Workforce Plan, Fiscal Years 2021–2025

> *This document is also provided separately to the State Auditor's Office.*

Key Factors Facing the Agency

During the next five years, TCEQ expects challenges as it fulfills its mission and goals. Key economic and environmental factors affecting the agency's workforce include an aging workforce; retention of qualified, experienced employees; and turnover. The competition to recruit and retain highly skilled employees remains a priority. By 2025, 34% of TCEQ's workforce will be eligible to retire. To address these factors, the agency must continuously adapt and focus on implementing attractive recruitment and retention strategies to differentiate itself in the increasingly competitive job market.

The ability to compete for highly skilled applicants, particularly in hard-to-fill occupations, will continue to prove critical in our efforts to maintain a diverse and qualified workforce necessary for the agency to carry out its mission. The attractive benefits and retirement package afforded state employees was altered in 2015 in an effort to address funding shortfalls. These changes will affect our ability to recruit applicants and retain staff.

Table F.1. Projection of TCEQ Employees Eligible for Retirement, FYs 2020–2025

Fiscal Year	Projected Retirements	Percent of Total Agency Headcount (2,625)
2020	497	18.9
2021	570	21.7
2022	654	24.9
2023	728	27.7
2024	810	30.8
2025	893	34.0

Data Source: Texas Uniform Statewide Accounting System, as of 8/31/19.

TCEQ does not expect significant changes in its mission, strategies, or goals over the next five years, but it does recognize the need to adapt readily to any changes required by legislation. Any new state and federal requirements will be demanding, considering budget and FTE constraints, and will likely point to a need to rely more heavily on program changes, process redesign, and technological advancements.

Retirement and Attrition

The departure of employees due to retirement and other reasons is, and will continue to be, a critical issue facing TCEQ. Within the next five years, 34% of TCEQ's workforce will be eligible to retire, with 19% eligible to retire by the end of fiscal 2020.

TCEQ remains well below the state average of 19.6% in turnover for fiscal 2019. TCEQ experienced turnover at 14.5% in fiscal 2019, with voluntary separations, excluding retirement, making up 54.8% of total separations. This potential loss of organizational experience and institutional knowledge poses a significant need for continued careful succession planning for key positions and leadership roles.

An ongoing focus on organizational development and training will also be required. Training and mentoring emerged as the primary strategy identified by agency offices to address skill gaps due to retirements, with hiring solutions ranking second.

Table F.1 demonstrates the projected increases in the number of employees eligible to retire from fiscal 2020 through fiscal 2025. TCEQ estimates that approximately 893 employees (34%) will become eligible to retire by the end of fiscal 2025. Retirement of the agency's workforce at this level could significantly affect the agency's ability to deliver programs and accomplish its mission.

New and Changing Requirements and Initiatives

New federal and state requirements, as well as internal initiatives, will continue to have an agency-wide impact. Offices may be required to change and modify, eliminate, or add programs, processes, and procedures. Also, to provide more timely data, the agency's use of technology to report and receive information is expanding.

Among other expected program changes, mandates, and initiatives are the following:

- **Digital Content and Accessibility Requirements.** Delivering more digital content–training, public education, and other informational material–on TCEQ websites. Will have to produce content in HD (high-definition) as SD (standard definition) fades away. Accessibility requirements for video will increase at the same time that the agency's video production increases. Maintaining and improving online access, accessibility, and navigation (both internal and external) through increasing and varied access points (such as mobile devices, collaboration tools, and social media) and situations (such as disasters). This includes continued website restructuring and upgrading, employing analytics, metadata, and usability studies to adequately support emerging web and application design and organization trends. Agency roles and responsibilities under Section 508 are aligned with Web Content Accessibility Guidelines 2.0, which requires more time and expertise when creating documents, webpages, and learning content.

- **Public Information Requests and Access to Public Records.** Participation in and support of the increased number of public information requests (PIR), legislative requests, and media requests. Modifications to existing databases and reporting capabilities and new initiatives allowing greater public access to agency records. The design, testing, and implementation of these initiatives may require large commitments in funding and manpower resources.

- **Central Accounting and Payroll/Personnel System (CAPPS).** The statewide Enterprise Resource Planning project will involve adopting a common statewide system supporting financial, human-resource, payroll, and timekeeping functions. TCEQ will deploy CAPPS HR/Payroll in July 2020. Additional CAPPS modules–including Financials, Learn and Recruit–will be implemented over the next three years. Implementation requires significant staff time and resources devoted to the development of new processes and procedures as well as training content and materials, to the delivery of agency-wide training, and to change-management efforts.

- **Continuous Process Improvement Initiatives: Lean.** In fiscal 2020, TCEQ, in collaboration with EPA, adopted Lean. Lean is being deployed across the agency aggressively to enhance agency processes and reduce backlogs. Lean requires extensive coordination with program areas on logistics and training/staff development. The Office of Administrative Services offers significant organizational and programmatic input requiring additional time and resources from staff with a specialized skillset to successfully implement and sustain Lean initiatives across the agency.

- **Educational Outreach.** Promoting and providing educational information on Texas' successes in environmental protection encourages all Texans to help keep our air and water clean, conserve water and energy, and reduce waste.

- **Communicating with Elected Officials.** Agency staff strives to effectively communicate technical and complex environmental-quality and natural-resource issues of the agency to the state's leadership, elected officials, stakeholders, and the media. Developing effective working relationships with new members of the state legislature during a time of significant turnover in officeholders is vital to TCEQ and its executive management, as is providing timely and accurate analysis of legislation affecting the agency.

■ **Government Performance and Result Act.**
This involves expansion of staff duties resulting
from new federal-grant commitments and per-
formance measures through the Government
Performance and Result Act, without corre-
sponding increases to the agency's authorized
full-time equivalent (FTE) count.

■ **Emergency Planning and Community
Right-to-Know Act.** The agency will work to
maintain a balance between the public's access
to information through the Emergency Planning
and Community Right-to-Know Act and protec-
tion of confidential information due to home-
land-security concerns for the Tier II Chemical
Reporting Program.

■ **Disaster- and Emergency-Response Plan-
ning.** There are emerging responsibilities asso-
ciated with disaster- and emergency-response
assistance, coordination, and information collec-
tion, including developing GIS map layers for
wastewater treatment plant infrastructures. The
public has created a demand for fast disclosure
and transparency of monitoring data during
high-profile emergency-response events such as
fires and explosions. The agency must be agile
in facilitating procurement and contracting with-
in guidelines and as needed during emergencies
and continue to refine processes and procedures
with respect to disaster response, including hur-
ricane-preparedness activities.

■ **Population Growth.** Areas of the state experi-
encing tremendous growth leads to an increased
regulatory universe in the form of business, wa-
ter, and wastewater infrastructure; waste genera-
tion; and air emissions, in addition to urban ar-
eas encroaching on previously rural areas. In-
creased issues and complexity of issues associat-
ed with heavy-growth areas create challenges in
providing adequate responses to citizen com-
plaints; investigations to determine compliance
with applicable air, waste, and water regula-
tions; and education of regulated entities.

The growing population trends and limited
additional water resources in Texas have result-
ed in public water systems considering innova-
tive or alternative treatment technologies. The
thorough and comprehensive review of these
complex and innovative or alternative treatment
technologies requires highly experienced engi-
neers and scientists to both protect public health
and support economic growth. These technolo-
gies require significant research and time, taxing
senior-level staff possessing high levels of techni-
cal expertise who may be needed for multiple
projects. These staff are also needed to provide
expertise in emergency situations affecting
public health.

