



COMPLAINT INVESTIGATIONS THAT TRIGGER ENFORCEMENT ACTION

All complaint investigations are conducted according to priority levels, as described above. Subsequent action depends on the outcome of the investigation. For approximately 67 percent of these investigations completed in fiscal 2021 and fiscal 2022, no enforcement action was required. For the remainder, TCEQ initiated enforcement: a notice of violation (NOV) was issued for 30 percent of the complaint investigations; and a notice of enforcement (NOE) was issued for 6 percent. Multiple complaints may be included in a single investigation and investigations may be completed in different fiscal years than when the complaint was received.

An NOV is issued when TCEQ rules, state statutes, or permit requirements have been violated, but the violation is not considered serious enough to require an enforcement order. Violations are expected to be resolved within a time frame specified in the NOV. An NOE is issued when a substantial violation has been documented and formal action is required. Typically, an NOE leads to administrative penalties.

The regulated entity must resolve all violations and TCEQ must verify them through a second investigation.

These verification investigations are not included in the totals in this appendix.

COMPLAINT INVESTIGATIONS BY PROGRAM TYPE

TCEQ also analyzed complaint investigations by program type. Waste and water media each have several subcategories. Air complaints are not further subdivided. If an investigation involves more than one type, it is classified as “multi-program.”

The waste program types are:

- dry cleaners
- emergency response
- petroleum storage tanks
- industrial and hazardous waste
- municipal solid waste

The water program types are:

- animal feeding operations
- Edwards Aquifer Protection Program
- on-site sewage facilities
- public water supply
- water rights
- aggregate production operations
- landscape irrigation
- water quality

Water quality also comprises several program sub-types (sludge transporters, beneficial use, stormwater, and municipal and industrial wastewater treatment, and pretreatment); however, these sub-types are not listed separately in this analysis.

Figure A-7 shows the number of complaint investigations in each type—in fiscal 2021, 4,694 investigations and in fiscal 2022, 5,153 investigations. One investigation may be conducted for multiple complaints for the same or similar incidents or conditions.

In fiscal 2021, 42% of all complaint investigations, by program type, were for water, 40% for air, 12% for waste, and 6% for multi-media programs. In fiscal 2022, 44% of all complaint investigations were for water programs, 41% for air programs, 11% for waste programs, and 4% for multi-media programs.

CONCLUSIONS

The total number of complaints received in fiscal 2021 and fiscal 2022 is consistent with the trends in fiscal 2019 and fiscal 2020. Although there has been an increase in number of complaints received, overall totals have not returned to pre-COVID-19 pandemic levels. Air complaints increased in fiscal 2022—dust and odor complaints make up over 60% of all air complaints received, with dust complaints increasing the most. Water complaints decreased between fiscal

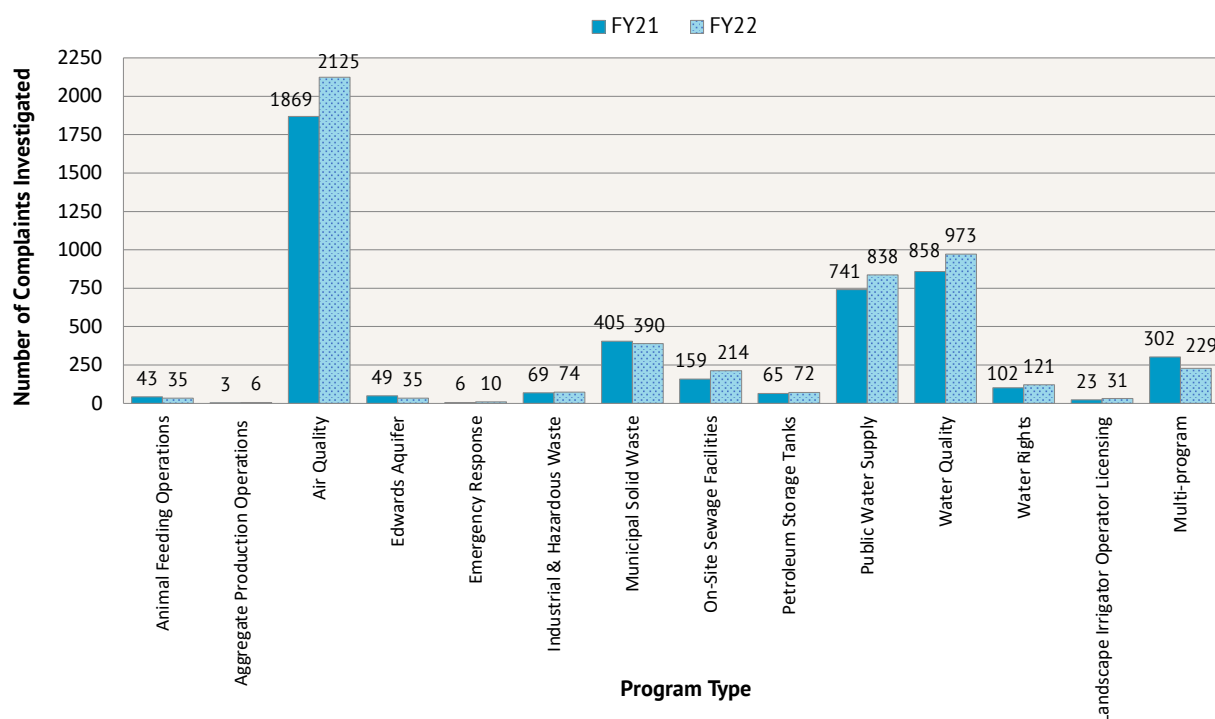
2021 and fiscal 2022, but there was an increase in stormwater complaints. Waste complaints increased between fiscal 2021 and fiscal 2022, primarily in the more heavily populated parts of the state.

TCEQ reviews all complaints received and investigates those within TCEQ’s jurisdiction. From fiscal 2018 to fiscal 2022, there has been an increase in complaints outside of TCEQ jurisdiction (25% in fiscal 2022 compared to 18% in fiscal 2018). Of the complaints that are investigated, 67% do not result in a violation. This represents a large commitment of TCEQ resources that may be more effectively used for other types of investigations. Many complaints that are received and investigated are repeats of previous complaints, which may or may not have previously resulted in a violation.

When multiple complaints are related, they may be addressed collectively within a single investigation. Therefore, there is not a direct correlation between the number of complaints received and the number of investigations.

Finally, the analysis of complaint investigations by program type demonstrates that TCEQ places a high priority on investigating complaints. Management prioritizes all complaints, and they are reviewed according to potential impact on public health or the environment, and investigated per the assigned priority or, if not within the jurisdiction of this agency, they are promptly referred to the appropriate governmental authority.

Figure A-7. Complaint Investigations by Program Type



APPENDIX B

PERMIT TIME FRAME REDUCTION AND TRACKING

The Texas Commission on Environmental Quality is charged with issuing permits and other authorizations for:

- controlling air pollution
- managing hazardous and nonhazardous waste and surface water
- protecting water quality
- ensuring safe and adequate drinking water
- remediating soil and groundwater
- safely operating in situ mines

Texas Government Code Section 2005.007 requires TCEQ to report every two years on its permit application system, showing the periods adopted for processing each type of permit issued and any changes enacted since the last report.

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

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

PERMIT TIME FRAME TRACKING

One of the agency's primary goals is to issue well-written permits that protect human health and the environment, and to do so as efficiently as possible. TCEQ's Permit Time Frame Tracking process focuses on establishing time frames for processing permits and goals for adhering to those time frames. The goal in most program areas is to review 90% of all permit applications within the established time frames. Air Permitting has a goal to review 75% of all permit applications within the established time frames.

Each type of TCEQ authorization tracked within this process is prioritized as follows:

- **Priority 1.** These projects require agency action before applicants may begin operations. This category includes uncontested applications for new permits and for amendments to existing permits. Amendment applications request changes from current permit requirements.
- **Priority 2.** These projects allow permit applicants to continue operating while the agency processes the request. This category includes uncontested applications for renewals of existing permits to continue under existing permit conditions.

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



Canyon Lake. Credit: iStock.

Figures B-1 through B-6 show the status of Priority 1 and Priority 2 projects at the end of fiscal 2022 in the following categories:

- air permits
- waste permits
- water quality permits
- water right permits
- water supply authorizations
- radioactive material licenses
- permits and authorizations for underground injection control (UIC)

Excluded from the data are projects that were contested or that involved significant review or approval outside of TCEQ—such as obtaining U.S. Environmental Protection Agency (EPA) approval—that can significantly slow down application processing times.

Progress on Time Frame Goals

Two permitting areas met their time frame goals:

- Air Permitting reviewed 75% of all permit applications within the established time frames despite an increase in applications that were more complex and required more time to review and issue.
- Waste Permits reviewed 90% of all applications within established time frames.

