
FUNDING TRENDS AND CHALLENGES IN COMMUNITY MENTAL HEALTH SERVICES

Local mental health authority funding from the Legislature and other sources has increased substantially in Texas since fiscal year 2013. As a result, the number of individuals served also has increased. During fiscal year 2013, local mental health authorities reported \$829.6 million in inflation-adjusted community mental health-related revenues. By fiscal year 2017, this amount increased to \$1.2 billion. The net increase primarily was from \$231.8 million in temporary funding from the U.S. Social Security Act, Section 1115, Waiver Delivery System Reform Incentive Payment demonstration program, and increases of \$106.8 million in local funding and \$66.2 million in General Revenue Funds. Despite the funding available to provide access to care for uninsured individuals, 43.2 percent of local mental health authorities have experienced a decrease in per-capita funding from General Revenue Funds since fiscal year 2008. Furthermore, funding from the 1115 waiver expires in 2021.

As the state considers options to address the loss of 1115 waiver funding, it also will face several challenges to improving equitable access to mental health services. These challenges include balancing access to crisis services with ongoing treatment and supports, and addressing the growing inequity in funding among local mental health authorities.

FACTS AND FINDINGS

- ◆ The recent funding increase has improved access to mental health care. The number of clients served has increased, and the number of underserved clients has decreased. These underserved clients include those who were asked to wait for any service and clients who received lower-than-recommended levels of care.
- ◆ Depending on allocations for local mental health authority projects, funding from the 1115 waiver could decrease as soon as fiscal year 2020. A transition plan is required to be submitted to the federal government by October 2019.
- ◆ Local mental health authority funding per person living in poverty within a region can be as high as \$301.00 or as low as \$78.00 per year. The range and the standard deviation in funding from General Revenue Funds have increased during the past 10 years.

DISCUSSION

Local mental health authorities (LMHA) receive funding from various sources. The largest source of revenue is non-Medicaid related General Revenue Funds appropriated by the Legislature, which is used to provide services to uninsured individuals. For the 2018–19 biennium, the Eighty-fifth Legislature, Regular Session, 2017, appropriated General Revenue Funds for this purpose to the Health and Human Services Commission (HHSC) primarily through the agency's bill pattern strategies for Community Mental Health Services and Community Mental Health Crisis Services.

LMHAs receive these funds based on performance contracts between the authorities and HHSC. The performance contract requires a local funds match and a minimum number of clients the LMHA must serve. It also provides detailed requirements regarding the populations and the scope of eligible services for funding.

The base funding that each LMHA receives is a result of historical allocations, including funds appropriated during the past decade for crisis program redesign and outpatient services. As the Legislature provides additional General Revenue Funds to the relevant strategies, HHSC may distribute funds using different criteria depending on state policy goals. For fiscal year 2018, for example, the Legislature appropriated funding based on population growth, waitlist avoidance, and equity. For fiscal year 2018, equity for additional funding was based on each LMHA's per-capita funding, with a weight added for the number of individuals living in poverty. HHSC used each of these factors separately to distribute up to \$12.1 million using different criteria for each.

LMHAs also can receive funding from General Revenue Funds for specific projects or services at an LMHA. In some cases, these funds come from grant programs established by the Legislature. In other cases, the funds are a part of a broad strategy within the General Appropriations Act.

The second-largest funding source comes from the U.S. Social Security Act, Section 1115, Delivery System Reform Incentive Payment (DSRIP) program, which is a temporary source of federal funding. Funding allocations have changed, but they originated with project proposals from LMHAs sent through regional health partnerships. In anticipation of

upcoming funding decreases, HHSC is developing a proposal for submission in March 2019 regarding how these funds should be distributed during the final two years of the program.

Local funds, including tax revenues from cities, counties, and other taxing authorities, account for 13.1 percent of LMHA revenue. HHSC considers patient fees and insurance reimbursement to be local funds. Patient fees and insurance reimbursement account for 9.1 percent of revenues and are shown separately in **Figure 1**.

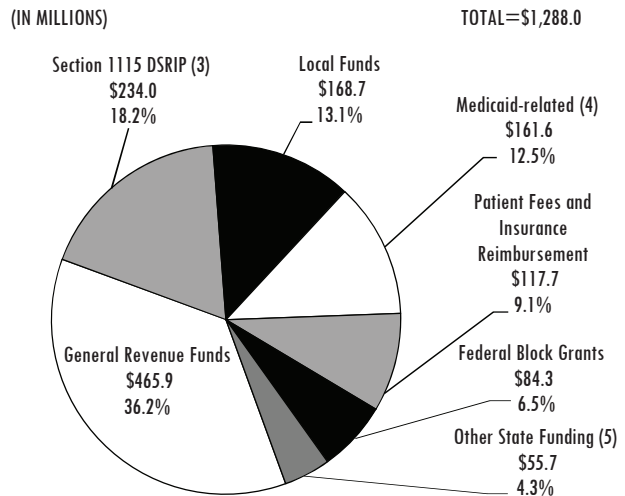
PERFORMANCE-BASED FUNDING

Before 1985, LMHAs received funding through grant awards from the state. In 1985, the Legislature began restructuring the community mental health system so that LMHAs would focus on “the smallest but most needful population groups.” Senate Bill 633, Sixty-ninth Legislature, Regular Session, 1985, established a framework for LMHAs to receive reimbursement through a contract if they were providing services to priority populations. These contracts also were intended to include expected performance standards and measures for outcomes.

During the 33 years since the conversion to performance-based contracts, Texas health agencies have made progress in collecting high-quality information. HHSC collects standardized information about the status of individuals receiving state-funded mental health services. This information enables HHSC to track whether individuals and groups are making progress in treatment at each LMHA. This progress is measured with a validated assessment tool used in many jurisdictions across the U.S. HHSC also tracks whether clients are receiving the recommended level of care. This information has been instrumental in understanding how funding levels affect access to clinically appropriate care.

However, it is challenging to use this information exclusively to determine the performance of an LMHA and its treating providers. Performance measures capture outcomes that are affected by multiple systems. LMHAs do not control all of the services they coordinate directly; they manage services in cooperation with schools, foster care, juvenile justice, corrections, primary healthcare providers, and state hospitals. The mandates of each system may impede providing individuals with clinically appropriate services. Separating the effects of the decisions within an LMHA’s control from the other systems is a challenge for any performance measurement system.

**FIGURE 1
SOURCES OF TEXAS LOCAL MENTAL HEALTH AUTHORITY
REVENUE
FISCAL YEAR 2017**



NOTES:

- (1) Excludes NorthSTAR funding because data was unavailable from the Health and Human Services Commission.
- (2) Revenues are shown without any adjustments for inflation.
- (3) DSRIP=Delivery System Reform Incentive Payment Program, a part of the U.S. Social Security Act, Section 1115, waiver program.
- (4) Medicaid-related funding is a combination of Federal Funds and General Revenue Funds.
- (5) Other state funding includes revenues from other state agencies and programs, including the Texas Correctional Office on Offenders with Medical or Mental Impairments.

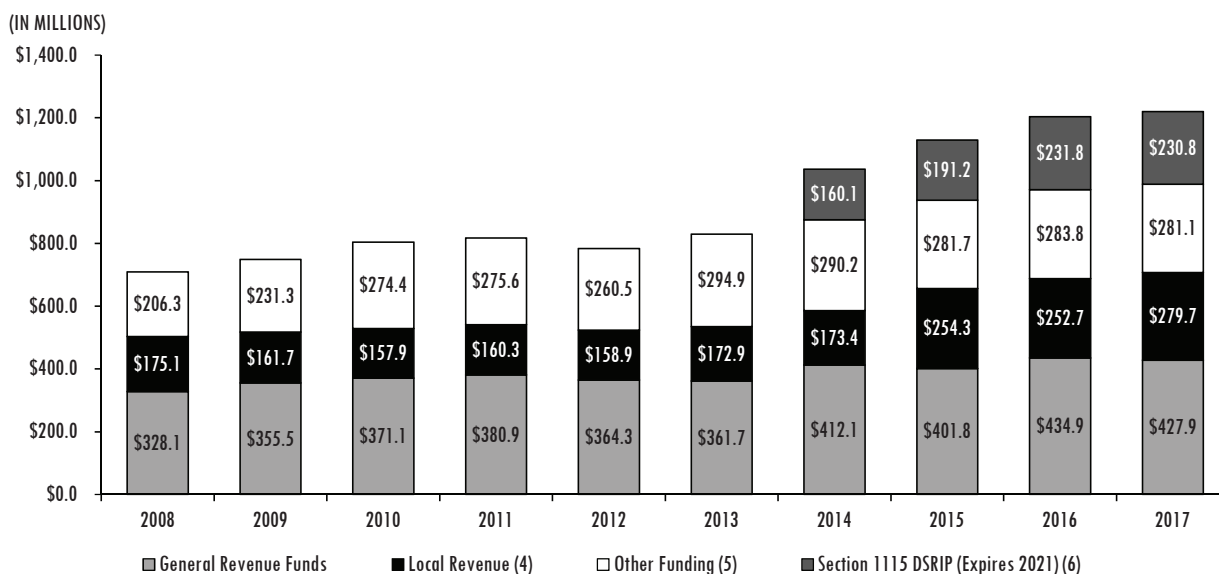
SOURCES: Legislative Budget Board; Health and Human Services Commission.