■ **Increased Regulatory Oversight.** The agency
will have investigation needs for an expanding
regulatory universe and added complexity of
these investigations without corresponding in-
creases to the agency's FTE count. Examples in-
clude the following:

- Prevention of explosions and fires in the
petrochemical industry in the Coastal &
East Texas Area.
- New roles and duties required to implement
the Tier II Chemical Reporting Program.
- Expanded roles and duties for the revised
total chloroform rules (RTCR).
- Increased issues associated with oil and gas
industry activities that affect air (emission
events and complaints, and comprehensive
inspections), water (demand on water sys-
tems for both public drinking water and
wastewater treatment), waste disposal meth-
ods, and other on-demand activities.
- Continued implementation of the investiga-
tion-frequency requirements of the Under-
ground Storage Tank provisions of the fed-
eral Energy Policy Act.
- Sustained focus on aggregate production
operations (APOs) and their impact on the
environment and on citizens' property.

Compliance activities for APOs continue to challenge investigation resources in the Central Texas Area. TCEQ's APO Registration Program is moving from the Office of Water to the Office of Waste.

- Proposed liquefied natural gas plants, if approved, will require additional regulatory oversight in the air, water, and waste programs in the Border and Permian Basin Area.

- Addressing an increasing number of odor-nuisance complaints related to poultry operations and meeting expedited investigation timeframes in the Central Texas Area and the Coastal & East Texas Area.

- Meeting investigation needs for an expanding dam safety regulatory universe without corresponding increases to staffing numbers.

- For the Central Texas Area, economic changes have resulted in increased and complex construction activity in the areas covered by the Edwards Aquifer Program. This has increased the workload due to the increase in number and complexity of the plans for review.

- Increased water availability issues related to increasing drought conditions.

- Increase in public involvement on applications for municipal solid waste (MSW) disposal, processing, and management facilities has resulted in longer application review times and an increase in staff effort on MSW applications. Between fiscal 2017 and fiscal 2018, the Waste Permits Division (WPD) received an average of 5,867 comments on MSW applications per year. In the previous three years, fiscal 2014 to fiscal 2016, WPD received an average of 949 comments per year.

■ **Updates to Federal Guidance in Relation to Staff Knowledge.** Changes in overall federal guidance related to the Environmental Protection

Agency (EPA) and other agencies with ties to TCEQ will necessitate staff members gaining additional knowledge to understand the changes, and subsequently, be able to audit the subject.

■ **Expanding Federal and State Requirements and Initiatives.**

- EPA is seeking changes to rules implementing the Safe Drinking Water Act (SDWA) as well as revising guidelines for implementation of those programs.

- Expanding and more complex workloads with changing federal and state rules, regulations, and guidance—such as the Waters of the U.S. Rule, Methods Update Rule, Revised Total Coliform Rule, Lead and Copper Rule revisions, lead testing in schools and childcare facilities, and regulations regarding perfluorinated compounds and perchlorate.

- Providing extensive guidance, technical assistance, and templates to help permittees and stakeholders understand changing, more complex rules.

- Additional and more complex computer tools required by state and federal regulations such as the eReporting rule, Safe Drinking Water Information System, and the Surface Water Rights Database.

- Keeping up with new and innovative technologies to assist facilities to identify, reduce, or remove contaminants.

- Aging and deteriorating drinking water and wastewater infrastructure, which adds to the workload due to increased numbers of complaints, requests for technical assistance, and media requests.

- Technologies to remove or reduce contaminants in drinking water have become more complex since the 1996 SDWA Amendments. As water quality technologies and program requirements change, the degree of technical expertise necessary to

understand and manage these issues, as well as perform compliance determinations, increases. Additionally, Texas water systems are challenged by aging and deteriorating infrastructure, a well-documented problem which will require significant investment to protect public health and ensure reliable delivery of safe drinking water. Drivers influencing Texas' public water systems utilizing more complex water treatment technologies include strain on available water supplies to address continued population growth, and the need to re-evaluate water-treatment practices to address rule revisions.

- In administering the Texas Groundwater Protection Committee, the Groundwater Program will continue to be challenged to coordinate with nine other state agencies or organizations and across 20 internal groundwater protection programs in 10 divisions and 3 offices. The most recent version of the Texas Groundwater Protection Strategy is a dynamic document that will be continuously reviewed and updated, instead of being updated every six years, requiring brief but continuous staff time.

- Water Rights Permitting. Due to limited water availability and increasing demand, water-right applications are becoming increasingly complex, raising numerous legal and technical issues. Those issues include indirect reuse, system operation plans, water management plans, reservoir operation plans, major new reservoir projects, interbasin transfer considerations, desalination, and aquifer storage and recovery. This increased complexity translates into additional time demands for permitting projects. To balance those increased workloads, the 86th Texas Legislature passed House Bill 1964, streamlining the process for certain limited water-right amendments. TCEQ is currently implementing this legislation and will be

tracking the efficiencies created. Additionally, the Water Rights Permitting program is using the Environmental Protection Agency's Lean Management System (ELMS) as a tool to evaluate permitting processes. This tool is designed to identify and solve process problems and ensure continuous improvement within the process.

- Water availability is a key component in TCEQ's technical review of water-rights applications. TCEQ uses surface water availability models (WAMs) to evaluate water availability for new permits and impacts associated with amending existing permits. The WAMs are structured to implement the prior-appropriation doctrine so that TCEQ only permits water that is available and senior water rights are protected. The 86th Texas Legislature passed HB723 and appropriated $2.162 million requiring TCEQ to obtain or develop updated naturalized flow datasets for the water availability models for the Red, Neches, Brazos, and Rio Grande river basins. TCEQ will be contracting this work, which is expected to be completed in fiscal 2021.

- Non-Watermaster River Basin Evaluations. The 82nd Legislature adopted HB 2694, TCEQ's Sunset Legislation, which continued the agency for 12 years. The legislation also included a requirement for TCEQ to evaluate river and coastal basins that do not have a watermaster, assess whether there is a need to appoint a watermaster, and issue a report with its findings. This assessment is required at least once every five years. The new cycle started in fiscal 2017 and will run through fiscal 2022.

- Drought conditions may continue to affect water resources and increase the cost of water to consumers, which in turn leads to an increase in the number of consumer-assistance requests received from the public; an

increase in technical-assistance requests; an increase in the need for emergency approvals, including bond approvals; requests for emergency authorizations and exceptions that require staff to perform expedited technical and engineering reviews; and an increase in review of plans and specifications for innovative technology projects such as direct potable reuse.