Water Rights Permitting changed how it categorizes permit application types in October 2020 in response to implementation of House Bill (HB) 1964, 86th Legislature (Figure B-4). The program did not meet the time frame goals for applications exclusive of Fast Track and HB 1964 applications.

Since September 2021, Water Rights Permitting has met time frame goals for HB 1964 applications and most Fast Track applications and has continued reducing the average processing times for these permits. Since fiscal 2016, the program reduced the number of pending water rights applications by 66%. As the total number of pending, uncontested water right applications have declined, so have the number of pending applications which exceed the processing goal. This reduction paves the way for the program to focus on processing applications that currently exceed time frames.

Water Quality Permitting did not meet the time frame goals. Applications that were contested, involved complex review, or received EPA objections



Lake Austin. Credit: iStock.

resulted in a backlog of applications. From fiscal 2021 to 2022, Water Quality Permitting reduced the backlog of applications by 60%. This reduction allows the program area to focus on processing applications that currently exceed time frames.

GREATER EFFICIENCIES

The agency has identified several ways to streamline the permitting process, improving efficiencies and reducing paperwork requirements. Some of those measures are described below.

Expand options for applicants for online permitting, notification, and payment

TCEQ's e-permitting options allow applicants to apply for a permit online and receive authorization within minutes. TCEQ has offered e-permitting, along with specific fee incentives, since 2008 and has implemented requirements for obtaining authorizations electronically for the large categories of stormwater general permits unless waivers are obtained.

The Air Permitting program requires all permits by rule (PBR), standard permits, and case by case new source review (NSR) applications be submitted through the ePermits system, which has helped with Air Permitting's workload. With similar staffing, the number of completed projects submitted online significantly increased—11,285 between fiscal 2021 and 2022. During the same period, the Air Permitting program completed 44% of NSR projects automatically

through e-permitting with same-day response.

And for fee collection, during fiscal 2021 and 2022, the agency's e-Pay system processed over 100,000 fee payments and collected about \$56 million in fees.

Implement targeted initiatives within permitting and authorization programs

WASTE PERMITS

- Holding pre-application meetings.
- Improving checklists, forms, and guidance documents to facilitate more consistent and complete applications.
- Consolidating processes for reviewing applications to improve turnaround times.
- Implementing a LEAN Management system to improve processes.

RADIOACTIVE MATERIAL LICENSES AND UIC PERMITS

- Holding pre-application meetings and communicating with the applicants during the permit review process to facilitate more consistent and complete applications.
- Developing new and revised procedures and checklists for staff efficiency and consistency; also developing a quick reference guide for staff, including program specific rules and regulations.
- Streamlining pre-injection units (PIU)



Gorman Falls, Colorado Bend State Park. Credit: iStock.

regulation for injection wells by removing redundant requirements for registering or permitting PIUs under 30 TAC Chapter 331.

- Initiating LEAN Management systems to improve processes.

WATER RIGHTS PERMITS

- Implementing LEAN Management for processing water rights permits.
- Establishing a separate, streamlined permitting process for specific applications that have no impact on other water rights or the environment (certain changes to the purpose of use, place of use, and location of diversion points), as provided for by HB 1964, 86th Legislature.
- Requiring pre-application meetings to facilitate more complete applications.
- Revising forms, standard operating procedures, guidance, checklists, and templates to support smoother application processing.
- Continuing to implement extension and return policies.

WATER QUALITY

- Implementing new and revised program goals, standard operating procedures, and application tracking tools for staff.
- Establishing internal deadlines for each step of the permit review process to facilitate meeting permit time frames.
- Identifying time frame exceptions beginning September 2021.
- Holding pre-application meetings to facilitate more complete applications.
- Working with applicants to achieve timely publishing of public notices and addressing application deficiencies.

WATER SUPPLY

- Holding pre-application meetings and providing checklists, guidance, and forms to facilitate more consistent and complete applications.
- Using electronic submission processes and updating internal processes to expedite reviews.
- Growth and development in the state led to an increase in expedited bond application reviews. The Districts Advisory Workgroup—created in the last biennium to identify efficiencies

and streamline the districts bond application process—continues to provide an open forum to discuss TCEQ’s water district processes and procedures.

AIR PERMITS

- Continuing to develop and update electronic guidance tools and workbooks to improve application quality.
- Streamlining the internal review process for NSR applications so that administrative and technical reviews are conducted simultaneously and deficiencies are identified earlier in the process.
- Expanding the ePermits system to include case by case NSR permit applications and all standard permits applications, which were previously not available.
- Implementing changes to Title V permits to incorporate PBR requirements using a new PBR Supplemental Table with applications.
- Developing additional standard permits for specific types of facilities.
- Developing additional readily available permits (RAP) for specific types of facilities. TCEQ currently has five RAPs.

Expand the options for more standardized permitting by using general permits, standard permits, and PBRs

TCEQ offers over 20 types of standard permits, 104 PBRs, and six general operating permits in the Air Permitting program; 15 general permits in the Water Quality program; six PBRs and three registrations by rule in the Waste Permitting program; and one general permit in the UIC program. Continuing to use these authorizations has reduced the time frames for processing permits.

Maintain an expedited permitting and authorization process for all economic-development projects

In addition to the time frame goals for processing standard permits, TCEQ maintains an expedited permitting process for economic-development projects. TCEQ personnel meet regularly with the Governor’s Office of Economic Development and Tourism to prioritize these types of projects. During fiscal 2021 and 2022, TCEQ tracked and issued 13 permits for major economic-development projects.



Salt Basin Dunes, Guadalupe Mountains National Park. Credit: iStock.

PROCESSING TIMES FOR PERMITS, REVIEWS, AND AUTHORIZATIONS

Figure B-1. Air Permits (Uncontested) Processing Times

Application Type	Received in FY21 and FY22	Processed in FY21 and FY22	Exceeding Target as of 8/31/2022	Minimum Processing Time (Days)	Maximum Processing Time (Days)	Average Processing Time (Days)	Target Maximum (Days)
PRIORITY 1							
New Source Review (NSR) New Permits	218	170	0	1	3,651	278	285
NSR Amendments	623	616	11	3	2,080	205	315
NSR New Permits – Federal Timeline	8	9	0	145	326	242	365
NSR Amendments – Federal Timeline	41	47	2	51	569	318	365
Federal NSR (Prevention Significant Deterioration, Nonattainment, 112g) New & Major Modifications	88	82	3	8	569	222	365
PBRs	6,674	6,667	1	1	105	12	45
Standard Permits (without public notice), Changes to Qualified Facilities (SB 1126) & Relocations	3,497	3,513	1	1	365	9	45
Standard Permits (with public notice)	327	294	0	6	184	75	150
Standard Permits for Concrete Batch Plants (with public notice)	191	246	0	35	213	86	195
Priority 1 Totals	11,667	11,647	18				
PRIORITY 2							
NSR Alterations & Other Changes	565	583	2	2	224	58	120
NSR Renewals	494	481	9	14	2,080	170	270
New Site Operating Permits (SOP)	94	100	0	77	790	361	365
SOP Revisions	429	454	30	1	1,747	231	365
SOP Renewals	347	373	35	66	2,675	356	365
New General Operating Permits (GOP)	94	100	0	31	229	102	120
GOP Revisions	226	239	0	1	361	139	330
GOP Renewals	130	141	0	14	262	138	210
Priority 2 Totals	2,379	2,471	76				
OVERALL TOTALS	14,046	14,118	94				

Figure B-2. Waste Permits (Uncontested) Processing Times

Application Type	Received in FY21 and FY22	Processed in FY21 and FY22	Exceeding Target as of 8/31/2022	Minimum Processing Time (Days)	Maximum Processing Time (Days)	Average Processing Time (Days)	Target Maximum (Days)
PRIORITY 1							
Industrial and Hazardous Waste (IHW) New Permits	6	3	0	267	329	299	450
IHW Class 3 Modifications	11	12	0	16	442	292	450
IHW Major Amendments	0	0	0	N/A	N/A	N/A	450
Municipal Solid Waste (MSW) New Permits	16	12	0	40	357	185	360
MSW Major Amendments	25	21	0	20	359	183	360
MSW Registered Transfer Stations	6	5	0	51	171	134	230
MSW Registered Liquid Waste Processor	2	1	0	160	160	160	230
Priority 1 Totals	66	54	0				
PRIORITY 2							
IHW Renewals	34	44	0	24	2,174	376	450
Priority 2 Totals	34	44	0				
OVERALL TOTALS	100	98	0				

TCEQ processed to a final decision 59 IHW and 39 MSW authorizations. The average processing time for these applications ranged from 134 to 376 days, which was within their respective targets.

In addition to the targeted initiatives to streamline applications and reduce review times, the Office of Waste continues to resolve minor issues and minor application deficiencies through phone calls and emails, improving the overall time frame for reviews.