In addition, the ability of administrators to simplify complex clinical interactions into a performance measure may be limited. For example, the RTI–University of North Carolina Evidence-based Practice Center published a report in January 2015 regarding the use of quality measures in mental health for the U.S. Agency for Health Care Quality. The researchers found the following results:

- stakeholders do not agree on preferred outcomes;
- no studies have assessed whether the use of quality measures improves health outcomes for patients with serious mental illness; and
- no evidence shows whether commonly used measures capture quality accurately or improve outcomes.

LMHAs also are paid by multiple entities, making it difficult to overhaul their entire system to meet the directives of one performance indicator system. In fiscal year 2015, the Sunset

FIGURE 2
INFLATION-ADJUSTED FUNDING FOR TEXAS LOCAL MENTAL HEALTH AUTHORITIES
FISCAL YEARS 2008 TO 2017



NOTES:

- (1) Excludes NorthSTAR funding and the local mental health authorities (LMHA) that replaced NorthSTAR during fiscal year 2017 because data was unavailable from the Health and Human Services Commission.
- (2) Revenues are shown using 2017-equivalent values. Revenues are adjusted using the U.S. Bureau of Economic Analysis Personal Consumption Expenditures Index to account for changes in purchasing power. This index was relatively stable during the period shown.
- (3) Population is based on all individuals living within LMHA regions.
- (4) Local revenue includes patient fees and insurance reimbursement.
- (5) Other funding includes Medicaid, other federal funding, and funding through certain state agencies in addition to the Health and Human Services Commission and the Department of State Health Services. Patient assistance program in-kind funding from drug manufacturers for medications is excluded.
- (6) Section 1115 Delivery System Reform Incentive Payment (DSRIP) program funding expires in fiscal year 2021.
- (7) Revenue data is self-reported by LMHAs and has not been audited by Legislative Budget Board staff.

SOURCES: Legislative Budget Board; Health and Human Services Commission; U.S. Bureau of Economic Analysis.

Advisory Commission found that the state did not link performance to funding effectively. A subsequent internal audit at HHSC found that nearly all of the reviewed performance targets lacked any justification or documentation for how they were developed.

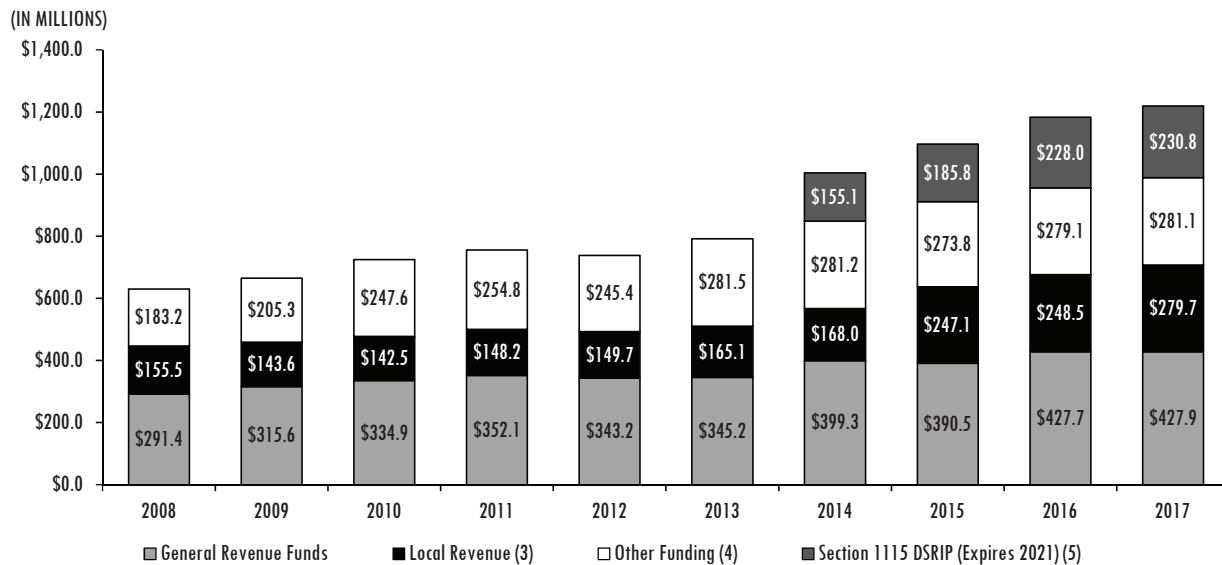
The internal audit also found that the financial incentive system was not timely. Based on direction from the Legislature, HHSC had implemented a system of withholding funds from LMHAs until they achieved performance targets. In January 2017, HHSC sent notification letters to LMHAs about withheld funds for fiscal year 2016. Six months later, the funds had not been redistributed or used for technical assistance.

Since this internal audit, HHSC has taken steps to improve the system. The Eighty-fifth Legislature, General Appropriations Act (GAA), 2018–19 Biennium, directed HHSC to eliminate prospective withholding of funds.

Starting in fiscal year 2018, HHSC paid out all funds and will later recoup funds from LMHAs for nonperformance. This payment method enables LMHAs to access funds to provide services and to make adjustments later as necessary if funds are recouped.

Based on the Sunset Advisory Commission’s recommendations, HHSC is evaluating and restructuring its performance management system for LMHAs. Pursuant to the Eighty-fourth Legislature, GAA, 2016–17 Biennium, Article II, HHSC, Rider 82, the agency contracted with third-party consultants to evaluate its performance management system. HHSC determined from this review that the state should use a low-risk model that adds funding, rather than removing it. The Texas Council of Community Centers reports that it is coordinating with HHSC to improve the performance management system.

FIGURE 3
FUNDING FOR TEXAS LOCAL MENTAL HEALTH AUTHORITIES, NO ADJUSTMENT FOR INFLATION
FISCAL YEARS 2008 TO 2017



NOTES:

- (1) Excludes NorthSTAR funding and the local mental health authorities (LMHA) that replaced NorthSTAR during fiscal year 2017 because data was unavailable from the Health and Human Services Commission.
- (2) Population is based on all individuals living within LMHA regions.
- (3) Local revenue includes patient fees and insurance reimbursement.
- (4) Other funding includes Medicaid, other federal funding, and funding through certain state agencies in addition to the Health and Human Services Commission and the Department of State Health Services. Patient assistance program in-kind funding from drug manufacturers for medications is excluded.
- (5) Funding from the Section 1115 Delivery System Reform Incentive Payment (DSRIP) program expires in fiscal year 2021.
- (6) Revenue data is self-reported by LMHAs and has not been audited by Legislative Budget Board staff.

SOURCES: Legislative Budget Board; Health and Human Services Commission.

Research suggests that Texas can increase the motivation and credibility of its performance management system by providing autonomy to LMHA administrators and clinicians to help interpret performance. A performance management system cannot ameliorate the fiscal pressure to provide services; however, it should help LMHAs attain internally driven goals that align with state priorities. Current efforts by HHSC and the Texas Council of Community Centers may help the state redesign the performance monitoring system in conjunction with funding changes from the expiration of the 1115 DSRIP program.

RECENT INCREASES IN FUNDING AND ACCESS TO SERVICES

Since fiscal year 2013, funding received by LMHAs for community mental health in Texas has increased by 47.0 percent. **Figure 2** shows that most of the increase came from receipt of Federal Funds from the 1115 DSRIP program.

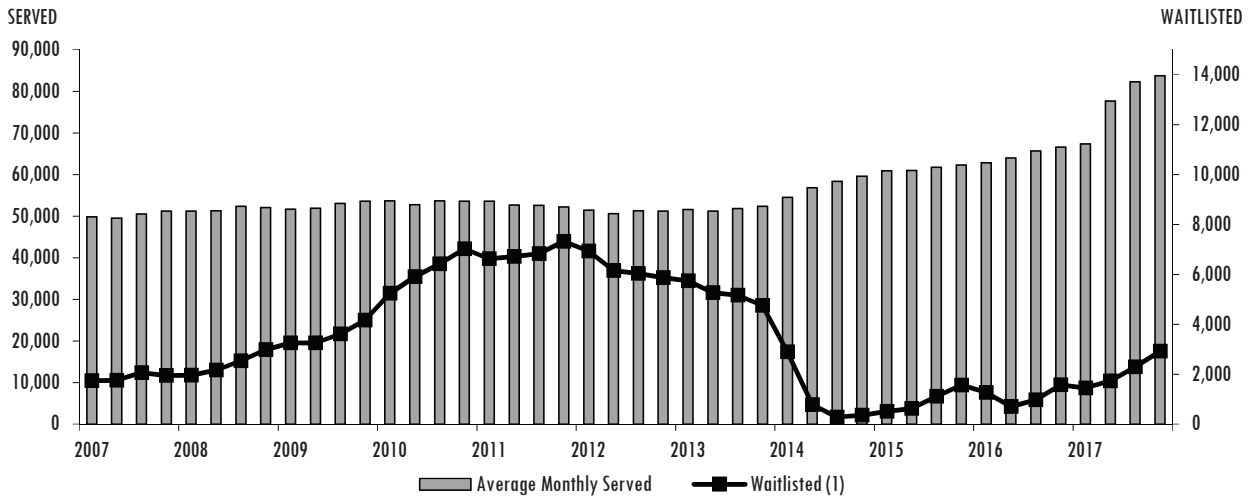
During this period, General Revenue Funds also increased by 18.3 percent, and local revenues increased by 61.7 percent.

Figure 3 shows the funding without an adjustment for inflation.

As shown in **Figures 4** and **5**, this funding increase resulted in LMHAs serving more clients. The number of underserved clients also decreased, including clients who were asked to wait for any service, referred to as waitlisted, and those who received lower-than-recommended levels of care.