- Preparation of application to EPA for delegation of oil and gas wastewater as required by HB 2771 (86th Regular Session).
- Increased requirements for managing contracts and purchasing.
- Increased reporting requirements for grants.
- Recent legislation and growing public interest in aquifer recharge, managed aquifer recharge, and aquifer storage and recovery will require program-specific geoscientific expertise.
- Demand for shorter processing timeframes for permits and authorizations, including change of ownership or water-rights permits, wastewater permits, and review of drinking-water plans and specifications.
- Expanding permit programs result in increased noticing requirements, public participation, and the potential for an increase in the number of public comments, public meetings, and matters necessitating consideration at Agency Agenda meetings. Agency initiatives can affect the workload of offices.
- Meeting anticipated new federal requirements to establish a state levee safety program.
- Federal and state requirements may change for analyses performed in the Sugar Land Laboratory (e.g., lower metals criteria). This would require the laboratory to obtain NELAC accreditations anew.
The laboratory must adhere to state and federal policies, maintain documentation of the processes used to ensure the quality of

the analyses conducted in the laboratory, and continuously improve those quality processes. This creates a need for additional staff (FTEs) for the efficient progression to a more enhanced and comprehensive environmental laboratory. In addition to required audits, the laboratory will explore and discover ways in which the laboratory can be improved to achieve maximum capabilities. As the Sugar Land Laboratory moves toward a more technologically advanced, paperless, and automated environment, the laboratory may experience an increase in analytical requests with shorter turnaround times and lower detection limits as well as requests to perform other analyses that coincide with new EPA and governmental regulations. This will require the laboratory to stay abreast of advancements in technology, instrumentation, and software. Staff training will be necessary to keep current with technological changes, and to gain competency and to maintain proficiency with analyses, software, and hardware in the environmental analytical field.

- Increase the influence of the Toxicology, Risk Assessment, and Research Division (TRARD) on federal regulations and policies that affect TCEQ and Texas's regulated community disproportionately compared to other states.
- Incorporate New Approach Methods (NAMs) of toxicity testing into the TRARD's methodologies to keep up with federal regulatory requirements to reduce the use of animals in toxicity testings.

■ **Reduced Funding for Water Programs.** Continued impacts to federal and state budgets have resulted in reduced funding for water programs, including changes to the grant structure and constraints on the use of grant funds.

■ **New EPA Standards and Regulations.** EPA continues to promulgate more stringent air quality standards and regulations, such as the

Maximum Achievable Control Technology (MACT) requirements and the Affordable Clean Energy (ACE) Rule. The new standards and regulations result in significant workload increases, specifically in the processing of air permit authorizations, the creation of new state plans implementing the federal regulations, the Emissions Banking and Trading Program offset requests, and General Conformity determination review. It will be necessary for the Office of Air to increase its proactive planning to ensure that the office can meet the increased workload demand and provide employees with additional training regarding the new federal requirements.

■ **State Implementation Plan (SIP).** SIP revision development and coordinating is becoming more complex and the technical requirements are expanding, requiring an intimate knowledge of agency procedures and federal regulations, as well as computing and analytical abilities. This, combined with the constant changes in the air-quality field due to new regulations and new technologies, creates a high need for experienced, knowledgeable staff.

EPA reviews all NAAQS criteria pollutants on a five-year cycle. It is possible that changes to the NAAQS may result in additional Texas counties being designated as nonattainment within the 2021–2025 timeframe. Each nonattainment area will require SIP revision development, along with potential control strategies specific to the pollutant.

Transport and infrastructure SIP revisions specific to each revised criteria pollutant will also be due within three years of promulgation of the revised NAAQS. In addition to these SIP revisions, Texas is expected to continue to have to develop maintenance plans for certain criteria pollutants to show how an area will maintain its attainment status. EPA is scheduled to review the NAAQS for ozone and particulate matter (PM) in 2020. The next review of lead, carbon

monoxide, nitrogen dioxide, and sulfur dioxide (SO_2) is not known at this time.

The agency is currently developing numerous attainment demonstration, reasonable further progress, emission inventory, and international transport SIP revisions for several counties and areas of the state for the 2008 and 2015 primary NAAQS Ozone Standards. If these areas do not meet current EPA standards by 2020, additional SIP revisions will be required. In addition, the agency may be required to implement an emissions penalty fee program for major stationary sources in the Houston-Galveston-Brazoria and Dallas–Fort Worth areas and an emissions inspection and maintenance program for gasoline-powered vehicles in Bexar County. For areas that meet the standards by 2020, the agency will have to develop redesignation requests and maintenance plan SIP revisions.

■ **Regional Haze SIP.** The agency is also developing a Regional Haze SIP for the Guadalupe Mountains and Big Bend national parks, as well as Federal Class I areas in surrounding states, which is due in 2021. Another Regional Haze SIP will be due in 2028 and every 10 years thereafter, through 2064. Regional Haze program requirements also include a progress-report letter due to EPA in 2023 and every five years thereafter, to demonstrate progress toward the visibility goal.

■ **Texas Emission Reduction Plan (TERP) Program.** TERP is an important strategy in achieving maximum reductions in nitrogen oxides from mobile sources to demonstrate compliance with the Texas SIP. The TERP includes ten unique grant programs. Beginning in fiscal 2022, TCEQ will be authorized to award grant funds from the collected TERP Trust Fund revenues, projected to be $547 million per biennium. This is more than three times the amount of funding allocated to the current TERP program and will double the number of contracts

managed by employees from approximately 5,000 to over 10,000. The Office of Air estimates that the TERP program will need one new FTE for each additional $10 million of collected revenue above existing appropriation to maintain current levels of workload. In addition, the anticipated increase in the TERP program will also require updated and improved data management systems and the creation of online applications.

- **Volkswagen State Environmental Mitigation Trust.** Gov. Abbott selected TCEQ as the lead agency responsible for the administration of $209 million received from the Volkswagen State Environmental Mitigation Trust for grants to reduce nitrogen oxides in the environment. Beginning in fiscal 2019 and through fiscal 2021, TCEQ will manage grant openings and awards for 10 mitigation categories, resulting in over 1,000 new contracts to be monitored by Office of Air employees over the next seven years.
- **National Ambient Air Quality Standards.** As national ambient air quality standards are revised, accompanying revisions to federal requirements for air monitoring related to those standards could dictate changes in the number of monitors, monitoring locations, or monitoring methods across Texas' network. This could result in an increase to division workloads related to deployments, maintenance, operations, data verification, etc.
- **Expedited Permitting Program.** Implemented in November 2014, this program allows applicants to request an expedited review of an application filed under 30 TAC, chapters 106, 116, or 122. The challenge for TCEQ is the limited number of experienced technical employees. The air program requires additional resources through employee overtime or contract labor to review projects designated as expedited.
- **Recycling Programs.** There is renewed legislative and external-stakeholder interest in

market-development activities for recyclable materials. This includes new statutory manufacturer stewardship or recycling programs for products such as other electronics, paint, and alkaline batteries. We are also seeing a potential statutory expansion of current television and computer-equipment recycling programs in response to market changes.

- **Scrap Tire Program.** The Scrap Tire Program will continue to evaluate possible disposal and recycling avenues for scrap tires located across the state with the funding available.
- **Expiration of Dry Cleaner Remediation Program.** The agency will prepare for the expiration of the Dry Cleaner Remediation Program in 2021.

Information Technology

To maintain and enhance the agency's level of service, respond to increasing customer demands and expectations, and implement legislative changes, TCEQ must prepare for several issues in the area of information technology (IT). They include:

- **Critical Technology Upgrade.** The agency is committed to major projects that will require expansive software and database skills. A primary focus will be the Critical Technology Upgrade (CTU) project–legacy applications core to the agency's mission will be upgraded with a contemporary platform over multiple biennia.
- **DIR/DCS Technology Requirements.** As a mandated Data Center Services (DCS) customer, the agency is required to maintain a posture of no more than one release prior to the current version for software. Additionally, the agency faces increased cost if server hardware is not "refreshed" at the designated interval. When software is upgraded or hardware is refreshed, application developers must test application code and remediate it as needed. While this practice is recommended for security reasons, it increases the maintenance overhead for application-development staff. As staff

prioritizes time to maintain compliance with DCS standards, less time is available to modify or build applications to meet the program areas' business needs.