Figure B-3. Water Quality (Uncontested) Processing Times

Application Type	Received in FY21 and FY22	Processed in FY21 and FY22	Exceeding Target as of 8/31/2022	Minimum Processing Time (Days)	Maximum Processing Time (Days)	Average Processing Time (Days)	Target Maximum (Days)
PRIORITY 1							
New Permits (Major Facilities)	1	1	1	352	352	352	330
Major Amendments (Major Facilities)	50	61	18	212	3,493	646	330
New Permits (Minor Facilities)	284	178	20	1	1,200	290	330
Major Amendments (Minor Facilities)	132	109	22	142	1,248	355	300
Sludge Registrations	101	111	2	23	827	181	270
Priority 1 Totals	568	459	62				
PRIORITY 2							
Renewal Major Facilities	156	171	24	168	4,431	468	330
Renewal Minor Facilities	629	687	45	111	1,603	272	300
Priority 2 Totals	785	858	69				
OVERALL TOTALS	1,353	1,317	131				

Figure B-4. Water Rights Permits (Uncontested) Processing Times

Application Type	Received in FY21 and FY22	Processed in FY21 and FY22	Exceeding Target as of 8/31/2022	Minimum Processing Time (Days)	Maximum Processing Time (Days)	Average Processing Time (Days)	Target Maximum (Days)
PRIORITY 1							
Water Rights Applications [excluding Fast Track and House Bill (HB) 1964]	62	65	69	42	3,646	1,255	300
Fast Track	89	120	4	3	2,342	250	300
HB 1964	19	19	0	35	428	84	90
Priority 1 Totals	170	204	73				

Figure B-5. Water Supply Reviews/Authorizations Processing Times

Application Type	Received in FY21 and FY22	Processed in FY21 and FY22	Exceeding Target as of 8/31/2022	Minimum Processing Time (Days)	Maximum Processing Time (Days)	Average Processing Time (Days)	Target Maximum (Days)
PRIORITY 1							
Water District Expedited Bond Applications	444	367	4	18	137	60	60
Water District Regular Bond Applications	284	353	2	1	824	165	180
Water District Expedited Escrow Releases & Surplus Fund Requests	113	122	1	1	183	58	60
Water District Regular Minor Applications	200	228	0	1	200	58	120
Water District Expedited Creation Applications	65	34	0	14	257	118	120
Water District Regular Creations & Conversions	48	65	0	127	982	286	180
Water Engineering Plan Reviews	5,038	4,994	0	1	88	58	60
Exceptions	2,729	2,824	4	1	184	78	100
Alternative Capacity Requirements	180	184	0	15	90	81	90
Priority 1 Totals	9,101	9,171	11				

TCEQ's Water Supply Authorization program completed reviews for 9,171 applications and authorizations, with an average processing time ranging from 58 to 286 days

Figure B-6. Radioactive Materials Permits (Uncontested) Processing Times

Application Type	Received in FY21 and FY22	Processed in FY21 and FY22	Exceeding Target as of 8/31/2022	Minimum Processing Time (Days)	Maximum Processing Time (Days)	Average Processing Time (Days)	Target Maximum (Days)
PRIORITY 1							
Uranium Radioactive Material License Initial Issuance	0	0	0	N/A	N/A	N/A	885
Low-Level Radioactive Waste, Radioactive Material License Initial Issuance	0	0	0	N/A	N/A	N/A	990
Underground Injection Control (UIC) New Permits	10	2	4	263	357	310	390
UIC General Permit Notice of Registration	1	0	0	N/A	N/A	N/A	60
UIC Permit Major Amendments	9	0	9	N/A	N/A	N/A	390
UIC Class III Production Area Authorizations	0	0	0	N/A	N/A	N/A	390
Priority 1 Totals	20	2	13				
PRIORITY 2							
Uranium Radioactive Material License Renewals	1	0	2	N/A	N/A	N/A	885
Uranium Radioactive Material License Major Amendments	0	0	1	N/A	N/A	N/A	885
Uranium Radioactive Material License Minor Amendments	3	2	1	133	338	236	230
Low-Level Radioactive Waste, Radioactive Material License Renewals	0	1	0	761	761	761	990
Low-Level Radioactive Waste, Radioactive Material License Major Amendments	0	0	0	N/A	N/A	N/A	990
Low-Level Radioactive Waste, Radioactive Material License Minor Amendments	2	2	0	210	233	222	230
UIC Permit Renewals	18	27	12	245	1,135	776	390
UIC Class V Authorizations	140	142	2	2	307	45	60
Priority 2 Totals	164	174	18				
OVERALL TOTALS	184	176	31				

The Radioactive Materials Division met and communicated with applicants during the permitting and licensing process to improve their understanding of agency regulations, forms, and procedures. This allowed for a more streamlined resolution of application deficiencies and issues, improving the overall time frame for reviews.

Definitions for Tables

Number Received – The number of applications/permits/amendments received.

Number Processed – The number of applications/permits/amendments completed.

Exceeding Target – The total pending applications/permits/amendments exceeding agency target WITHOUT exceptions.

Minimum Processing Time (Days) – The minimum processing time of applications/permits/amendments WITHOUT exceptions.

Maximum Processing Time (Days) – The maximum processing time of applications/permits/amendments WITHOUT exceptions.

Average Processing Time (Days) – The average processing time of applications/permits/amendments WITHOUT exceptions.

Target Maximum – The maximum days allowed for processing the specific applications/permits/amendments.

APPENDIX C

OFFICE OF PUBLIC INTEREST COUNSEL'S ANNUAL REPORT TO THE TCEQ

For Fiscal Year 2022

INTRODUCTION

Texas Water Code, Chapter 5, Subchapter G prescribes the role, responsibilities, and duties of the Office of Public Interest Counsel (OPIC or Office) at the Texas Commission on Environmental Quality (Commission or TCEQ). Included among these statutory duties is the requirement under Texas Water Code, Section 5.2725 for OPIC to make an Annual Report to the Commission containing:

1. An evaluation of the Office's performance in representing the public interest;
2. An assessment of the budget needs of the Office, including the need to contract for outside expertise; and
3. Any legislative or regulatory changes recommended pursuant to Texas Water Code, Section 5.273.

In even-numbered years the report must be submitted in time for the Commission to include the reported information in the Commission's reports under Texas Water Code, Section 5.178(a) and (b), and in the Commission's biennial legislative appropriations requests, as appropriate. Accordingly, OPIC respectfully submits this Annual Report to comply with the requirements of Texas Water Code, Section 5.2725.

OPIC was created in 1977 to ensure that the Commission promotes the public's interest. To fulfill the statutory directive of Texas Water Code, Section 5.271, OPIC participates in contested case hearings and other Commission proceedings to help develop a complete

record for the Commission to consider in its decision-making process. In these proceedings, OPIC develops positions and recommendations supported by applicable law and the best available information and evidence. OPIC also advocates for meaningful public participation in the decision-making process of the Commission to the fullest extent authorized by the law. The Office works independently of other TCEQ divisions and parties to present a public interest perspective on matters that come before the Commission. OPIC does this work through activities that include:

- Participating as a party in contested case hearings;
- Preparing briefs for Commission consideration regarding hearing requests, requests for reconsideration, motions to overturn, motions for rehearing, use determination appeals, and various other matters set for briefing by the Office of General Counsel;
- Reviewing and commenting on rulemaking proposals and petitions;
- Reviewing and recommending action on other matters considered by the Commission, including, but not limited to, proposed enforcement orders and proposed orders on district matters;
- Participating in public meetings on permit applications with significant public interest; and
- Responding to inquiries from the public related to agency public participation procedures and other legal questions related to statutes and regulations relevant to the agency.

As a party to Commission proceedings, OPIC is committed to providing independent analysis and recommendations that serve the integrity of the public participation and hearing process. OPIC is committed to ensuring that relevant information and evidence on issues affecting the public interest is developed and considered in Commission decisions. OPIC's intent is to facilitate informed Commission decisions that protect human health, the environment, the public interest, and the interests of affected members of the public to the maximum extent allowed by applicable law.

The Public Interest Counsel is appointed by the Commission. The Counsel supervises the overall operation of OPIC by managing the Office's budget, hiring and supervising staff, ensuring compliance with agency operating procedures, and establishing and ensuring compliance with Office policies and procedures. OPIC has eight full-time equivalent positions: Public Interest Counsel; Senior Attorney; five Assistant Public Interest Counsels; and the Office's Executive Assistant.

OPIC is committed to fulfilling its statutory duty to represent the public interest in Commission proceedings by hiring, developing, and retaining knowledgeable staff who are dedicated to OPIC's mission. To maintain high quality professional representation of the public interest, OPIC ensures that attorneys in the office receive continuing legal education and other relevant training. OPIC further ensures that its staff undertakes all required agency training and is fully apprised of TCEQ's operating policies and procedures.



Fall foliage at Lost Maples State Park. Credit: iStock.