Wait times to see providers for noncrisis services also have improved. According to the Texas Council of Community Centers, 61 percent of LMHAs indicated that the wait to see a service provider after completing a comprehensive adult assessment was shorter in May 2018 than five years before, and 8.0 percent of LMHAs reported that wait time was longer. As of May 2018, 94.6 percent of LMHAs initiated services within two weeks. Most LMHAs also indicated that clients typically see prescribers within 30 days. Among

FIGURE 4
ADULTS SERVED OR WAITLISTED FOR SERVICES FROM TEXAS LOCAL MENTAL HEALTH AUTHORITIES
FISCAL YEARS 2007 TO 2017

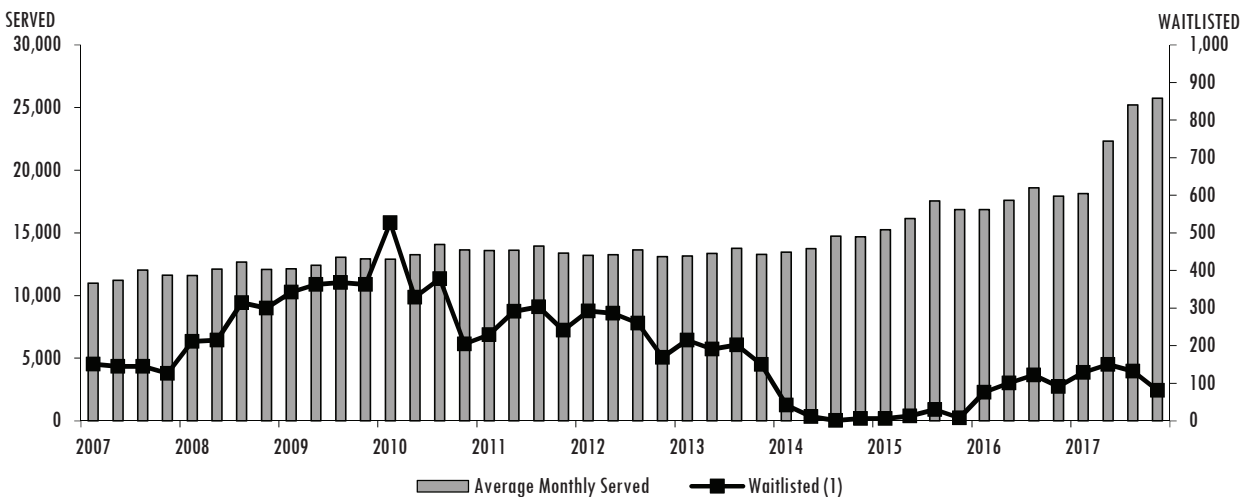


NOTES:

- (1) Waitlisted clients include adults waiting for any services, excluding those receiving some services and waiting to receive higher levels of clinically appropriate care.
- (2) Excludes individuals served by NorthSTAR. Individuals in the former NorthSTAR region, currently served by North Texas Behavioral Health Authority and Lifepath Systems, are counted starting in the second quarter of fiscal year 2017.
- (3) Individuals receiving services outside of the standard treatment package and funded by the U.S. Social Security Act, Section 1115, Delivery System Reform Incentive Payment program may not be included.

SOURCES: Legislative Budget Board; Health and Human Services Commission.

FIGURE 5
CHILDREN SERVED OR WAITLISTED FOR SERVICES FROM TEXAS LOCAL MENTAL HEALTH AUTHORITIES
FISCAL YEARS 2007 TO 2017



NOTES:

- (1) Waitlisted clients include children waiting for any services, excluding those waiting to receive higher levels of clinically appropriate services.
- (2) Excludes individuals served by NorthSTAR. Individuals in the former NorthSTAR region, currently served by North Texas Behavioral Health Authority and Lifepath Systems, are added starting in the second quarter of fiscal year 2017.
- (3) Individuals receiving services outside of the standard treatment package and funded by the U.S. Social Security Act, Section 1115, Delivery System Reform Incentive Payment program may not be included.

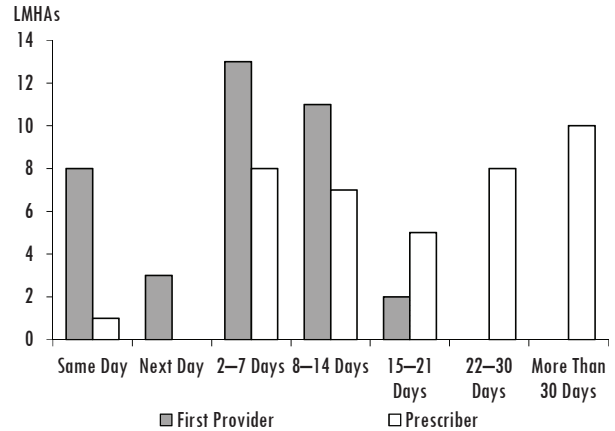
SOURCES: Legislative Budget Board; Health and Human Services Commission.

LMHAs, 61.5 percent indicated that the wait for prescriber services was shorter in May 2018 than in May 2013. **Figure 6** shows wait times by provider type at LMHAs in May 2018.

The primary source of increased per-capita funding in recent years has been the 1115 DSRIP program, as shown in **Figure 7**. This source of revenue is temporary and will expire at the end of fiscal year 2021.

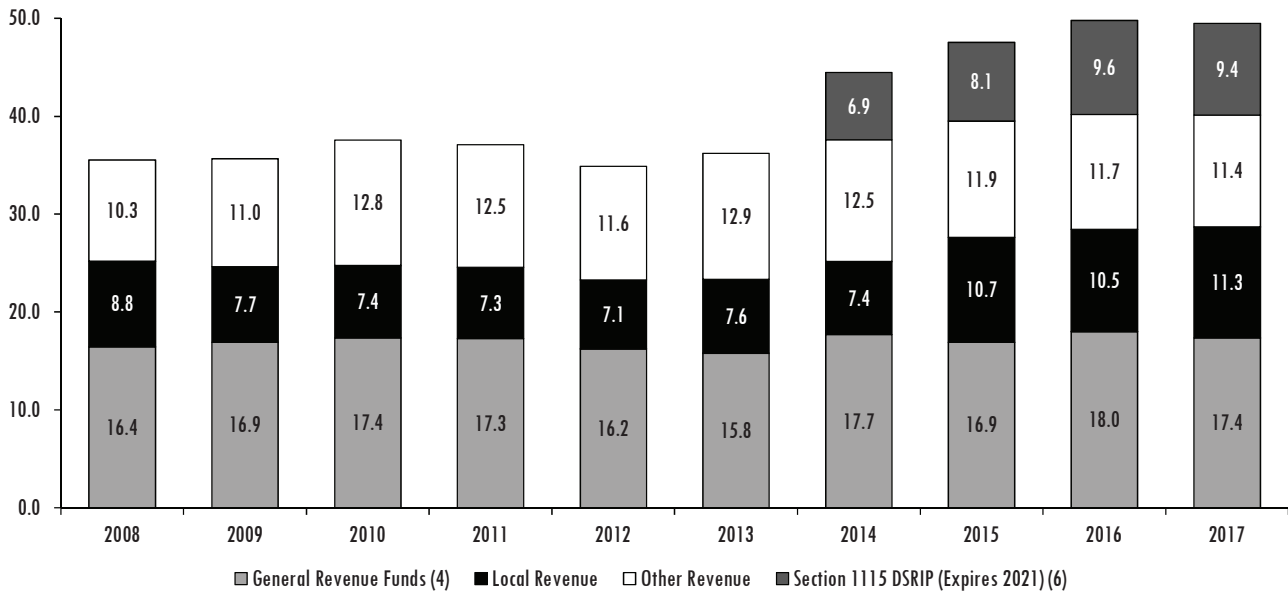
The Eighty-fifth Legislature, Regular Session, 2017, provided an additional \$27.4 million in General Revenue Funds per year for the 2018–19 biennium to HHSC to address waitlists for community mental health services for adults and children. In addition, the Legislature appropriated \$67.5 million in General Revenue Funds for the 2018–19 biennium to provide grants to community entities, including LMHAs, for behavioral health services. Total statewide per-person General Revenue Funds amounts at LMHAs are estimated to increase by approximately 6.5 percent from fiscal years 2017 to 2019 due to these grant programs; however, data regarding revenue receipts by LMHAs was not finalized as of November 2018.

FIGURE 6
WAIT TIMES TO INITIATE TEXAS LOCAL MENTAL HEALTH AUTHORITY SERVICES
MAY 2018



NOTE: Estimated average wait is from the completion of the Adult Needs and Strengths Assessment (ANSA) to the first service, excluding crisis services.
 SOURCE: Texas Council of Community Centers.

FIGURE 7
INFLATION-ADJUSTED FUNDING PER CAPITA FOR COMMUNITY MENTAL HEALTH
FISCAL YEARS 2008 TO 2017



NOTES:

- (1) Excludes NorthSTAR funding and the local mental health authorities (LMHA) that replaced NorthSTAR during fiscal year 2017 because data was unavailable from the Health and Human Services Commission.
- (2) Revenues are shown using 2017-equivalent values. Revenues are adjusted using the U.S. Bureau of Economic Analysis Personal Consumption Expenditures Index to account for changes in purchasing power. This index was relatively stable during the period shown.
- (3) Population is based on all individuals living within LMHA regions.
- (4) General Revenue Funds reported by LMHAs for private inpatient beds are excluded.
- (5) Revenue data is self-reported by LMHAs and has not been audited by Legislative Budget Board staff.
- (6) DSRIP=Section 1115 Delivery System Reform Incentive Payment program.