- **Information Security.** Increasingly, legislation addresses policies and practices regarding information security. House Bill 8, 85th Legislative Session, mandates bi-annual security-risk assessments and elevated vulnerability testing for applications that process personally identifiable or confidential information. Retaining staff with the necessary expertise is an ongoing challenge in a field with high demand and escalating pay.

- **Increasing Technological Demands.** The agency is faced with demands applicable to internal and external stakeholders or users with expectations to maintain and improve online access and navigation to more information through increasing and varied access points, such as mobile devices, collaboration tools, and social media. This involves continued site restructuring and the use of analytics, metadata, and usability studies to adequately support emerging web-design and organization trends.

- **Increased Need for Digital Content.** There is a need to deliver more digital content for use on TCEQ websites–training, public education, and other informational content. Content must be produced in HD (high-definition), as SD (standard definition) fades away. Time spent on meeting accessibility requirements for video content will increase as the agency's video production increases.

- **IT Components for New Regulatory Programs.** New regulatory programs routinely require IT components to be developed and supported; the agency is providing more data and expanding the use of technology for reporting information and receiving authorizations. To implement the flow of electronic information between the regulated community and the public, business processes must be analyzed and documented. The agency's program areas will

need to develop proficiency in analysis and design to facilitate implementation. The challenge will be to ensure that staff is capable of building and using these tools effectively and efficiently.

- **Database Management.** Modifying, maintaining, expanding, and/or automating existing database, reporting, and storage capabilities, as well as new initiatives to allow greater public access to agency records, will require large commitments in funding and manpower resources.

- **Information Technology Skill Sets.** Keeping the skill levels of employees up to speed with constantly changing web and related technology, including advocating for increased skill sets around the agency, remains a challenge.

- **Environmental Compliance Technology.** In response to an increased demand for real-time data, additional staff will require training on applicable technology in the areas of environmental and compliance monitoring.

- **Online Access and Navigation.** Maintaining and improving online access and navigation (both internal and external) allows for quick dissemination of information to large groups, both in "real time" and customized, through increasing and varied access points, such as mobile devices, collaboration tools, and social media. This includes restructuring to adequately support content management.

- **Database Integration.** TCEQ's Authorization and Remediation Tracking System (ARTS) database, CCEDs, Central Registry, and PARIS are being tapped to flow data electronically to the EPA National Environmental Information Enterprise Network (NEIEN). EPA is seeking changes to rules implementing the Safe Drinking Water Act (SDWA) and Clean Water Act (CWA), as well as revising guidelines for the implementation of those programs.

- **Improvement and Transparency in Data Management.** There is a need for continued improvement and transparency in the agency's

capabilities in electronic reporting, data handling, and data management, including continued maintenance and enhancement of the Consolidated Compliance and Enforcement Data System (CCEDS).

- **Implementing IT Goals.** Skills are needed to implement the four primary IT goals in the Information Strategic Plan:
  - Improve internal and external access to information.
  - Promote effective and efficient service delivery.
  - Enable strategic management of information.
  - Support a high-performing, next-generation workforce.

Equipment, technology, and training resources are not sufficient to maintain competencies and improve efficiencies. The agency will continue to monitor funding and examine program efficiencies, monitor and manage staff workloads, and evaluate the need for projects as funding reductions affect the agency.
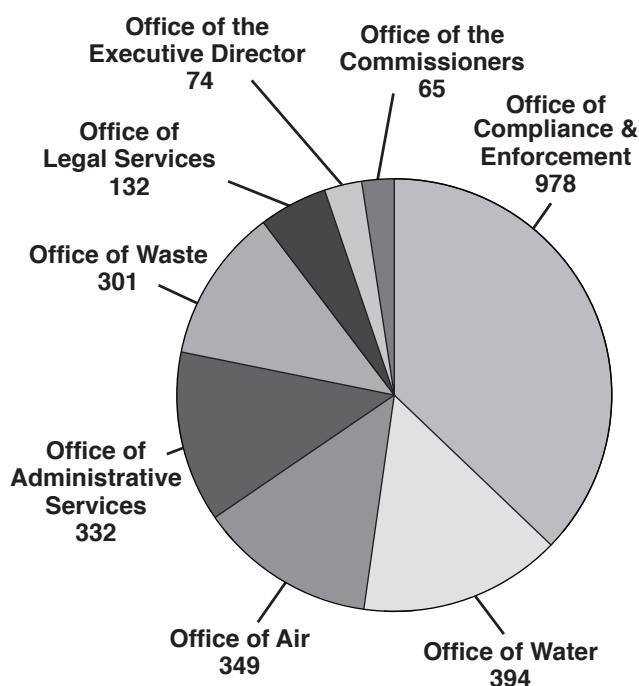
Current Workforce Profile (Supply Analysis)

In fiscal 2019, TCEQ employed a cumulative total of 2,622 employees, which includes 376 separated employees. The following chart (Figure F.1) summarizes the agency workforce by office. The totals indicate an actual head count of employees, not full-time equivalents (FTEs), and do not include contractors or temporary personnel.

Location of Employees

As of Aug. 31, 2019, 778 employees–or 29.7% of the total workforce–were located throughout the 16 regional offices (see Figure F.2). In an effort to facilitate delivery of the agency's services at the point of contact and to increase efficiencies, 131 of these employees (5% of the total workforce) were matrix-managed staff who worked in regional offices, but were supervised from the Central Office.
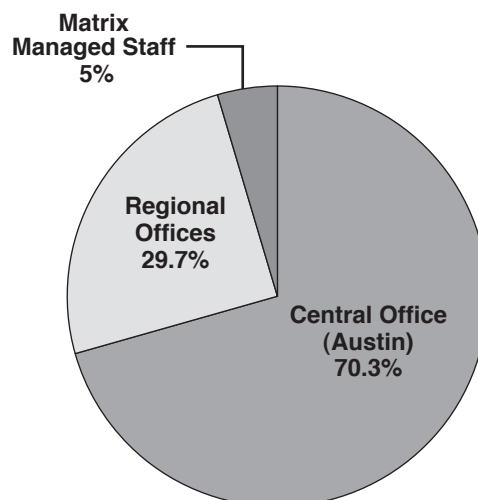

**Figure F.1.
TCEQ Employees by Office, FY 2019**

Office of the Executive Director 74

Office of the Commissioners 65

Office of Legal Services 132

Office of Compliance & Enforcement 978

Office of Waste 301

Office of Administrative Services 332

Office of Air 349

Office of Water 394

Note: Data includes separations.
Data Source: Texas Uniform Statewide Accounting System, as of 8/31/19.