EVALUATION OF OPIC'S PERFORMANCE

Texas Water Code, Section 5.2725(a)(1) requires OPIC to provide the Commission with an evaluation of OPIC's performance in representing the public interest. In determining the matters in which the Office will participate, OPIC applies the factors stated in 30 Texas Administrative Code (TAC) Section 80.110 (Public Interest Factors) including:

1. The extent to which the action may impact human health;
2. The extent to which the action may impact environmental quality;
3. The extent to which the action may impact the use and enjoyment of property;
4. The extent to which the action may impact the general populace as a whole, rather than impact an individual private interest;
5. The extent and significance of interest expressed in public comment received by the Commission regarding the action;
6. The extent to which the action promotes economic growth and the interests of citizens in the vicinity most likely to be affected by the action;
7. The extent to which the action promotes the conservation or judicious use of the state's natural resources; and
8. The extent to which the action serves Commission policies regarding the need for facilities or services to be authorized by the action.

OPIC's performance measures classify proceedings in four categories: environmental proceedings; district proceedings; rulemaking proceedings; and enforcement proceedings.

For reporting purposes, environmental proceedings include contested case hearing proceedings on permits at the State Office of Administrative Hearings (SOAH) and Commission proceedings related to consideration of hearing requests, requests for reconsideration, motions to overturn, proposals for decision, and other miscellaneous matters heard by the Commission. These proceedings relate to municipal and industrial solid waste and hazardous waste management and disposal activities, underground injection activities, waste disposal wells, water rights authorizations, priority groundwater management area designations,

watermaster appointments, industrial wastewater discharge permits, municipal wastewater discharge permits, land application of wastewater permits, land application of septage and sludge, concentrated animal feeding operations, rock and concrete crushers, concrete batch plant standard permit registrations, facilities requiring state and federal air permits, pollution control equipment use determination appeals, and various authorizations subject to the Commission’s motion to overturn process. OPIC also includes permit revocation petitions, appeals of decisions on occupational licenses, and emergency orders in numbers reported for this category.

District proceedings include proceedings at SOAH and at the Commission related to the creation and dissolution of districts, and any other matters within the Commission’s jurisdiction relating to the oversight of districts.

Rulemaking proceedings include Commission proceedings related to rulemaking actions, state implementation plans, general permits, and rulemaking petitions.

Enforcement proceedings include enforcement contested case hearings active at SOAH and Commission proceedings related to the consideration of proposed orders. For purposes of this report, enforcement proceedings do not include other agreed enforcement orders issued by the Executive Director in matters that were never active cases at SOAH.

OPIC’s Performance Measures

As required by Texas Water Code, Section 5.2725(b), the Commission developed the following OPIC performance measures which were implemented on September 1, 2012:

Goal 1: **To provide effective representation of the public interest as a party in all environmental and district proceedings before the Texas Commission on Environmental Quality**

Objective: To provide effective representation of the public interest as a party in 75 percent of environmental proceedings and 75 percent of district proceedings heard by the TCEQ

Outcome Measure:

- Percentage of environmental proceedings in which OPIC participated

- Percentage of district proceedings in which OPIC participated

Goal 2: **To provide effective representation of the public interest as a party in all rulemaking proceedings before the Texas Commission on Environmental Quality**

Objective: To participate in 75 percent of rulemaking proceedings considered by the TCEQ

Outcome Measure:

- Percentage of rulemaking proceedings in which OPIC participated

Goal 3: **To provide effective representation of the public interest as a party in all enforcement proceedings before the Texas Commission on Environmental Quality**

Objective: To provide effective representation of the public interest as a party in 75 percent of enforcement proceedings heard by the TCEQ

Outcome Measure:

- Percentage of enforcement proceedings in which OPIC participated

FY 2022 Performance

OPIC’s performance measures for environmental, district, rulemaking and enforcement proceedings are expressed as percentages of the proceedings in which OPIC could have participated. OPIC uses a reporting process within the TCEQ Commissioners’ Integrated Database that allows OPIC to track its work on assigned permitting and licensing matters active at any point within a fiscal year. Other tools used by OPIC include spreadsheets that track fiscal year agenda item totals by performance measure category and track enforcement matters active at SOAH at any point during the fiscal year.

Performance measure percentages were derived by using information available for FY 2022 as of August 1, 2022. In fiscal year 2022, OPIC participated in a total of 640 proceedings consisting of: 96 environmental proceedings; 13 district proceedings; 38 rulemaking proceedings; and 493 enforcement proceedings.

OPIC’s participation in 96 of 96 total environmental

proceedings resulted in a participation percentage of 100%.

OPIC's participation in 13 of 13 district proceedings resulted in a participation percentage of 100%.

OPIC's participation in 38 of 38 rulemaking proceedings, including the review of all petitions, proposals, and adoptions considered by the Commission during fiscal year 2022, resulted in a participation percentage of 100%.

OPIC's participation in 493 of 493 enforcement proceedings, including the review of orders considered at Commission agendas and the participation in additional cases that were active at SOAH during fiscal year 2022, resulted in a participation percentage of 100%.

ASSESSMENT OF BUDGET NEEDS

Texas Water Code, Section 5.2725(a)(2) directs OPIC to provide the Commission with an assessment of its budget needs, including the need to contract for outside technical expertise. The operating budget for OPIC in fiscal year 2022 was \$ 653,677 as shown in Figure 1 below.

Texas Water Code, Section 5.274(b) provides that OPIC may obtain and use outside technical support to carry out its functions. Texas Water Code, Section 5.2725(a)(2) requires this report to include information about OPIC's budget needs to contract for outside technical expertise. OPIC's initial budgets typically do not include funds for temporary and professional

services; however, when such needs have been identified, funds are made available through additional funding requests.

The need to retain technical consulting services in contested case hearings rarely becomes apparent in time for OPIC to identify, obtain, and use technical expertise by way of individually negotiated contracts. Also, the complex permit applications OPIC tracks during the comment period often settle prior to hearing. OPIC has been reluctant to commit state resources for work on such matters until SOAH proceedings are imminent.

OPIC has remained open to possibilities for retaining outside technical expertise in novel and complex cases when the timing and circumstances allow. During the agency's sunset review this past year, sunset advisory committee staff and TCEQ General Law Division attorneys brought to OPIC's attention that efficiencies could be realized by retaining technical expertise through umbrella contracts. The initial process of establishing an umbrella contract may require extensive time and effort from multiple agency staff members; however, the assumption is that once such a contract is in place, individual work orders for technical expertise could be processed relatively quickly.

Nevertheless, a primary concern would remain as to whether the 180-day schedule for SB 709 permitting cases allows sufficient time following placement of a work order for a contractor to: (1) locate an appropriate expert; (2) ensure the expert has no conflicts of interest because of work for other clients; (3) ensure the expert's existing workload and schedule allow them to work for OPIC within the window of time required; (4) and ensure that high quality deliverables such as technical reports can be available in time to be useful for the hearing. This timing problem is compounded by the fact that SOAH reserves one-third of SB 709's maximum 180-day period from the preliminary hearing through the issuance of the proposal for decision (PFD) to prepare a PFD. Because SOAH reserves 60 days after conclusion of the evidentiary hearing and submittal of all written briefs related to closing arguments, the duration of time from preliminary hearing through evidentiary hearing is less than 120 days. OPIC will continue to engage with agency staff to explore these concerns and determine how umbrella contracts and work orders may allow OPIC to avail itself of technical expertise more efficiently.

Figure C-1. OPIC Budget, FY 2022

Budget Category		FY 2022 Budget
31	Salaries	\$636,677
37	Travel	\$7,100
39	Training	\$5,500
43	Consumables	\$500
46	Other Operating Expenses	\$1,600
54	Facilities, Furniture & Equipment	\$2,300
TOTAL		\$653,677

LEGISLATIVE & REGULATORY CHANGE RECOMMENDATIONS

Texas Water Code, Section 5.273(b) authorizes OPIC to recommend needed legislative and regulatory changes. Texas Water Code, Section 5.2725(a)(3) provides that any such recommendations are to be included in OPIC's Annual Report. For purposes of this report, OPIC's only recommendations are for legislative changes relating to concrete batch plant standard permits and authorizations to use these permits.

Legislative Change Recommendations

PROPOSED CHANGES TO TEXAS HEALTH AND SAFETY CODE SECTIONS 382.058, 382.05195, AND 382.05198 REGARDING CONCRETE BATCH PLANT STANDARD PERMITS

First, OPIC proposes changes to Texas Health and Safety Code (THSC), Section 382.058(c), addressing who can be found to have standing as an "affected person" with respect to concrete operations authorized by the standard permit issued under THSC Section 382.05195. As currently written, only those persons residing in a permanent residence within the specified distance of the "proposed plant" may request a hearing as a person who may be affected. OPIC asserts that limiting affected person status by reference to a "permanent residence" is overly restrictive and does not account for schools or places of worship requesting a hearing. Allowing schools and places of worship to request a hearing is consistent with other related provisions of the Texas Clean Air Act; these institutions are protected by the buffer zone requirements of the standard permit for concrete batch plants with enhanced controls and the standard permit for concrete crushers.¹ OPIC's proposal would include schools and places of worship, as well as residents of single or multifamily housing units, in the universe of requestors who may be considered affected persons.