SOURCE: Legislative Budget Board; Health and Human Services Commission; U.S. Bureau of Economic Analysis.

HISTORY OF FUNDING CRISIS INTERVENTIONS AND ONGOING TREATMENT AND SUPPORTS

Although recent increases in funding have improved access to community mental health services, the needs of the population have exceeded available funding. *The Performance Audit and Evaluation Report*, “Overview of Community Mental Health Needs and Services,” Legislative Budget Board, January 2019, reports that most individuals with serious mental illness do not access LMHA specialty mental health services.

In 2006, the Department of State Health Services (DSHS), the agency then responsible for community mental health services, released a report regarding crisis service redesign. The report found that individuals experiencing a mental health crisis had inadequate access to services. DSHS estimated it would cost an additional \$222.1 million per biennium to adequately address this need. The agency’s plan called for requesting the first \$83.3 million for the 2008–09 biennium, and the remainder was intended to be requested for the following biennium. DSHS anticipated that increased funding could help individuals avoid more intensive, costly admissions to hospitals and correctional facilities.

The Eightieth Legislature, 2007, appropriated \$82.0 million in General Revenue Funds for the 2008–09 biennium for community mental health crisis services. In addition, the Legislature requested an evaluation of the soon to be redesigned system. In its evaluation completed in January 2010, Texas A&M University found that the crisis redesign accomplished the intended objectives. Individuals’ access to crisis services improved, decreasing the need for more intensive services.

However, the report identified concerns about access to ongoing services. Crisis services primarily are short-term interventions. The crisis level of care, for example, is authorized for seven days. Adult levels of care for ongoing treatment are authorized for six months to 12 months. As LMHAs served more individuals in crisis, many of these newly engaged individuals qualified for ongoing treatment. Individuals coming from the crisis system often received priority in treatment, given their acuity. According to Texas A&M University’s report, most new investment in the service system targeted crisis service users, leaving ongoing treatment services significantly underfunded. The report stated that, if the pattern continued, the system would evolve into one in which individuals received help only after they deteriorated into crisis.

Following Texas A&M University’s evaluation, DSHS convened an expert task force to study mental health services. Among its recommendations in August 2010, the task force recommended prioritizing ongoing treatment in future funding increases.

Since then, however, the share of funding for crisis services has increased. Although crisis funding has not reached the levels recommended in 2006, the percentage of General Revenue Funds dedicated to crisis services has increased since 2010, and noncrisis-related per-person General Revenue Funds amounts have remained stable. **Figure 8** shows the totals for each fiscal year.

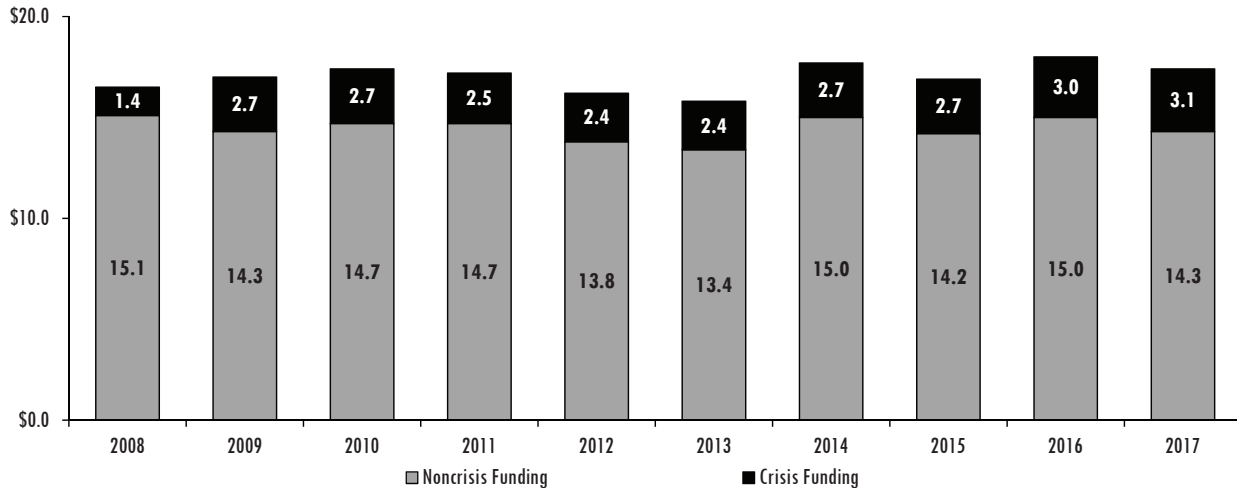
Evaluations conducted after Texas A&M University’s 2010 report have raised the same concerns. The Eighty-second Legislature, Regular Session, 2011, directed DSHS to contract for an external evaluation of the mental health system. In 2012, the evaluator, PCG, identified concerns about the system being “crisis-driven.” Interviews with system participants indicated that a “greater emphasis should be placed on prevention and recovery to address client needs before they reach crisis level.” A Travis County assessment published in 2012 reached the same conclusion.

Starting in fiscal year 2013, the state increased funding for outpatient services using 1115 DSRIP program funds, as shown in **Figure 7**. The 1115 waiver DSRIP program projects were intended to help the state increase provider capacity and prepare the health system for an influx of insured individuals that would result from the expansion of Medicaid, as part of the federal Patient Protection and Affordable Care Act. The mental health projects also were intended to address the gaps in the continuum of care and supports, as highlighted in the DSHS 2010 Task Force Report.

EQUITY IN PER-PERSON FUNDING

In addition to total funding available for services, equity of funding across LMHAs has been a challenge since the establishment of the centers. In 1963, Congress enacted the Community Mental Health Act of 1963 to establish community mental health centers. The legislation established 3,000 regions, with each center intended to serve from 125,000 to 250,000 individuals. Shortly after the establishment of these regions, concerns arose about funding inequities and health center oversight. According to a 1974 U.S. Government Accountability Office report, regions were defined arbitrarily, resulting in uneven distribution of funds.

FIGURE 8
INFLATION-ADJUSTED, PER-PERSON GENERAL REVENUE FUNDS PROVIDED FOR COMMUNITY MENTAL HEALTH SERVICES
REPORTED BY CRISIS LEVEL
FISCAL YEARS 2008 TO 2017



NOTES:

- (1) Excludes NorthSTAR funding and the local mental health authorities (LMHA) that replaced NorthSTAR during fiscal year 2017 because data was unavailable from the Health and Human Services Commission.
- (2) Revenues are shown using 2017-equivalent values. Revenues are adjusted using the U.S. Bureau of Economic Analysis Personal Consumption Expenditures Index to account for changes in purchasing power. This index was relatively stable during the period shown.
- (3) Population is based on all individuals living within LMHA regions.
- (4) General Revenue Funds reported by LMHAs for private inpatient beds are excluded.
- (5) Revenue data is self-reported by LMHAs and has not been audited by Legislative Budget Board staff.

SOURCE: Legislative Budget Board; Health and Human Services Commission; U.S. Bureau of Economic Analysis.

In Texas, funding inequities also were driven by each LMHA’s ability to negotiate for available funding.

From fiscal years 1982 to 2000, Texas began to address these inequities by allocating new funds using a formula primarily based on population, with some additional information to estimate need, including poverty. In fiscal year 2000, the state streamlined the formula for these funds to be based solely on population.

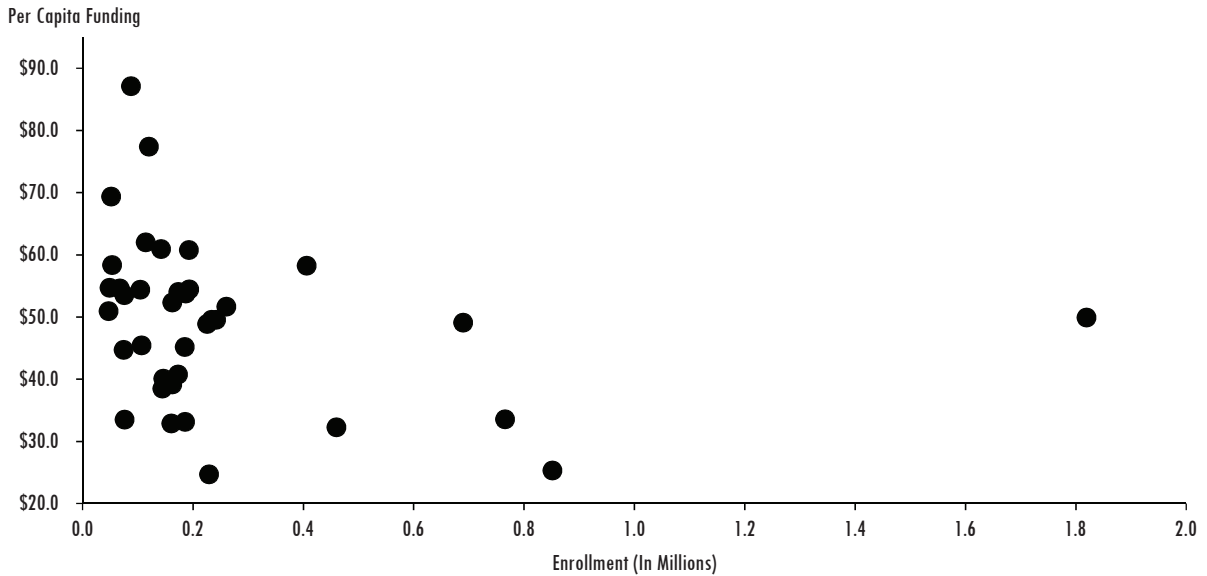
Since 2008, the variation in LMHA per-person funding has increased. Statewide per-person funding from all revenue sources has increased, as shown in **Figure 7**. For fiscal year 2017, statewide per-person funding from all sources of revenue had increased to \$49.48 per person, excluding the former NorthSTAR region. However, since fiscal year 2008, General Revenue Funds per-person funding decreased for 16 LMHAs. On average, General Revenue Funds allocations decreased \$1.58 per person living in those LMHA regions. Twenty-one LMHAs received an increase in their inflation-adjusted, per- person General Revenue Funds allocations. The increase on average was \$3.13 per person.