**Figure F.2.
TCEQ Employees by Location, FY 2019**

Matrix Managed Staff 5%

Regional Offices 29.7%

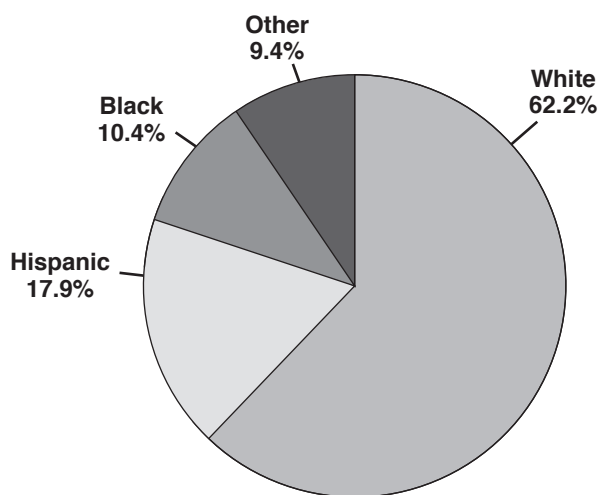Central Office (Austin) 70.3%

Data Source: Texas Uniform Statewide Accounting System, as of 8/31/19.

Workforce Demographics

Figures F.3 and F.4 illustrate the agency's workforce during fiscal 2019. Blacks and Hispanics constituted 28.3% of the agency's workforce, with other ethnic groups representing over 9%. The available Texas labor force for Blacks is 11.8%; for Hispanics, it's 37.1%. This reveals an under-utilization of over 19% for Hispanics.

In fiscal 2019, the TCEQ workforce was 46.7% male and 53.3% female. These percentages indicate a small change from the last reporting period of fiscal 2018 (males, 47%; females, 53%). The available Texas labor force for males is 55%; for females, it's 45%. This represents a 7.3% under- and over-utilization, respectively, in these categories.

The TCEQ Workforce Compared to the Available Texas Civilian Labor Force

The TCEQ workforce comprises four employee job categories, as established by the Equal Employment Opportunity Commission (EEOC). These categories are: Official/Administrator, Professional, Technical, and Administrative Support.

Table F.2 and figures F.5, F.6, and F.7 compare the agency workforce as of Aug. 31, 2019, to the available statewide civilian labor force as reported in the 2017–2018 *Equal Employment Opportunity and Minority Hiring Practices Report*, a publication of the Civil Rights Division of the Texas Workforce Commission. This table reflects the percentages of Blacks, Hispanics, and females within the available statewide labor force (SLF) and the TCEQ workforce.

Figure F.3.
TCEQ Employees by Ethnicity, FY 2019

Data Source: Texas Uniform Statewide Accounting System, as of 8/31/19.
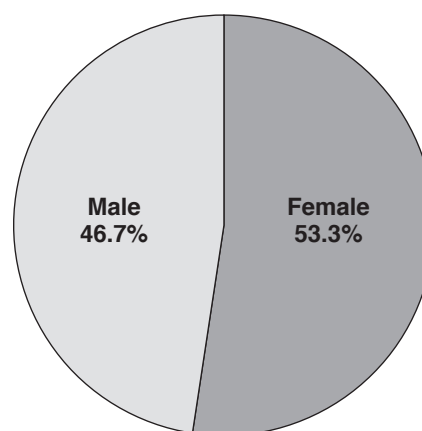
Figure F.4.
TCEQ Employees by Gender, FY 2019

Data Source: Texas Uniform Statewide Accounting System, as of 8/31/19.

Table F.2. TCEQ Workforce Compared to Available Statewide Labor Force, 8/31/19

EEOC Job Category	Black		Hispanic		Female	
	SLF	TCEQ	SLF	TCEQ	SLF	TCEQ
Official/Administrator	8.1%	8.4%	22.4%	12.9%	38.8%	46.6%
Professional	10.9%	6.7%	20.3%	16.7%	54.5%	47.9%
Technical	14.4%	10.5%	29.2%	24.2%	55.2%	30.7%
Administrative Support	14.3%	25%	36.4%	24.4%	71.6%	82.6%

Data Source: Texas Uniform Statewide Accounting System, as of 8/31/19.

Although minorities and females are generally well represented at TCEQ, the agency's ability to mirror the available statewide labor force remains difficult.

Compared to fiscal 2018, the SLF percentages increased for Blacks in the Professional and Official/Administrator job categories. While the SLF percentages remained the same for Blacks in the Technical category, TCEQ continues to experience difficulty in mirroring the SLF. While the SLF shows a slight increase in the Professional category, TCEQ's representation of Blacks in this category decreased and the agency continues to be under-represented.

While the Hispanic SLF percentages increased, TCEQ remains under-represented in all job categories for Hispanics.

The female SLF percentages increased significantly in the Technical job category; however, the agency remains under-represented by 24.5%. Females within the agency are under-represented in the Professional job category and are well represented in the Administrative Support and Official/Administrator job categories. The agency continues to strive to
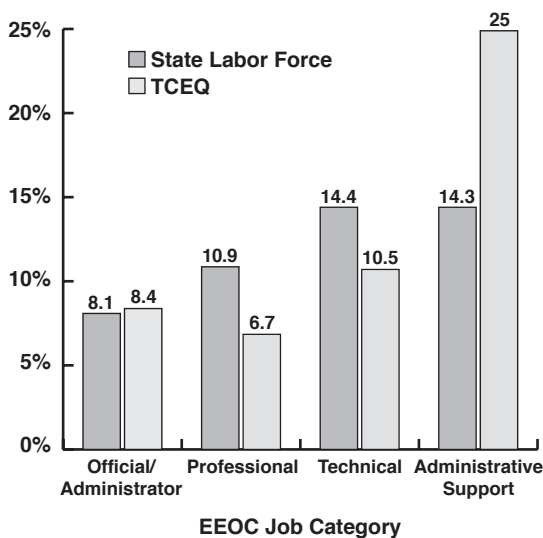
employ a labor force representative of the available Texas workforce.

Figure F.6.
**TCEQ Hispanic Workforce Compared to Available Statewide Hispanic Labor Force, FY 2019**
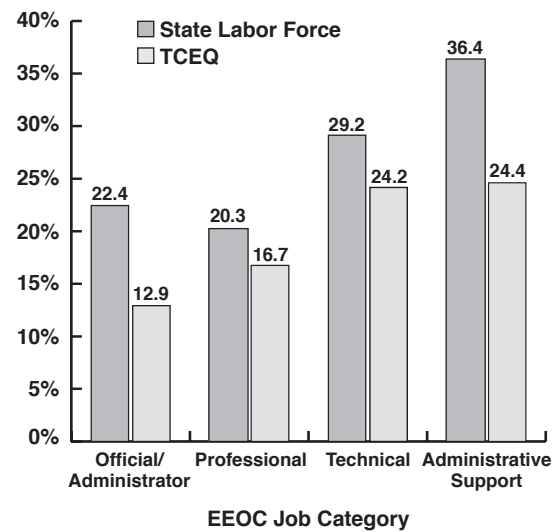
Data Source: Texas Uniform Statewide Accounting System, as of 8/31/19.

Figure F.5.
TCEQ Black Workforce Compared to Available Statewide Black Labor Force, FY 2019

Data Source: Texas Uniform Statewide Accounting System, as of 8/31/19.