Second, OPIC proposes that the distance limitation for determining affected person status be increased

from 440 to 880 yards. The buffer zone for the standard permit with enhanced controls would also increase to 880 yards. OPIC notes that changing the distance requirements in Sections 382.058(c) and 382.0198(19) to 880 yards was previously proposed by Senator Donna Campbell in SB 208 filed during the 86th Texas Legislative Session.

Regardless of any air dispersion modeling the agency has relied upon to conclude individuals should expect no ill effects from a plant 440 yards from them, the public is not reassured that such a short distance is unquestionably protective under all circumstances. Concrete batch plant authorizations tend to be among the most contentiously protested permitting matters under TCEQ's jurisdiction. People in neighborhoods further than 440 yards from facilities are frequently outraged to learn that they are not considered eligible to be affected persons in hearings held on these applications.

The public's dissatisfaction with the 440-yard distance limitation is based on experience. Particularly in environmental justice communities where these plants are concentrated, nearby neighbors regularly report health concerns and nuisance dust conditions. In written comments dated June 29, 2021, Harris County informed TCEQ that the county had documented 144 violations during 122 concrete batch plant investigations conducted between February 2020 and June 2021.² It appears in many cases that a 440-yard buffer zone is simply insufficient to prevent nuisance conditions.

Examples may be helpful to envision 440 yards. Many par-4 golf course holes are 440 yards or longer. At the Tournament Players Club (TPC) Four Seasons Las Colinas (Four Seasons Resort Dallas), hole 3 is 528 yards. At the TCEQ's Park 35 offices in Austin, Building F is over 440 yards away from two other buildings within the TCEQ office complex, Building A and Building B.

OPIC presents this hypothetical scenario for illustration purposes:

- (1) a proposed concrete plant with a baghouse located at the site of Building A;
- (2) a family's property within the boundaries of Park 35 Circle and I-35; and
- (3) the family's residence located at Building F.

The plant (at Building A) would be over 440 yards

¹ Texas Health and Safety Code, Sections 382.05198(19) and 382.065.

² TCEQ Non-Rule Project No. 2021-016-OTHR-NR; Harris County's Comments and Request for Extension of Time regarding Proposed Amendment to Texas Commission on Environmental Quality Air Quality Standard Permit for Concrete Batch Plants submitted on June 29, 2021.

from the family residence (at Building F), and the baghouse (at Building A) would be more than 100 feet from the property line (Park 35 Circle). Such a plant could be authorized with no opportunity for the family to have a contested case hearing under current law. Also under current law, stockpiles of dust-causing raw materials of unrestricted size could be located within 50 feet of the family's property line (Park 35 Circle).

Third, in addition to increasing the distance limitation from 440 to 880 yards, OPIC also recommends that the starting point for the operative measurement in Texas Health and Safety Code, Section 382.058(c) and 382.0198(19) be taken from the property line. The existing statutory language is problematic in measuring the specified distance from the "proposed plant." The term "proposed plant" in Section 382.058(c) has been interpreted to refer to "a stationary point of origin of air contaminants proposed in the application."³ However, as discussed below, emissions points plotted in concrete batch plant registration applications are neither definite nor immovable.

The standard permit issued under Section 382.05195 allows operators to (1) place a suction shroud baghouse exhaust anywhere on the applicant's property if it is not within 100 feet of the property line, and (2) place stationary equipment and stockpiles anywhere on the applicant's property, so long as they are not within 50 feet of the property line. Notably, after a standard permit is issued, TCEQ rules allow the operator to relocate proposed emission points anywhere on the property, without the opportunity for a contested case hearing, so long as the changes do not "affect that person's right to claim a standard permit." 30 Texas Administrative Code, Section 116.615(2). Therefore, under the current rules, an applicant could avoid a contested case hearing by filing an application that plots emission points at areas of the plant site more than 440 yards away from potentially affected persons, obtaining a registration, then moving emission points closer to the requestor's residence, anywhere just outside the minimum 100-foot and 50-foot buffers designated in the standard permit. To address the concerns discussed above, OPIC recommends that the designated distance requirement be measured from an unchangeable point — the property line of the site where the concrete batch plant would be located.

Fourth, OPIC proposes changes to THSC Section



Palo Duro Canyon. Credit: iStock.

382.058(d) to allow parties to present air dispersion modeling evidence during a contested case hearing. The applicant could continue relying on prior modeling that TCEQ used in issuing the standard permit. It makes sense that applicants are not required to submit additional modeling to have their application declared technically complete or to meet their prima facie burden to present evidence at hearing.

However, affected persons have not had the opportunity to challenge the permit's protectiveness in the context of their unique location and circumstances. Environmental justice communities that are home to numerous concrete plants question whether the standard permit adequately accounts for the impact of cumulative effects from multiple nearby plants. Though there may be variables other than production throughput that could affect modeling results for a specific concrete batch plant site, the assumptions underlying the TCEQ's modeling cannot be challenged under existing law. Because protesting parties cannot submit modeling to challenge the assumption that anticipated impacts on their interests are minimal, some conclude that a hearing is futile and question why the right to hearing even exists with respect to these registrations. If there continues to be a statutorily authorized opportunity for a contested case hearing on these registrations, this opportunity should allow for meaningful public participation.

Fifth, OPIC proposes changes to ensure that concrete plant standard permits remain protective in the years following initial issuance. Proposed THSC Section

³ See, e.g., Proposal for Decision on the Application by East Texas Precast Co., Ltd. for Registration and Approval to Use the Air Quality Standard Permit for Concrete Batch Plants at page 8; Registration No. 86593; SOAH Docket No. 582-10-2070; TCEQ Docket No. 2009-1691-AIR.

382.058 (e)-(g) would require a review of concrete batch plant standard permits every ten years. Updated modeling would be required during these reviews to ensure the most advanced and current models have been used. The provisions of proposed Section 382.058 (e)-(h) would help ensure that all particulate matter emissions are considered, and any standard permit renewed contains enforceable provisions that are consistent with the assumptions and inputs used in the underlying modeling.

Finally, the proposal includes changes to THSC Section 382.05198 to address certain requirements of the current Concrete Batch Plant Standard Permit with Enhanced Controls that arguably are less stringent than the standard permit's provisions. The proposed changed provisions would address these differences concerning requirements relating to daily production limits, warning devices and automatic shut offs, visible emissions testing, and emissions controls for auxiliary storage tanks. Also, OPIC proposes eliminating the current subsection (b) exceptions to 100-foot buffer zone requirements for certain emission sources to ensure truly "enhanced" protectiveness of operations under this authorization.

For the foregoing reasons, OPIC proposes statutory changes to Texas Health and Safety Code Chapter 382 as follows:

Sec. 382.058. CONCRETE PLANTS AUTHORIZED UNDER PERMIT BY RULE, STANDARD PERMIT, OR EXEMPTION.

(a) A person may not begin construction on any concrete plant that performs wet batching, dry batching, or central mixing under a standard permit under Section 382.05195 or a permit by rule adopted by the commission under Section 382.05196 unless the person has complied with the notice and opportunity for hearing provisions under Section 382.056.

(b) This section does not apply to a concrete plant located temporarily in the right-of-way, or contiguous to the right-of-way, of a public works project.

(c) For purposes of Section 382.056(n) and Texas Water Code Section 5.556, the only hearing requestors who may be affected persons entitled to a contested case hearing are:

(1) persons residing in a single or multifamily permanent residence within 880 yards of the property line of the site where the concrete plant is proposed to be located; and

(2) schools or places of worship within 880 yards of the property line of the site where the concrete plant is proposed to be located.

(d) If the commission considers air dispersion modeling information in the course of adopting an exemption under Section 382.057 for a concrete plant that performs wet batching, dry batching, or central mixing, the commission may not require that a person who qualifies for the exemption conduct air dispersion modeling before beginning construction of a concrete plant. Notwithstanding the foregoing, air dispersion modeling may be introduced into the evidentiary record at the State Office of Administrative Hearings by any party admitted to a contested case hearing under Sections 382.056 and 382.058.

(e) For any standard permit issued under Section 382.05195 or Section 382.05198 for a concrete plant that performs wet batching, dry batching, or central mixing, the commission shall review the standard permit not later than the tenth anniversary of the date on which the standard permit takes effect and every ten years after that date. The adoption of an amendment does not affect the dates on which the standard permit must be reviewed, except that the effective date of an amendment is considered to be the effective date of the standard permit or exemption if the agency formally conducts a review in accordance with this section as part of the process of adopting the amendment.