During fiscal year 2016, the state started tracking equity based on the number of individuals in poverty. Among regions with similar numbers of individuals living in poverty, some LMHAs receive more than three times as much funding per person as others, as shown in **Figure 9**. For fiscal year 2018, allocations of new funds that were to improve equity were based on the per-capita funding of each LMHA with a weight added for the number of individuals living in poverty.

Figure 10 shows similar patterns for all revenue sources per person in fiscal year 2017.

Since 2002, every Legislature has included a rider in the General Appropriations Act containing an equity-related directive. The Seventy-ninth Legislature, General Appropriations Act, 2006–07 Biennium, required DSHS to develop a long- term plan for funding equity. As part of its 2015 review of DSHS, the Sunset Advisory Commission also issued a management directive to evaluate funding equity. State agencies, LMHAs, and experts in the mental health field have reported that the current inequity is too large. HHSC has worked with stakeholders to develop changes. As of August 2018, HHSC was evaluating options.

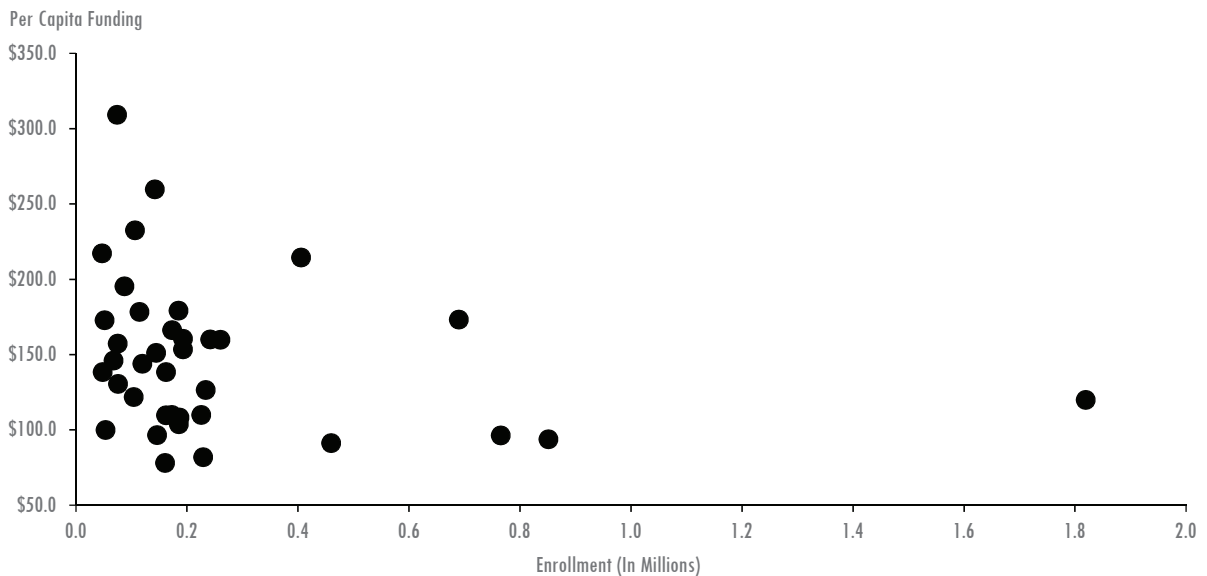
FIGURE 9
PER-PERSON GENERAL REVENUE FUNDS BY LOCAL MENTAL HEALTH AUTHORITY AREA RESIDENTS IN POVERTY
FISCAL YEAR 2017



NOTES:

- (1) Excludes NorthSTAR funding and the local mental health authorities (LMHA) that replaced NorthSTAR during fiscal year 2017 because data was unavailable from the Health and Human Services Commission.
 - (2) Population is based on the number of individuals within an LMHA region living at or less than 200 percent of the federal poverty level.
 - (3) Revenue data is self-reported by LMHAs and has not been audited by Legislative Budget Board staff.
- SOURCES: Legislative Budget Board; Health and Human Services Commission; U.S. Bureau of Economic Analysis.

FIGURE 10
PER-PERSON TOTAL REVENUE BY LOCAL MENTAL HEALTH AUTHORITY AREA RESIDENTS IN POVERTY
FISCAL YEAR 2017



NOTES:

- (1) Excludes NorthSTAR funding and the local mental health authorities (LMHA) that replaced NorthSTAR during fiscal year 2017 because data was unavailable from the Health and Human Services Commission.
 - (2) Population is based on the number of individuals within an LMHA region living at or less than 200 percent of the federal poverty level.
 - (3) Revenue data is self-reported by LMHAs and has not been audited by Legislative Budget Board staff.
- SOURCES: Legislative Budget Board; Health and Human Services Commission.

The Eighty-fourth Legislature 2015, directed HHSC to end the NorthSTAR program, which was a publicly funded managed-care approach to delivering mental health and chemical dependency services for residents in the Dallas region. Access to benefits in NorthSTAR was determined by clinical need, not funding source, and the program had no waitlists for services. At that time, concerns arose that discontinuing NorthSTAR would result in waitlists and could decrease access to mental health services.

During the Eighty-fifth Legislature, Regular Session, 2017, HHSC presented two funding options for providing care in the Dallas region to the Legislature. One option included adding \$8.1 million into the base funding for one of the LMHAs that replaced NorthSTAR, at the LMHA's request. This amount was approximately equivalent to funding provided by the Eighty-fourth Legislature, 2015, for a onetime transition cost. A second option would have allocated new funding across all LMHAs primarily based on population growth and equity, and provided nearly half of the amount requested by the Dallas-area LMHA. The total amount of funding remained the same in both options. HHSC reported that the first option would not support increasing capacity and avoid waitlists across the system, but it would address concerns about funding for one LMHA that received per-capita funding at less than average. The Legislature funded the first option.

The Legislature has prioritized funding during recent sessions to eliminate waitlists for clients who are unable to receive any services due to a lack of funding at LMHAs. To some extent, LMHAs can manage demand for services through different strategies. One strategy is to offer a more comprehensive set of benefits and make eligible clients wait when the LMHA is at capacity. This practice negatively affects uninsured clients the most, because Medicaid clients cannot be placed on waitlists and, therefore, may receive services before uninsured clients that are on waitlists. Another strategy is to increase LMHAs' capacity to serve clients by offering less-intensive services to all clients. These LMHAs may have clients waiting to receive clinically appropriate and recommended services, but fewer waitlisted clients for any services. During fiscal year 2017, approximately one in 10 interactions with eligible adults after assessment resulted in a client in need being waitlisted or underserved.

LMHAs that manage resource constraints by underserving clients, rather than waitlisting them, may experience a decrease in funding equity when the Legislature provides new funding dedicated to the elimination of waitlists.

In addition to waitlist funding, equity improvements have been negatively impacted by other funding priorities. For example, the Legislature often seeks to leverage funds through the use of competitive awards with local match requirements. New initiatives may require each participating LMHA to make a minimum investment, sometimes including a match requirement. Some LMHAs also may have a greater need for the type of project funded by a grant. When the needs and ability to fund differ, some LMHAs might receive no funding or proportionately less funding from a new source.

The Legislature frequently has included funding to address equity in addition to project-specific funding. However, these equity allocations have not been large enough to result in a net improvement in equity for the biennium. As a result, the equity allocation mitigates some of the effects of the project-specific funding, but equity each biennium still decreases.

The funding needs and tax capacity of the local governments within each LMHA vary. Some schools, for example, have behavioral health staff onsite, which may decrease the need for LMHA services. Likewise, some LMHAs contain counties with greater levels of property wealth, fewer individuals living in poverty, and therefore higher taxing capacity. A uniform per-person funding amount would not account for those differences. Therefore, HHSC has transitioned to using an equity measure that includes the number of individuals living in poverty, in an effort to reflect the need for services.

FUTURE FUNDING CHANGES AND CONSIDERATIONS

Funding from the 1115 DSRIP program could decrease as soon as fiscal year 2020 and will end in fiscal year 2021. HHSC must prepare and submit a transition plan by October 2019 to the U.S. Centers for Medicare and Medicaid Services. The plan must describe how Texas will sustain its delivery system reform efforts without the 18.2 percent of federal funding accounted for in LMHA revenue. This transition process may build a foundation for restructuring funding to maintain access and improve equity.

As the state considers how to address the absence of 1115 DSRIP program funding, it also will face multiple challenges regarding equitable access to mental health services. If these funds are not replaced, the number of individuals served and the services delivered would decrease, and wait times would increase. The Texas Council of Community Centers estimated that LMHAs served 90,769 new individuals as a result of 1115 DSRIP program funds from October 2015 to September 2016. An additional 85,199 individuals received

enhanced services during that period. Because 1115 DSRIP program funding is not distributed based on population, the All Funds variation among LMHAs and the median per-capita funding by LMHA would decrease.