Figure F.7.
TCEQ Female Workforce Compared to Available Statewide Female Labor Force, FY 2019
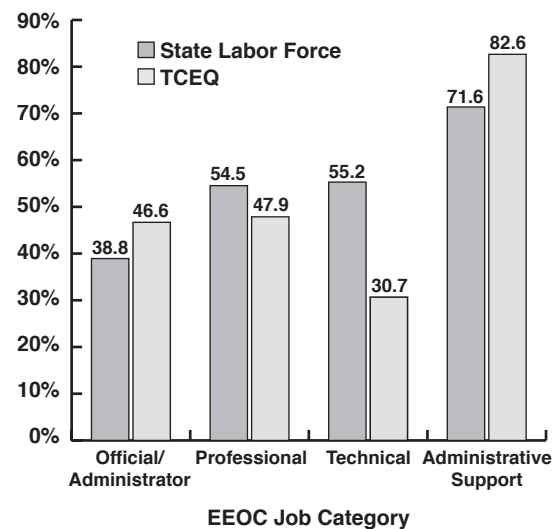
Data Source: Texas Uniform Statewide Accounting System, as of 8/31/19.

Workforce Qualifications

TCEQ employs a highly qualified workforce in a variety of program areas, performing complex and diverse duties. Strong employee competencies are critical to meet program objectives and goals.

Over 18% of TCEQ's job classifications require a bachelor's degree (see Figure F.8). Another 47% require a degree; however, related experience may substitute for this requirement. The remaining positions do not require a degree—they constitute 35% of the agency's workforce.

Workforce Profile by Job Classification

Although over 75% of the agency's employees are categorized as Officials/Administrators and Professionals, the work fulfilled by TCEQ employees is diverse, requiring the use of over 300 job classifications and sub-specifications. Figure F.9 represents the ten most frequently used job classification series in fiscal 2019.

In fiscal 2019, TCEQ supplemented its workforce with 69 contracted staff to provide vital program support, manage workloads, and perform various information technology functions as a means of meeting agency goals and objectives.

Employee Turnover

TCEQ turnover consistently remains below statewide turnover. In fiscal 2019, for example, the statewide turnover rate was 20.3%, in comparison to TCEQ's turnover rate of 14.5% (see Figure F.10). This can be attributed to the agency's recruitment and retention efforts.

Recruitment and retention of qualified staff is critical to the ability of the agency to effectively carry out its objectives. It is imperative that quality replacements be found, trained, and retained. Certified and licensed staff are highly marketable outside of the

**Figure F.8.
Education Requirements of
TCEQ Employees, FY 2019**
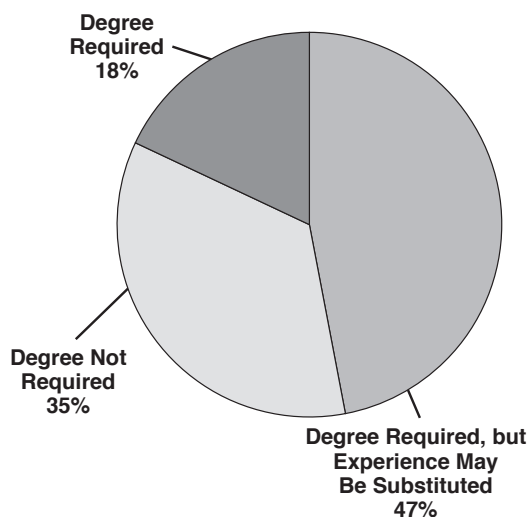
Data Source: Texas Uniform Statewide Accounting System, as of 8/31/19.

**Figure F.9.
TCEQ Employees by Job Classification Series,
FY 2019**
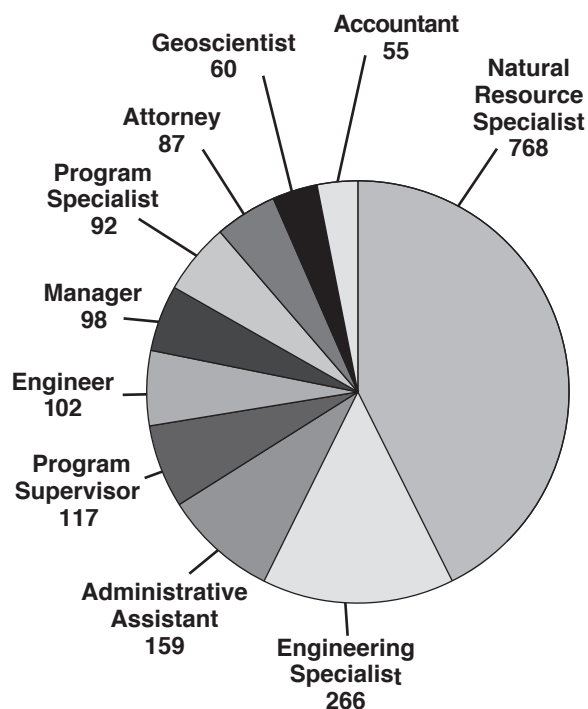
Data Source: Texas Uniform Statewide Accounting System, as of 8/31/19.

agency, which results in turnover and lower experience levels in the remaining staff. Ensuring that agency salaries are competitive with other state agencies using similar skill sets continues to be a challenge.

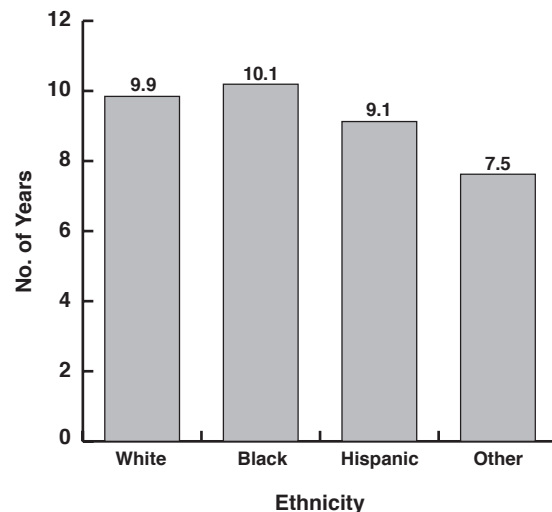See Figures F.11 and F.12 for additional information about the average tenure of the TCEQ workforce.

Future Workforce Profile (Demand Analysis)

TCEQ carries out its mission through broad and diverse activities. These activities require that employees demonstrate a high level of proficiency in a variety of critical skills, also referred to as competencies. Table F.3 is a listing of sets of critical "competencies" that have been identified as the skill sets necessary to accomplish the agency's mission.

The agency continues to emphasize and support workforce and succession planning. This process involves building a viable talent pool that contributes to the current and future success of the agency, including the need for experienced employees to mentor and impart knowledge to their potential successors. Such initiatives will enable the agency to

identify the skills, knowledge, and abilities needed to maintain our organizational excellence and to strengthen the skills of up-and-coming staff.

Figure F.11.
TCEQ Employee Average Tenure by Race, FY 2019

Data Source: Texas Uniform Statewide Accounting System, as of 8/31/19.

Figure F.10.
TCEQ Employee Turnover Rate, FYs 2010–2019

Data Source: Texas Uniform Statewide Accounting System, as of 8/31/19.

Figure F.12.
TCEQ Employee Average Tenure by EEOC Job Category, FY 2019

Data Source: Texas Uniform Statewide Accounting System, as of 8/31/19.