(f) The commission shall renew, renew with amendments, or revoke a standard permit as the result of reviewing the standard permit under this section.

(g) The procedures of Section 382.05195 relating to the original adoption of a standard permit apply to the



Amistad Reservoir. Credit: iStock.

review of a standard permit under this section, and to the resulting renewal, or renewal with amendments of the standard permit.

(h) The commission's review of a standard permit under this Section must include an assessment of updated air dispersion modeling using the AERMOD model or a subsequently developed model deemed more accurate and accepted by the United States Environmental Protection Agency. The review must also include an evaluation of health effects of speciated particulate matter emissions including crystalline silica, fly ash, and Portland cement. The review must provide a reasoned justification for all assumptions and inputs used in the air dispersion modeling and health effects review regarding background concentrations of air pollutants, emissions from roads, emissions from concrete manufacturing operations, emissions from material loading and handling operations, and emissions from material storage operations, including:

- (1) the size of material stockpiles and their location relative to the concrete plant site's property line;
- (2) the number and location of material loading and transfer drop points;
- (3) the composition of raw materials stockpiled or otherwise stored at the concrete plant site, including aggregates, sand, cement, and fly ash; and
- (4) the control technologies used to limit emissions from baghouses, silos, weigh hoppers, material transfer drop points, stockpiles, and roads.

Sec. 382.05195. STANDARD PERMIT.

(a) The commission may issue a standard permit for new or existing similar facilities if the commission finds that:

- (1) the standard permit is enforceable;
- (2) the commission can adequately monitor compliance with the terms of the standard permit; and
- (3) for permit applications for facilities subject to Sections 382.0518(a)-(d) filed before September 1, 2001, the facilities will use control technology at least as effective as that described in Section 382.0518(b). For permit applications filed after August 31, 2001, all facilities permitted under this section will use control technology at least as effective as that described in Section 382.0518.

(b) The commission shall publish notice of a proposed standard permit in the Texas Register and in one or more statewide or regional newspapers

designated by the commission by rule that will, in the commission's judgment, provide reasonable notice throughout the state. If the standard permit will be effective for only part of the state, the notice shall be published in a newspaper of general circulation in the area to be affected. The commission by rule may require additional notice to be given. The notice must include an invitation for written comments by the public to the commission regarding the proposed standard permit and must be published not later than the 30th day before the date the commission issues the standard permit.

(c) The commission shall hold a public meeting to provide an additional opportunity for public comment. The commission shall give notice of a public meeting under this subsection as part of the notice described in Subsection (b) not later than the 30th day before the date of the meeting.

(d) If the commission receives public comment related to the issuance of a standard permit, the commission shall issue a written response to the comments at the same time the commission issues or denies the permit. The response must be made available to the public, and the commission shall mail the response to each person who made a comment.

(e) The commission by rule shall establish procedures for the amendment of a standard permit and for an application for, the issuance of, the renewal of, and the revocation of an authorization to use a standard permit.

(f) A facility authorized to emit air contaminants under a standard permit shall comply with an amendment to the standard permit beginning on the date the facility's authorization to use the standard permit is renewed or the date the commission otherwise provides. Before the date the facility is required to comply with the amendment, the standard permit, as it read before the amendment, applies to the facility.

(g) The adoption or amendment of a standard permit or the issuance, renewal, or revocation of an authorization to use a standard permit is not subject to Chapter 2001, Government Code, except as required under Section 382.058.

(h) The commission may adopt rules as necessary to implement and administer this section.

(i) The commission may delegate to the executive director the authority to issue, amend, renew, or revoke an authorization to use a standard permit.

(j) If a standard permit for a facility requires a distance, setback, or buffer from other property or structures as a condition of the permit, the determination of whether the distance, setback, or buffer is satisfied shall be made on the basis of conditions existing at the earlier of:

- (1) the date new construction, expansion, or modification of a facility begins; or
- (2) the date any application or notice of intent is first filed with the commission to obtain approval for the construction or operation of the facility.

(k) An application for ~~the issuance of authorization to use~~ a standard permit under this section for a concrete plant that performs wet batching, dry batching, or central mixing, including a permanent, temporary, or specialty concrete batch plant, as defined by the commission, must include a plot plan that clearly shows:

- (1) a distance scale;
- (2) a north arrow;
- (3) all property lines, emission points, buildings, tanks, and process vessels and other process equipment in the area in which the facility will be located;
- (4) at least two benchmark locations in the area in which the facility will be located; and
- (5) if the permit requires a distance, setback, or buffer from other property or structures as a condition of the permit, whether the required distance or setback will be met.

(l) Any renewed or amended standard permit for a concrete plant issued following a standard permit review under Section 382.058 (e)-(h) shall include enforceable provisions that are consistent with the assumptions made and input variables used in the air dispersion modeling required by Section 382.058(e)-(h). These provisions may include, without limitation, restrictions on the number, size, and location of material storage stockpiles, restrictions on the number and location of material loading and transfer drop points, and the use of specified control technologies for all emission sources at the concrete plant site.

Sec. 382.05198. STANDARD PERMIT FOR CERTAIN CONCRETE PLANTS.

(a) The commission shall issue a standard permit for a permanent concrete plant that performs wet

batching, dry batching, or central mixing and that meets the following requirements:

- (1) production records must be maintained on site while the plant is in operation until the second anniversary of the end of the period to which they relate;
- (2) each cement or fly ash storage silo, weigh hopper, and auxiliary storage tank must be equipped with a fabric or cartridge filter or vented to a fabric or cartridge filter system;
- (3) each fabric or cartridge filter, fabric or cartridge filter system, and suction shroud must be maintained and operated properly with no tears or leaks;
- (4) excluding the suction shroud filter system, each filter system must be designed to meet a standard of at least 0.01 outlet grain loading as measured in grains per dry standard cubic foot;
- (5) each filter system and each mixer loading and batch truck loading emissions control device must meet a performance standard of no visible emissions exceeding 30 seconds in a six-minute period as determined using United States Environmental Protection Agency Test Method 22 ~~as that method existed on September 1, 2003~~;
- (6) if a cement or fly ash silo is filled during non-daylight hours, the silo filter system exhaust must be sufficiently illuminated to enable a determination of compliance with the performance standard described by Subdivision (5);
- (7) the conveying system for the transfer of cement or fly ash to and from each storage silo must be totally enclosed, operate properly, and be maintained without any tears or leaks;
- (8) except during cement or fly ash tanker connection or disconnection, each conveying system for the transfer of cement or fly ash must meet the performance standard described by Subdivision (5);
- (9) An automatic shut off must be installed, or a warning device must be installed on each bulk storage silo to alert the operator in sufficient time for the operator to stop loading operations before the silo is filled to a level that may adversely affect the pollution abatement equipment, and any visible warning devices must be kept free of particulate build-up at all times;
- (10) if filling a silo results in failure of the pollution abatement system or failure to meet the

performance standard described by Subdivision (5), the failure must be documented and reported to the commission;

(11) each road, parking lot, or other area at the plant site that is used by vehicles must be paved with a cohesive hard surface that is properly maintained, cleaned, and watered so as to minimize dust emissions;

(12) each stockpile must be sprinkled with water or dust-suppressant chemicals or covered so as to minimize dust emissions;

(13) material used in the batch that is spilled must be immediately cleaned up and contained or dampened so as to minimize dust emissions;

(14) production of concrete at the plant must not exceed 300 cubic yards per hour and 6,000 cubic yards per day;

(15) a suction shroud or other pickup device must be installed at the batch drop point or, in the case of a central mix plant, at the drum feed and vented to a fabric or cartridge filter system with a minimum capacity of 5,000 cubic feet per minute of air;

(16) the bag filter and capture system must be properly designed to accommodate the increased flow from the suction shroud and achieve a control efficiency of at least 99.5 percent;

(17) the suction shroud baghouse exhaust must be located more than 100 feet from any property line;

(18) stationary equipment, stockpiles, and vehicles used at the plant, except for incidental traffic and vehicles as they enter and exit the site, must be located or operated more than 100 feet from any property line; and

(19) if the plant is located in an area that is not subject to municipal zoning requirements, the central baghouse must be located:

- (i) at least 880 yards from the property line, or
- (ii) at least 880 yards from any building used as a single or multifamily residence, school, or place of worship at the time the application to use the permit is filed with the commission, and
- (iii) the authorization to use the permit prohibits the relocation of emission sources to any locations that differ from those shown on the plot plan required under subsection (b), unless a new application to use the permit is approved



Chisos Mountains, Big Bend National Park. Credit: iStock.

that satisfies all requirements of this section. if the plant is located in an area that is not subject to municipal zoning regulation.