If the Legislature chose to replace the 1115 DSRIP program funding, it could appropriate General Revenue Funds. Funding could be allocated to improve per-capita equity compared to current allocations. However, increasing funding at some LMHAs would result in a loss in services at other LMHAs if total funding remains constant.

Alternatively, states can amend Medicaid eligibility rules through an existing authority in the U.S. Social Security Act, Section 1915(i). In accordance with this authority, a state can receive federal funding to provide services to individuals based on state criteria for age, condition, functionality, or other standards. For federal fiscal year 2019, with the exception of certain enhanced rates, the federal government will pay for 58.19 percent of Medicaid costs in Texas. Eligibility does not have to be defined by diagnosis, and can be defined by a client's level of functioning. According to the U.S. Department of Health and Human Services, "this flexibility presents an opportunity for states to create highly targeted programs that serve specific high-need or hard-to-serve populations, such as those with [severe mental illness]." States can use the existing authority in accordance with federal law without seeking a waiver. Some states have opted to use waivers in lieu of this authority because waivers enable them to cap enrollment or begin geographic phase-ins. Texas currently uses the Section 1915(i) authority to provide enhanced services for individuals that are eligible for Medicaid. This authority could be modified to include uninsured individuals that receive services from LMHAs.

Transitioning to funding based on an individual's mental health needs and ability to pay could help improve equity in funding. LMHAs would receive funding based on utilization instead of the existence of a project or historical funding allocations.

The changes precipitated by the upcoming end of 1115 DSRIP program funding will be significant. The strategies that the Legislature and HHSC adopt in response will affect access to ongoing treatment and equitable access to services across the state. Consideration of the balance among crisis services and ongoing treatment, equity in funding among local mental health authorities, and the structure of the performance management system can help improve equitable access to community mental health services.

IMPROVE VIABILITY OF SMALL PUBLIC WATER SYSTEMS

A public water system provides potable water for public use. This designation applies broadly and can include cities, residential subdivisions, private businesses, or governmental entities. The Texas Commission on Environmental Quality is the primary agency responsible for ensuring that the state complies with the federal Safe Drinking Water Act, which requires a system to provide adequate drinking supplies to the public.

As water infrastructure ages, a small system that serves 3,300 people or less is more likely than a larger system to face challenges in its ability to maintain adequate water supplies. This likelihood is due to constraints on financial, managerial, and technical capabilities as a result of having a smaller rate base. This finding is consistent across the U.S. and leads to thousands of systems being in noncompliance with federal standards every year. States employ various tactics to address these issues. In Texas, the Texas Commission on Environmental Quality and the Public Utility Commission, through a contract with the Texas Rural Water Association, provide multiple services, including technical assistance to public water systems to encourage them to comply with standards. The Texas Water Development Board also offers financial assistance to these entities. However, additional efforts by the state, in the forms of increased oversight, financial assistance, and the ability to promote system consolidation or regionalization, would help improve the viability of small, struggling systems.

FACTS AND FINDINGS

- ◆ As of fiscal year 2017, Texas had approximately 6,977 public water systems, 4,159 of which serve populations of 500 or less.
- ◆ Approximately 95.0 percent of water supplied and tested from public water systems meets federal drinking water standards. Of the 5.0 percent that does not, the majority of that water is supplied by small systems.
- ◆ In a 2014 letter to the Texas Commission on Environmental Quality, the U.S. Environmental Protection Agency noted that Texas had more than 300 systems with severe drinking water violations, which represented approximately 4.0 percent of all

systems in the state, the highest relative percentage in the U.S.

CONCERNS

- ◆ The Texas Commission on Environmental Quality is not authorized by state law to institute a collections and late payment policy for systems that do not adhere to water system testing requirements.
- ◆ The Texas Commission on Environmental Quality issued 21,890 violations to systems during the 2016–17 biennium. The majority of violations were for systems that do not employ minimally acceptable operating practices for water quality testing, for water quality violations for lead and copper, and for failure to provide public notification in a timely manner. Approximately one-third of all violations are attributed to water systems improperly monitoring 102 separate water quality indicators, of which the majority are federally prescribed, and notifying the public regarding violations.
- ◆ Governmental entities with responsibilities to license and regulate restaurants, childcare facilities, or other businesses do not have a formalized process to receive and integrate water quality violations as they arise.
- ◆ Multiple state agencies and independent school districts have incurred water quality-related violations during the last five fiscal years, some of which are still outstanding.
- ◆ According to Texas Commission on Environmental Quality and Texas Water Development Board staff, financial constraints are a significant factor in preventing small public water systems from addressing violations. Additional financial vetting of water system applicants, combined with increased financial monitoring requirements for existing systems with repeat violations, could assist in addressing this issue.
- ◆ Other states use additional funding opportunities, such as grant programs for water systems. This supports compliance with federal drinking water requirements and incentivizes additional regionalization with other high-functioning water systems. Texas Commission

on Environmental Quality staff consider this practice as an additional mechanism to improve water system performance.

OPTIONS

- ◆ **Option 1:** Amend statute to authorize the Texas Commission on Environmental Quality additional cost-recovery abilities for systems that refuse to test their water supplies or perform other required functions.
- ◆ **Option 2:** Amend statute to require the Texas Commission on Environmental Quality to establish notification standards, which would include an automated reminder system, to increase water system compliance with reporting rules.
- ◆ **Option 3:** Amend statute to require the Texas Commission on Environmental Quality to notify local health departments, the Department of State Health Services, and the Health and Human Services Commission, as applicable, when health-based violations are identified at entities that operate water systems when those entities are subject to such agencies' inspection and certification.
- ◆ **Option 4:** Amend statute to require state entities to consider applying for Drinking Water State Revolving Fund financial assistance to address water system deficiencies. An agency with a health-based violation that does not apply for financial assistance would be required to notify the Legislative Budget Board providing a rationale for this decision, and a school district would provide similar notification to the Texas Education Agency.
- ◆ **Option 5:** Amend statute to require the Texas Commission on Environmental Quality and Public Utility Commission of Texas to periodically review and adjust financial accountability standards for new and existing, at-risk water systems and to determine the feasibility of consolidation or regionalization of new applicants with existing systems.
- ◆ **Option 6:** Amend statute to authorize the Texas Commission on Environmental Quality, Public Utility Commission, or an individual administering an existing system under receivership to apply for financial assistance on behalf of the owner of that system. Additionally, the Texas Commission on

Environmental Quality, in consultation with the Texas Water Development Board, before authorizing a new water system, would verify if any state funding is available that would increase the economic feasibility of connecting to an existing water system rather than developing a new water system.

- ◆ **Option 7:** Amend statute to authorize the Texas Commission on Environmental Quality and the Public Utility Commission to adopt thresholds that would initiate the required regionalization, consolidation, or closure of systems that incur significant health-based violations during a period, and institute a public petition process that also would initiate this review.
- ◆ **Option 8:** Amend statute to establish a drinking water supply assistance grant program at the Texas Commission on Environmental Quality to provide additional financial assistance to improve the viability of struggling public water systems.

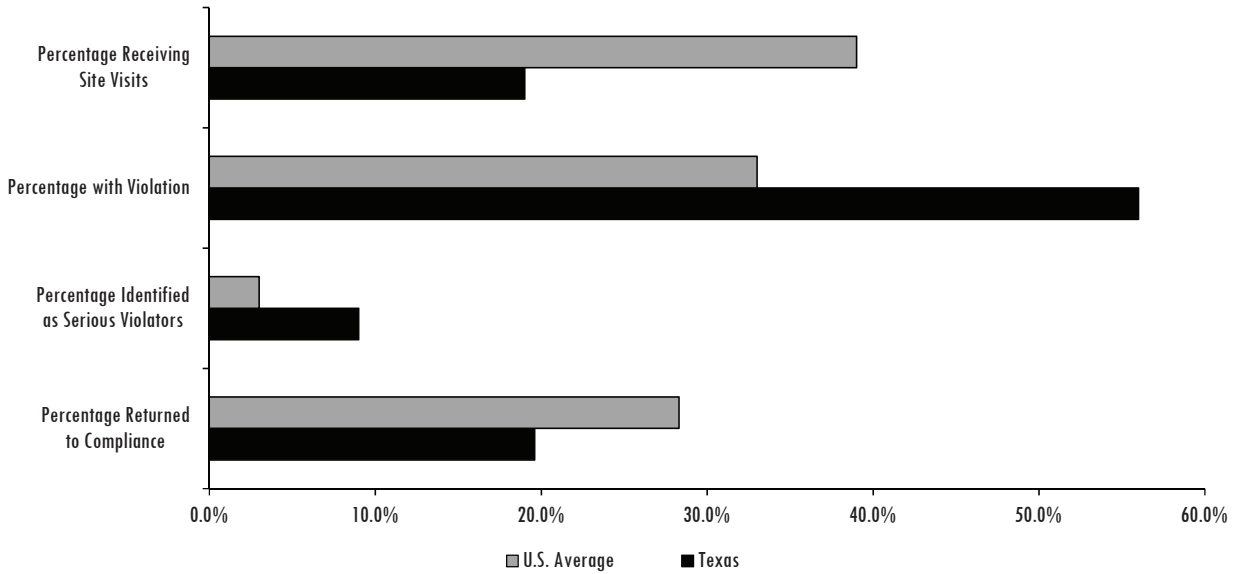
DISCUSSION

A public water system provides water to the public for human consumption. The U.S. Environmental Protection Agency (EPA) defines a public water system as having at least 15 service connections or serving at least 25 individuals for at least 60 days out of the year. The term public refers to the people drinking the water, and not necessarily the ownership of the system. According to Texas Commission on Environmental Quality (TCEQ) staff, the term utility differs from public water systems as utilities are more frequently associated with the business and billing aspect of providing retail service and can also provide sewer utility services. The term public water system relates more directly to the operational aspect of supplying drinking water. A utility can be made up of multiple water systems linked together that supply water to a particular customer base.