Table F.3. Critical Workforce Competencies within TCEQ Offices

Administrative Support

Basic computer skills

Standard software skills

Mail processing

Operate general office equipment

Record keeping

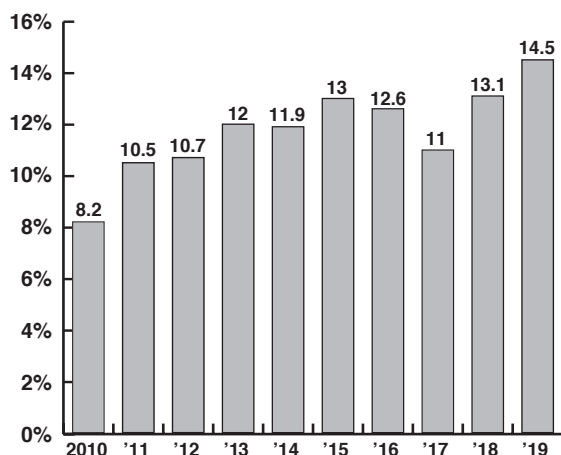Inventory management

Communication

Customer service

Active listening

Cultural awareness

Marketing and outreach

Public relations

Teamwork

Translating technical information into layperson's terms

Oral – public speaking and presentation

Written – composition and editing

Financial Management

Contract management

Financial administration

General procurement

Grant management

Information Development & Management

Accessibility

Computer-assisted tools

Database management

Electronic reporting

Graphic design

Software proficiency

Web development and maintenance

Management/Leadership

Building effective teams

Delegation

Facilitation

Interpersonal skills

Managerial courage

Mentoring

Performance management

Strategic planning

Problem Solving

Analysis

Critical thinking

Decision making

Innovation

Project Management

Coordination

Managing multiple priorities

Organizing

Planning

Quality analysis and process improvement

Technical Knowledge
(may be unique to a certain program area)

Agency policies, procedures, and programs

Audit skills

Litigation skills

Local, state, and federal laws, rules, and regulations

Policy analysis and development

Regulation analysis and development

Research

Specialized technical knowledge

Statistical analysis

Technical analysis

The agency strives to compete in the marketplace for certain disciplines, such as science and engineering. The predominant occupations used at TCEQ—such as environmental engineer, scientist, and geoscientist—require STEM (science, technology, engineering, and math) degrees.

The Texas Workforce Investment Council reported that job growth in STEM occupations through 2024 is promising: approximately 80% of the fastest-growing occupations are in STEM fields. According to the U.S. Department of Commerce, employment in STEM occupations grew much faster than employment in non-STEM occupations over the last decade (24.4% versus 4.0%, respectively), and STEM occupations are projected to grow by 8.9% from 2014 to 2024, compared to 6.4% growth for non-STEM occupations.

STEM occupations command higher wages, earning 29% more than their non-STEM counterparts. This makes it difficult to recruit and retain staff in the STEM job fields. The occupations with the fastest growth in upcoming years—such as statisticians, software developers, and mathematicians—all call for degrees in STEM fields.

The ability to recruit people with information-technology skills will also be essential. The Bureau of Labor Statistics states that seven out of the 10 largest STEM occupations are related to computers. The largest group of STEM jobs is within the computer and math fields, which account for close to half (49%) of all STEM employment. Information-security analysts are projected to have faster-than-average job growth, at 36.5%, with computer-systems analysts, software developers, and web developers maintaining a high profile as fast-growing occupations in Texas and elsewhere.

Gap Analysis

Each office within TCEQ analyzed the anticipated need for each competency and the possible risk associated with the skill being unavailable over the next five years. Competencies that are "at risk" are indicated in Table F.4, prioritized by "low," "medium," or "high," reserving the "high" designation for those gaps that will require action to address them.

Table F.4. Competency Checklist and Gap Analysis

LEGEND			
CO – Office of the Commissioners ED – Office of the Executive Director	OAS – Office of Administrative Services OCE – Office of Compliance & Enforcement	OLS – Office of Legal Services OA – Office of Air	OOW – Office of Waste OW – Office of Water

Skill Category	Skill	CO	ED	OAS	OCE	OLS	OA	OOW	OW
Administrative Support	Basic computer skills								
	Standard software skills								
	Mail processing								
	Operate general office equipment								
	Record keeping				Med				Med
	Inventory management			Low					
Communication	Customer service								
	Active listening								
	Cultural awareness								
	Marketing and outreach						Med		
	Public relations						Med		
	Teamwork			High					
	Translating technical information into layperson's terms	Med		High			Med	Med	Med
	Oral – public speaking and presentation	Med		Med				High	Med
	Written – composition and editing	High		High			Med		
	Other: Services for limited English proficient individuals	High							
Financial Management	Contract management			High			High	Med	Med/High
	Financial administration			High	High		High	High	High
	General procurement			High	High		Med		Med/High
	Grant management				High		High		Med/High
Information Development & Management	Accessibility	High		High	Med		Med		Med
	Computer-assisted tools	Med		Low			Med		High
	Database management	High		High	High		High	Med	High
	Electronic reporting			High			Med		Med
	Graphic design			Med					
	Software proficiency			High			Med		High
	Web development and maintenance	High		Low				Low	Med
	Other: Federal grantor systems utilized to meet reporting requirements			High					
	Other: CAPPS database management, electronic reporting, software proficiency			High					

Table F.4. Competency Checklist and Gap Analysis (continued)

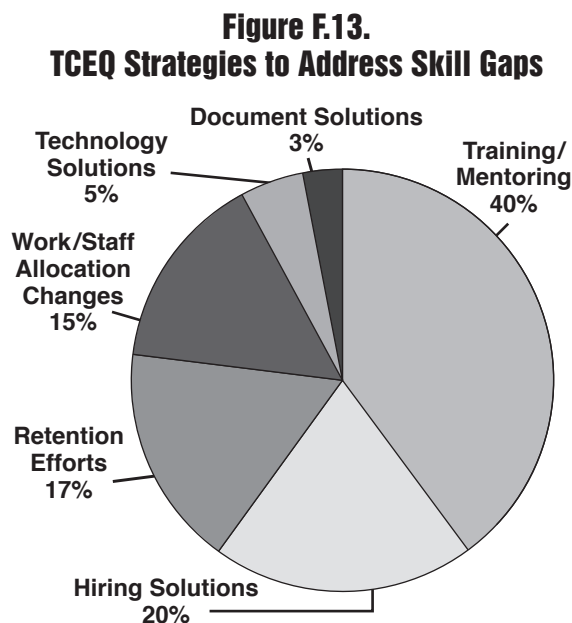| Skill Category	Skill	CO	ED	OAS	OCE	OLS	OA	OOW	OW
Management/ Leadership	Building effective teams				Low		Med		Med
	Delegation				High		Med		Med
	Facilitation	Med		Med					Med
	Interpersonal skills								
	Managerial courage	High							
	Mentoring			Low	High		Med		Med
	Performance management						Med		
	Strategic planning		High	Low	High		Med		Med
	Other: Staff development/retention				High				
Problem Solving	Analysis			High			Med		Med
	Critical thinking			High	Med		High	Low	Med/High
	Decision making			High	Med		Med	Low	High
	Innovation	Low		Med			Med		Med/High
Project Management	Coordination								
	Managing multiple priorities			High	High		Med	Low	
	Organizing				High				
	Planning								
	Quality analysis and process improvement	Low		High	Med		Med		Med
Technical Knowledge (may be unique to a certain program area)	Agency policies, procedures, and programs						Med	Med	High
	Auditing skills	High			Med			Med	Med
	Litigation skills								
	Local, state, and federal laws, rules, and regulations			High	Low/ Med		Med	Med	Med/ High
	Policy analysis and development			High	Low		Med	Low	Med/ High
	Regulation analysis and development			Low	Low		Med	High	High
	Research						Med		
	Specialized technical knowledge	High		High	High		High	High	High
	Statistical analysis	High		Med	High		Med	High	Med
	Technical analysis	Med		High	High		High	High	High

Strategy Development

TCEQ anticipates implementing key strategies, which are discussed in the following sections, to address expected skill gaps. Figure F.13 displays the strategies that were identified by agency offices.