~~(b) Notwithstanding Subsection (a)(18), the commission shall issue a standard permit for a permanent concrete plant that performs wet batching, dry batching, or central mixing and does not meet the requirements of that subdivision if the plant meets the other requirements of Subsection (a) and:~~

~~(1) each road, parking lot, and other traffic area located within the distance of a property line provided by Subsection (a)(18) is bordered by dust-suppressing fencing or another barrier at least 12 feet high; and~~

~~(2) each stockpile located within the applicable distance of a property line is contained within a three-walled bunker that extends at least two feet above the top of the stockpile.~~

(b) An application for the issuance of authorization to use a standard permit under this section must include a plot plan that meets the requirements of Section 382.05195(k).

CONCLUSION

OPIC appreciates this opportunity to review its work and recommits to its statutory directive to protect the public interest.

APPENDIX D

EVALUATION OF WATER BASINS IN TEXAS WITHOUT A WATERMASTER

At least once every five years TCEQ evaluates the river basins that do not have a watermaster program to determine if one should be established [required by House Bill 2694, Section 5.05, 82nd Legislature, Sunset, (2011)].

OVERVIEW OF WATERMASTER PROGRAMS

A TCEQ watermaster office is headed by a watermaster and staffed with personnel who regulate and protect water rights under the provisions of Chapter 11 of the Texas Water Code (TWC). Watermaster programs are created and authorized to take actions under TWC Sections 11.326, 11.3261, 11.327, 11.3271, 11.329, and 11.551–11.559. Rules governing this program are under Title 30, Texas Administrative Code, Chapters 295, 297, 303, and 304.

Watermasters and their staffs have the authority to protect water rights by the following:

- Reviewing diversion notifications.
- Authorizing appropriate diversions.
- Deterring illegal diversions.
- Providing real-time monitoring of area streamflow.
- Investigating alleged violations of Chapter 11.
- Mediating conflicts and disputes among water users.

TWC Chapter 11 sets forth the mechanisms for establishing a watermaster program:

- By the executive director in a water division established by the commission under Section 11.325.

- By court appointment.
- By the commission, upon receipt of a petition of 25 or more water-right holders in a river basin or segment of a river basin, or on its own motion, if the commission finds that senior water rights have been threatened.

In addition, the Legislature has the authority to create a watermaster.

TCEQ has an existing watermaster program in each of these areas:

- Rio Grande, which serves the Rio Grande River segment from Fort Quitman to the Gulf of Mexico in the Rio Grande River Basin (excluding the Pecos and Devils Rivers). Coordinates releases from the Amistad and Falcon reservoir systems. Established by a 1956 court appointment.
- South Texas, which serves the Lavaca, Nueces, San Antonio, and Guadalupe river basins, as well as the adjacent coastal basins. Established by commission order in 1988 and amended in 1998.
- Concho River, which serves a portion of the Concho River segment of the Colorado River Basin. Created by the Legislature in 2005.
- Brazos, which serves the Lower Brazos River Basin including and below Possum Kingdom Lake. In 2014 the commission directed that a watermaster be appointed for this basin after receiving a petition from 25 or more water right holders. The program was fully implemented in 2015.

CRITERIA AND SCHEDULE

The commission established criteria (2011) that is considered during evaluations:

- Is there a court order to create a watermaster?
- Has a petition been received requesting a watermaster?
- Have senior water rights been threatened based on the following:
 - A history of senior calls or water shortages within the river basin?
 - The number of water right complaints received annually in each river basin?

The agency completed the second five-year cycle in fiscal 2021. The third cycle—begun in fiscal 2022—is following this schedule:

Fiscal 2022

Brazos River Basin (Upper)
Brazos-Colorado Coastal Basin
San Jacinto-Brazos Coastal Basin
Colorado River Basin
Colorado-Lavaca Coastal Basin

Fiscal 2023

Trinity River Basin
Neches-Trinity Coastal Basin
San Jacinto River Basin
Trinity-San Jacinto Coastal Basin

Fiscal 2024

Neches River Basin
Sabine River Basin

Fiscal 2025

Canadian River Basin
Red River Basin

Fiscal 2026

Sulphur River Basin
Cypress Creek Basin

EVALUATION ACTIVITIES IN FISCAL 2021

For the **Sulphur River Basin** and **Cypress Creek**:

- Updated the webpage [Evaluating Basins for New Watermaster Programs](#), explaining the evaluation process, inviting stakeholders in these basins to participate and get automated email updates.



Brazos River, Brazos Bend State Park. Credit: iStock.

- Mailed initial outreach letters on March 8, 2021, to all water-right holders, county judges and extension agents, river authorities, agricultural interests, industries, environmental organizations, and other interested parties. Mailed the 2nd letter announcing stakeholder meetings on May 14, 2021. The comment period was open until June 30, 2021.
- Held two electronic stakeholder meetings in June 2021, at which the manager of the Watermaster Section was present to provide information and answer questions.

Comments

Sulphur River and Cypress Creek—Of the 9 stakeholder comments about these basins:

- 9 were opposed to establishing a watermaster program.
- 0 were in favor.

Evaluation Findings

TCEQ evaluated the basins based on the established criteria. There were no court orders or petitions to appoint a watermaster for either of the basins in this cycle.

THREATS TO SENIOR WATER RIGHTS

- In evaluating whether senior water rights have been threatened, staff considered if we received any priority calls and the history of complaints and investigations related to water rights management.

- Within the Sulphur River Basin and Cypress Creek, there were no priority calls during the evaluation period. The TCEQ regional offices received and investigated a total of four complaints and completed six investigations related to water rights management (e.g., compliance initiatives. This excludes temporary permit investigations) during the five-year period. Half of the investigations were completed with no violations or enforcement actions.

Costs to the Agency

Estimated costs to conduct regional investigation activities for fiscal 2016 through 2020 were \$2,417 and \$1,939 for the Sulphur River Basin and Cypress Creek, respectively.

The cost to conduct the required watermaster evaluation for these basins in calendar 2021 was:

- Office of Water: \$57,033, which included salary and fringe benefits, postage, and travel.
- Office of Legal Services staff time: \$139.40.
- Office of Compliance and Enforcement: \$143.89, which included staff time, travel time, and equipment use.
- Staff in TCEQ's Intergovernmental Relations Division participated in the process but incurred no cost.

At the commission's agenda meeting on September 8, 2021, TCEQ personnel gave a presentation and made recommendations for the fiscal 2021 evaluation.



Rio Grande, Santa Elena Canyon. Credit: iStock.

EVALUATION ACTIVITIES IN FISCAL 2022

For the **Upper Brazos River, San Jacinto-Brazos Coastal, Brazos-Colorado Coastal, Colorado River, and Colorado-Lavaca Coastal** basins:

- Updated the webpage [Evaluating Basins for New Watermaster Programs](#) explaining the evaluation process and inviting stakeholders in these basins to participate.
- Mailed initial outreach letters on March 11, 2022, to all water-right holders, county judges and extension agents, river authorities, agricultural interests, industries, environmental organizations, and other interested parties. Mailed the 2nd letter announcing stakeholder meetings on May 13, 2022. The comment period was open until June 28, 2022.
- Held two electronic and three in-person stakeholder meetings in June 2022, at which the manager of the Watermaster Section was present to provide information and answer questions.

Comments

Upper Brazos River and San Jacinto-Brazos Coastal—Of the 5 stakeholder comments about these basins:

- 4 were opposed to establishing a watermaster program.
- 1 was in favor.

Colorado River—Of the 32 stakeholder comments about this basin:

- 27 were opposed to establishing a watermaster program.
- 3 were in favor.
- 2 were neutral.

Evaluation Findings

TCEQ evaluated the basins based on the established criteria. There were no court orders or petitions to appoint a watermaster for any of the basins in this cycle.

THREATS TO SENIOR WATER RIGHTS

- In evaluating whether senior water rights have been threatened, staff considered if we received any priority calls and the history of complaints and investigations related to water rights management.

- Upper Brazos and the San-Jacinto Coastal Basins: There were no priority calls during the evaluation period. The TCEQ regional offices received and investigated a total of seven complaints and completed 14 investigations related to water rights management (excluding temporary permit investigations) during the five-year period. Most of the investigations were completed with no violations or enforcement actions.
- Colorado River Basin: There were nine priority calls during the evaluation period. Eight calls came from individual domestic and livestock users on the San Saba River. The ninth was from a water right holder on the Llano River and was later rescinded. (The San Saba and the Llano are part of the Colorado River Basin.)

The executive director did not suspend water rights in response to the calls on the San Saba because:

- any theoretical additional water in the stream resulting from such curtailment would either not have reached the location of the users who made the calls in sufficient quantities to be beneficially used; or
- there was still sufficient water in the river to meet the needs of those making the priority calls.

The TCEQ regional offices received and investigated a total of 53 complaints and completed 424 investigations related to water rights management (excluding temporary permit investigations) during the five-year period. Most of the investigations were within the San Saba Watershed: 339 of the 424. Most of the investigations were completed with no violations or enforcement actions.