TEXAS PUBLIC WATER SYSTEM PERFORMANCE

In a 2014 letter to TCEQ, EPA noted that Texas had more than 300 systems with drinking water violations, which represented approximately 4.0 percent of all systems in the state. According to EPA, this number represented the highest percentage in the U.S. *The Texas Tribune* reported that EPA cited dozens of Texas systems for having been out of compliance with federal law for almost five years. Studies performed by several entities during calendar years 2016 and 2018 found that thousands of Texans drink water that

FIGURE 1
PERFORMANCE OF VERY SMALL TEXAS PUBLIC WATER SYSTEMS COMPARED TO NATIONAL AVERAGES
CALENDAR YEAR 2017

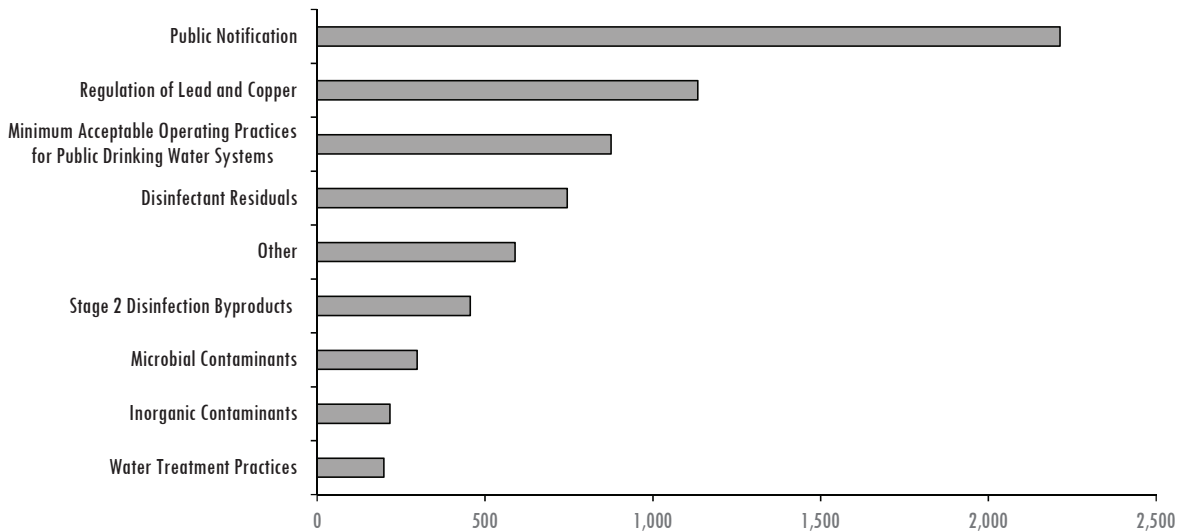


SOURCE: U.S. Environmental Protection Agency, Enforcement and Compliance History Online.

contains hazardous constituents, such as arsenic, radium, and lead, that exceed federal standards. Research performed by the federal Centers for Disease Control and Prevention (CDC) found that, nationwide, systems in rural areas are more likely to contain harmful contaminants. **Figure 1** shows U.S. and Texas statistics related to the monitoring and

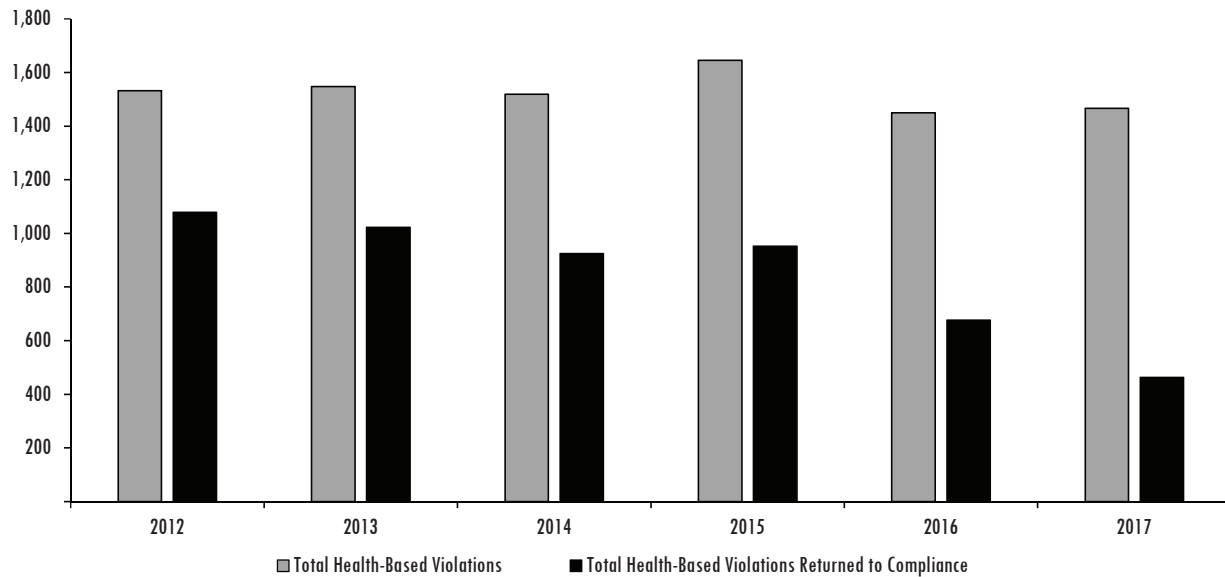
enforcement of very small systems, which are those that serve populations of 500 or less. Texas conducts fewer site visits, has a greater number of violators, and has a smaller proportion of those violators that return to compliance. **Figure 2** shows types of violations cited by TCEQ field operation staff during the 2016–17 biennium. According to TCEQ staff, a Notice

FIGURE 2
TEXAS PUBLIC WATER SYSTEM VIOLATIONS CITED BY TEXAS COMMISSION ON ENVIRONMENTAL QUALITY FIELD OPERATION STAFF, 2016–17 BIENNIUM



SOURCES: Legislative Budget Board; Texas Commission on Environmental Quality.

FIGURE 3
TEXAS PUBLIC WATER SYSTEMS' HEALTH-BASED VIOLATIONS INCURRED AND RETURNED TO COMPLIANCE
FISCAL YEARS 2012 TO 2017



SOURCES: Legislative Budget Board; Texas Commission on Environmental Quality.

of Violation from the agency to a system can contain multiple violations, and a single violation can contain multiple citations.

According to Legislative Budget Board (LBB) staff analysis of TCEQ data from fiscal years 2012 to 2017, on average, systems commit approximately 10,250 violations each year, of which 85.1 percent, on average, are violations of reporting or notification requirements. The remainder are for health-based violations. Contaminants that contribute to violations of health-based standards include lead, copper, trihalomethanes, arsenic, and haloacetic acid. Health effects of these contaminants, if ingested in significant doses throughout a certain period, can include cancers, heart disease, brain disease, and adverse reproductive outcomes. Failure to comply with reporting or notification requirements violations and health-based violations can be related, meaning that a health-based violation may not be communicated to the public in a timely manner or at all. As shown in **Figure 3**, the number of health-based violations has remained relatively constant at approximately 1,526 occurring per year. The number of health-based violations addressed and returned to compliance has decreased by 57.1 percent from fiscal years 2012 to 2017. From fiscal years 2012 to 2017, systems in King, Dawson, Jim Hogg, Mason, and McCulloch counties had the lowest rates of returning to

compliance after being cited for violations. Harris, Brazoria, Lubbock, Montgomery, and Midland counties had the most violations, including health and nonhealth-based violations, during this period.

According to EPA research, water systems, particularly those with limited resources, often face significant challenges to provide safe, reliable drinking water to their customers at a reasonable cost. These systems may lack financial, managerial, or technical capacity or a combination of these elements that would help them meet their public health protection goals. Other factors, such as aging infrastructure, a decreasing customer base throughout which to disperse costs, or a lack of qualified or knowledgeable operators can add to the challenges. Systems that rely on a single source of water and communities that use private domestic wells may have more relatively significant water reliability problems. Research performed by the University of North Carolina in 2007 estimates the average ongoing infrastructure needs per residential connection at \$19,734 for a system with less than 100 connections, compared to \$2,503 for systems with greater than 10,000 connections. According to a TCEQ staff presentation made to the 2018 Western States Water Council, these challenges can increase as operations and maintenance needs increase and can cause owners to abandon very small systems.