As in past assessments, Training and Mentoring will be the primary focus, followed by Hiring Solutions, to ensure that TCEQ aligns appropriate personnel with the necessary skill sets to fulfill the agency's core functions. The use of strategies as indicated below reflects the fact that there is a critical need to continue developing current staff skills, while also developing future workforce skills.

Some of the specific strategies mentioned by agency offices are:

- Increase recruiting efforts to attract qualified engineers, water chemists, geologists, toxicologists, health physicists, scientists, and attorneys. Recruit and retain staff in these specialized fields by competing with career benefits in the private sector.
- Ensure that agency salaries are competitive with other government agencies that have similar positions (i.e., city, county, state, and federal agencies).
- Obtain the equipment, technology, and training necessary to maintain a competent workforce within budgetary constraints.
- Participate in recruiting and training efforts as turnover of staff due to retirement and economic issues creates loss of knowledge and skills in critical program areas.
- Implement an adequate succession plan for key staff to increase the availability of experienced and capable employees that are prepared to assume roles in these critical program areas as they become available by 2025.
- Provide opportunities for management and technical experts to mentor, train, or facilitate on a regular basis.
- Develop viable options to recruit, obtain access to, contract with, or train staff in critical-needs areas.
- Recruit and retain staff with critical skill sets to ensure quality control in managing data functions and modifying processes to meet demands.
- Recruit and retain staff in key positions that possess the specialized knowledge to perform current and anticipated mission-critical functions.
- Seek transition positions to allow new junior, interim, or training positions until full technical positions become available through attrition or retirement.
- Document processes and procedures for core functions and produce guidance documents to record the protocol used for specialized decision-making.
- Develop tools (checklists, flow diagrams, guidance documents, desktop tools, web tools) to assist staff and the regulated community.
- Assign staff to special projects to increase their knowledge base.
- Assign backups to positions where medium and

Figure F.13.
TCEQ Strategies to Address Skill Gaps

Data Source: Office Workforce Plan, TCEQ, March 2020.

high gaps are identified and include these responsibilities on the backup's performance plan.

- Hold peer-review meetings to discuss common areas of concern and to ensure consistency in the processing of approvals, applications, permits, and authorizations.
- Seek approval for additional FTEs for new programs that will require additional staff.
- Retain employees by offering the use of flex-time and teleworking.

Training and Mentoring

It is evident that mentoring, job shadowing, on-the-job training, and cross-training will continue to be critical to maintaining institutional knowledge and technical expertise as well as to developing and enhancing critical workforce competencies. This will allow less-tenured staff to work with senior subject-matter experts, with the goal of developing and sharpening specific skills. It is also vital that TCEQ provide quality training and professional-development opportunities that focus on agency and division critical skills, competencies, and technical requirements for all employees. Staff should be afforded the opportunity and encouraged to attend training that promotes professional development.

The TCEQ Leadership and Management Excellence Program is a new training program that promotes the alignment of leadership and management development to TCEQ organizational goals. The program is focused on the continuous development of knowledge, skills, and abilities within TCEQ's Leadership and Management competency model. The alignment of competencies to leadership and supervisory roles allows for common language and promotes consistency in development opportunities. The program is designed to be flexible to individual and organizational needs while encouraging continuous improvement and professional development.

As agency resources are limited, the Human Resources and Staff Services (HRSS) Division is asked to enhance technical and leadership training, while

maximizing training dollars. As an attempt to accommodate budget constraints, the agency utilizes internally developed classes and online training, as well as subject-matter-expert (SME) offerings that are free to the agency, whenever possible. In addition, the agency has increased the use of video teleconferencing (VTC) when appropriate, to save travel funds.

Hiring Solutions

While the agency has limitations on FTE levels, offices may address these constraints by realignment, the elimination of unnecessary programs, and documenting and streamlining business processes to maintain a consistent level of regulatory oversight and customer service. Offices will pursue hiring above the entry level for jobs that are hard to fill due to the competitive market base. In addition, the continuation of internship programs has proven to be a successful avenue for hiring employees that have an interest and experience in environmental work.

TCEQ has a commitment to employing a qualified and diverse workforce. The recruitment program maintains a strong diversity focus and is committed to building a quality workforce. Recruitment events are regularly planned to target qualified ethnic minority and female candidates. The increased recruitment efforts necessitate a continued presence at events, while operating within limited agency resources.

TCEQ will continue to analyze hiring practices and determine opportunities for enhanced workforce diversity through usage of the Express Hire Program at diversity-focused events and predominantly minority colleges and universities. This program allows hiring supervisors to identify and hire qualified applicants for job vacancies on the spot at recruiting events. A final review of the applicant's qualifications, along with other hiring requirements, is conducted later.

Hiring supervisors also have the benefit of utilizing the agency's Transitions Hiring Program, which provides a diverse applicant pool to expedite hiring for entry-level positions requiring a degree. Recruiters actively recruit at colleges and universities

and at professional events throughout the state. Hiring supervisors have access to a pool of graduating or recently graduated college students from diverse backgrounds for professional entry-level positions. Further, HRSS launched the Engineer Hiring Program, designed to provide a continuous applicant pool of licensed engineers.

Retention Efforts

Retention of qualified staff remains a continuing challenge in a competitive market. Offices plan to retain individuals who possess essential competencies by providing opportunities for increased responsibility (promotions) and salary enhancements to recognize and reward exceptional performance. TCEQ will also continue to provide developmental opportunities for employees to focus on critical skills, competencies, and technical requirements needed by the agency. It is vital to develop employees to offset potential losses in staff with technical expertise, institutional knowledge, and management experience.

Other retention strategies will include the continued use of recognition, administrative-leave awards, and flextime or other alternative work-hour schedules to support a more flexible and mobile workforce. In addition, HRSS administers employee programs to promote the health, well-being, and education of employees, and to promote a sense of community throughout TCEQ. Further, HRSS is launching an Engineer Development Program to strengthen staff expertise and to retain and promote engineers and engineers-in-training (EITs) in support of the agency's mission-critical functions.

Work and Staff Allocation Changes

Managers continue to review workforce needs and available skill sets to ensure that adequate staff are assigned to meet the business needs of the agency. Offices indicate that the strategies most utilized in this area will be to assign backups for key positions, include these backup responsibilities in their performance plans, restructure jobs, revise functional job descriptions, and, in some instances, involve entry- and journey-level positions in senior decision making. Managers may also pursue process redesign to improve efficiencies and reduce the risk associated with a potential loss of specialized skill sets.

Documentation and Technology Solutions

Managers understand the need for documenting processes and procedures to ensure that tools are available for training purposes and continuity of operations. Documenting processes and procedures also provides a basis for streamlining core functions and can be used for specialized decision-making. Development of tools (checklists, flow diagrams, guidance documents, desktop tools) that can be used by both staff and the regulated community will also streamline and communicate processes and answer frequently asked questions.