Costs to the Agency

Estimated costs to conduct regional investigation activities in fiscal 2017 through 2021:

- Upper Brazos River and San Jacinto-Brazos Coastal costs were \$10,435.73 and \$2,263.74, respectively.
- Colorado River, Brazos-Colorado, and Colorado-Lavaca Coastal costs were \$163,533.54.
- The total estimated costs for managing priority calls were an additional \$4,515.69.

The costs to conduct the required watermaster evaluations of these basins in 2021 were:

- Office of Water: \$65,023.64, which included salary and fringe benefits, postage, and travel.
- Office of Legal Services staff time: \$209.83.
- Office of Compliance and Enforcement: \$2,961.05, which included staff time, travel time, and equipment use.
- Staff from TCEQ's Intergovernmental Relations Division participated in the process but incurred minimal costs.

At the commission's agenda meeting on September 7, 2022, TCEQ personnel gave a presentation and made recommendations for the fiscal 2022 evaluation.

EXECUTIVE DIRECTOR'S RECOMMENDATION IN FISCAL 2021 AND 2022

With no court orders or petitions to create a watermaster, and no repeated history of threatened water rights, the executive director recommended that the commission not move forward on its own motion to create a watermaster program in any of the basins reviewed in fiscal 2021 and 2022.

While the statute requires the agency to evaluate the need for a watermaster in those basins without a watermaster program at least every five years, there is no prohibition against evaluating a basin sooner, as needed. The executive director can review this decision and evaluate additional threats to senior water rights as they occur and consider area stakeholder input.

Since stakeholders would be responsible for paying annual fees to support a new regulatory program, it is important to have their support in articulating the threat and the need to establish one.



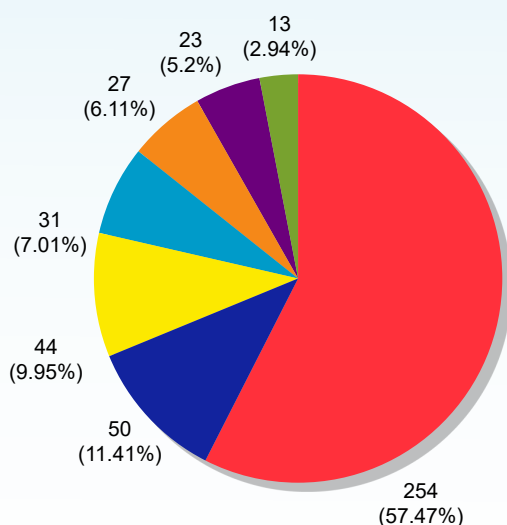
Guadalupe River. Credit: iStock.

APPENDIX E

VACANCY EXCEPTIONAL ITEM REQUEST

REQUEST: \$72M for Targeted Salary Increases for FY24/25 (\$36,004,890 per FY)

442 Vacancies as of 9/21/2022



Occupational Categories

- Permitting, Regulatory Compliance, Investigation and Enforcement
- Business Support
- Program Management
- Administrative Support
- Information Technology
- Legal
- Other

PURPOSE:

- Bring 35 classifications with the highest vacancies, turnover, and salary lag up to a competitive salary (75th percentile pay group).
- Increase pay for remaining staff positions by up to 20% to be competitive with other state agencies and local governments.

REASON:

Texas has grown economically and in population. This growth places ever-increasing demands on Texas' natural resources and agency staff, compounding the **need to recruit and retain a highly qualified workforce**.

TCEQ's vacancies, turnover, and loss of expertise are not sustainable, and key staff shortages may delay economic development.

For example, the Underground Injection Control Section, which reviews and issues permits for new or existing injection wells, is operating with two Engineers (1 full time and 1 part-time) instead of four.

TCEQ has absorbed various programs and activities since 2011:

- Volkswagen Mitigation Trust
- Tier II chemical reporting and low-level radioactive waste disposal
- Storage Vessel Performance Standards
- Brazos Watermaster
- 1944 Treaty negotiations to ensure water deliveries to the Rio Grande
- New federal programs and rules, such as: Revised Total Coliform Rule, PFAS, Lead and Copper Rule, coal combustion residuals
- Emergency Preparedness Plan reviews (Senate Bill 3) and Winter Storm Uri-related changes
- Increasing response for man-made and natural disasters, including hurricanes, fires, and drinking water emergencies

DETAILS:

Currently Authorized FTEs

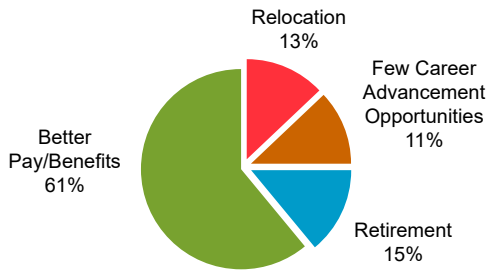
FY23 = 2821.3; **FY22** = 2811.8; **FY02** = 2962.50 (does not include TERP-funded FTEs = 158)
TCEQ's FTEs have decreased overall for the last 20 years.

Reasons Staff Leave

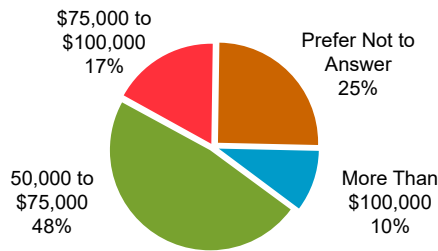
In response to the SAO Exit Survey, **61% of our employees report leaving TCEQ for better pay/benefits with 65% reporting that they will earn substantially more** than at TCEQ. For example: Austin-area averages \$1,635/week vs. TCEQ at \$1,215/week.

Despite leaving, **81% of TCEQ employees say they would want to return to TCEQ** (See next page).

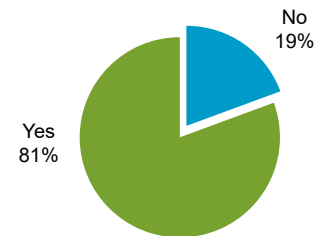
Reason for Leaving



Future Earnings Elsewhere



Want to Return



TURNOVER RATES

TCEQ's turnover escalated to 19% in FY22 with the highest jumps in our core mission classifications, including Natural Resources Specialist (22%), Engineering Specialist (25%), Attorney (28%) and Geoscientist (15%). **Turnover in our largest regional offices, Houston and Dallas, reached 52% and 30% in FY22; and overall, the regions are staffed at 89%.**

42% of TCEQ staff have fewer than 5 years of service.

FY	FTEs	Turnover Rate	New Hires	Separations
2022	2811.8	19%	494	495
2021	2829.3	12.87%	215	331
2020	2829.3	10.90%	388	297
2019	2794.8	13.90%	348	376
2011	3001.3	10.50%	84	238
2002	2962.50	10.8%	353	323

SALARY LAG

TCEQ's salaries lag our sister state agencies significantly (ex. in FY22 Electronics Technicians [ET] who maintain monitoring equipment, TCEQ ET III - \$42,244/yr; Railroad Commission – ET III \$61,091/yr **representing \$18,847 gap**). **79% of staff salaries remain below midpoint.**

WORKFORCE POLICY

In March 2022, TCEQ implemented our new policy that integrates remote work opportunities. 86% of staff are eligible for at least some remote work; of those, 12% are working 4 or 5 days remotely.

SEPARATIONS AND RETIREMENTS

In FY22, 495 employees separated from the agency.

Voluntary resignations escalated to 78.25% (up from 56% in FY21), mostly by staff with less than 4 years tenure (60.5%).

Staff with 5 to 14 years of tenure made up another 16% of voluntary separations.

In FY22, only 19% of separations were due to retirement (a decline from 28% in FY21). However, **within the next five years, over 36% of TCEQ's workforce will be eligible to retire.**

STEPS ALREADY TAKEN:

Annual Salary Enhancements

\$3.45M budgeted allocation per FY

Targeted Salary Increases

FY22/23 - \$5.9M LAR for Natural Resources Specialist (NRS), Engineer, Engineering Specialist and Attorney (87th Leg.)

FY22 – minimum salary increases for key business operations support (Contract Specialist, Purchaser, Human Resources and Training) (TCEQ initiated)

FY20 – 10% for NRS II – IV in TCEQ's Houston, Beaumont, and Midland regional offices only; 5% for Attorney I-III (TCEQ initiated)

FY18 –5% for NRS II; 10% for Engineer II-III; 5% for Engineer IV-V; \$30K minimum salary for A pay group classifications (TCEQ initiated)

FY16/17 - \$2M LAR for Engineer and Engineering Specialist (84th Leg.)

One-time Bonus Programs

Retention Bonuses:

Natural Resources Specialist II (\$2,500) and III (\$3,000)

Engineering Specialist I-III (\$3,000)

Health Physicist (\$5,000)

Contract Specialist (\$3,000)