FIGURE 4
TEXAS PUBLIC WATER SYSTEM CATEGORIES, FISCAL YEAR 2018

CATEGORY	DESCRIPTION	EXAMPLES
Community Water System	Has a potential to serve at least 15 residential service connections year-round, or serves at least 25 residents year-round.	A residential subdivision, municipal water system
Nontransient, Noncommunity	Not a community system and regularly serves at least 25 of the same individuals at least six months per year.	Manufacturing plant, business, school, or day-care center
Transient Noncommunity	Not a community system; serves at least 25 persons at least 60 days per year, but by its characteristics does not meet the definition of a nontransient, noncommunity water system. These systems do not serve the same people daily.	Highway rest stop, restaurant

SOURCE: U.S. Environmental Protection Agency, Texas Commission on Environmental Quality

FIGURE 5
ACTIVE PUBLIC WATER SYSTEMS IN TEXAS, FISCAL YEARS 2008 AND 2017

SYSTEM	2008	2017	PERCENTAGE CHANGE	2017 POPULATION SERVED
Community Water System	4,682	4,660	(0.5%)	26,980,771
Nontransient, Noncommunity	874	882	0.9%	506,129
Transient Noncommunity	1,276	1,435	12.5%	281,550
Total active Public Water Systems	6,832	6,977	1.9%	27,768,450

SOURCE: Texas Commission on Environmental Quality, Reports to the Governor: Public Water System Capacity Development Program.

FIGURE 6
TEXAS PUBLIC WATER SYSTEM CLASSIFICATIONS AND POPULATIONS, FISCAL YEAR 2017

EPA CLASSIFICATION	POPULATION RANGE	SYSTEMS	POPULATION SERVED
Very Small	25 to 500	4,159	673,567
Small	501 to 3,300	1,767	2,563,835
Medium	3,301 to 10,000	693	3,907,752
Large	10,001 to 100,000	303	7,871,304
Very Large	More than 100,000	37	12,751,992
Total		6,977	27,768,450

NOTE: EPA=U.S. Environmental Protection Agency.

SOURCE: Texas Commission on Environmental Quality.

TYPES OF PUBLIC WATER SYSTEMS

A system can receive its water from various sources. According to TCEQ data from 2017, 79.2 percent of all water used by systems was from groundwater sources, and the remaining 20.8 percent was from surface water sources. TCEQ rules require that all systems develop monitoring plans. The plans are system-specific documents that demonstrate that the system's monitoring of water quality is representative of the water distributed to consumers and is consistent with regulatory requirements. All systems must disinfect water properly before it is distributed to customers. Systems

typically are classified into three categories, as shown in **Figure 4**.

Figure 5 shows the number of each type of water system in Texas and the size of the population served in fiscal year 2017. The number of community and nontransient, noncommunity systems remained relatively unchanged from fiscal years 2008 to 2017. The number of transient noncommunity systems increased by 12.5 percent during that period. **Figure 6** shows the number of systems by size and the populations that receive their water from those sources.

**FIGURE 7
TEXAS PUBLIC WATER SYSTEM SUPERVISION PROGRAM ACTIVITIES AND TYPICAL ANNUAL WORKLOAD
FISCAL YEAR 2017**

ACTIVITIES	VOLUME
Monitoring and assistance	
Compliance samples collected	56,903
System plans and specifications reviewed	2,038
Financial, managerial, and technical assistance activities conducted	590
Exception requests and alternative capacity requirements reviewed	1,150
Investigations and Enforcement	
Onsite investigations of systems	2,600
Onsite investigations conducted as a result of complaints received from the public	600
Notices of Violation issued	1,200
Referrals for formal enforcement	810

SOURCE: Texas Commission on Environmental Quality.

From fiscal year 2015 to August 2018, TCEQ designated 410 new systems; 391 of these systems serve populations of less than 500. As of July 2018, an additional 574 systems are being considered. According to TCEQ staff, approximately 80.0 percent of newly designated public water systems are noncommunity systems, intended to serve water supply needs of businesses. Some of the 20.0 percent of community systems are new public water systems to serve new developments for existing retail public utilities. A system can be owned by a public or private entity.

OVERVIEW OF STATE AGENCY ROLES AND FUNDING SOURCES

TCEQ is the state’s primary environmental regulatory agency. Its mission is to protect human and natural resources consistent with sustainable economic development. TCEQ is responsible for protecting the quality and safety of drinking water through primary and secondary drinking water standards as adopted by the EPA. In accordance with the federal Safe Drinking Water Act (SDWA) and state law and regulations, primary drinking water standards protect public health by limiting the levels of certain contaminants, and secondary drinking water quality standards address taste, color, and odor. Texas, like other states, has a primacy agreement with the EPA, meaning that the state is required to implement and oversee the requirements of the SDWA. State statutes governing these activities are primarily in the Texas Health and Safety Code, Chapter 341, and TCEQ rules.

PUBLIC WATER SYSTEM SUPERVISION PROGRAM

TCEQ operates the Public Water System Supervision Program, which regulates and assists public drinking water systems. The goal of the program is to ensure that public water systems are supplying safe and adequate quantities of public drinking water to all users. Program staff conduct inspections of community water systems at least once every three years and of noncommunity systems every five years. Systems that TCEQ identifies as at risk of becoming out of compliance or that have been having performance issues receive more frequent visits. **Figure 7** shows program activities and volume, as reported by TCEQ staff.

Through this program, TCEQ also provides several forms of technical assistance for public water systems. The agency offers guidance and training to help system administrators understand federal rules. According to TCEQ, newer federal regulations, such as EPA’s Revised Total Coliform Rule, are considerably more complex and challenging to implement for TCEQ and systems than previous regulations. TCEQ staff expect this assistance to continue and potentially increase, because the EPA is seeking changes to the SDWA and is revising guidelines for implementing those programs. TCEQ also collaborates with public water systems to address challenges that threaten their sustainability, such as turnover among facility operators, lack of training opportunities, and operator occupational licensing. According to TCEQ, the agency’s ability to integrate services with EPA platforms is limited by deficiencies in information technology, which require independent development of databases and data tools to implement requirements. TCEQ indicated that more staff

resources would be required to support the transitions for unknown costs.

The Public Water System Supervision Program in Texas is funded through multiple methods of finance, as shown in **Figure 8**. Appropriations for the program include Federal Funds, General Revenue Funds, and General Revenue–Dedicated Funds from Account No. 153, Water Resource Management (Account No. 153).

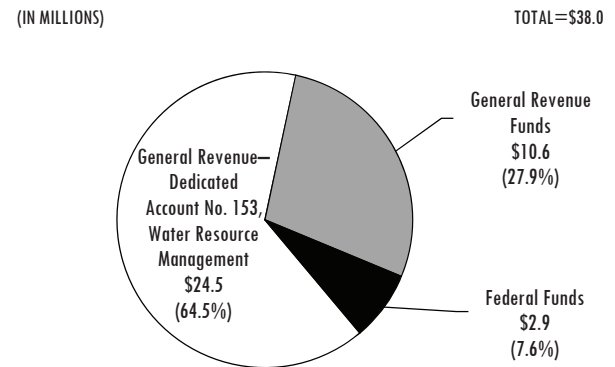
GENERAL REVENUE–DEDICATED ACCOUNT NO. 153, WATER RESOURCE MANAGEMENT

Account No. 153 provides the majority of state funding for TCEQ water programs and also contributes funding for activities at the Public Utility Commission of Texas and the Office of Public Utility Counsel. Account No. 153 receives collections from fees related to waste treatment inspection, cost recovery from protecting water resources, water supply system owner fees, assessments on public utilities, certification of boat sewage disposal devices, used oil registration and the sale of automotive oil revenue, and other application and permit fees and penalties. Account No. 153 has the following allowable uses:

- inspecting waste treatment facilities;
- enforcing the laws related to waste discharge and waste treatment facilities;
- water quality management and water resource management programs;
- registration of used oil collection centers, used oil transporters, used oil marketers, and used oil recyclers; and
- grants and public education related to used oil recycling.

Fee revenue deposited into Account No. 153 that is allocated to the Public Water System Supervision Program is derived from the Water Utility Regulatory Assessment Fee (RAF). The Seventy-second Legislature, Regular Session, 1991, established the RAF. From fiscal years 2012 to 2016, the fee collected \$9.0 million per year among 2,222 fee payers, on average. The RAF is collected by public utilities, water supply service corporations, and water districts. The fee is 1.0 percent of the charge for retail water or sewer service for public utilities, and 0.5 percent for districts and water supply or sewer service corporations.

FIGURE 8
METHODS OF FINANCE FOR THE PUBLIC WATER SYSTEM SUPERVISION PROGRAM, FISCAL YEAR 2016



SOURCE: Texas Commission on Environmental Quality.

ROLE OF THE PUBLIC UTILITY COMMISSION

As part of a recommendation made by the Sunset Advisory Commission, House Bill 1600, Eighty-third Legislature, Regular Session, 2013, transferred the water and wastewater utility regulatory program from TCEQ to the Public Utility Commission of Texas (PUC). TCEQ remains the primary authority for public drinking water programs. The authority transferred to PUC includes water and wastewater utility rate-making, wastewater utility submetering, certificates of convenience and necessity (CCN), shared responsibilities in financial, managerial, or technical (FMT) practices, and other duties. A CCN grants the holder exclusive rights to provide retail water or sewer utility service to an identified geographic area. As of August 2018, 180 CCNs were active in the state.

PUC is responsible for determining whether utilities have the financial and managerial capability to provide continuous and adequate water or sewer service to the public. PUC assists consumers and provides oversight of submetering and allocated utility billing practices. If the public water system becomes part of a utility or is issued a CCN, it would be subject to these separate regulatory processes.

STATE CAPACITY DEVELOPMENT PROGRAM

TCEQ's Capacity Development Program assists in maintaining the viability of systems by developing their FMT capacity to meet drinking water regulations. Federal law requires states to update their capacity development reports every three years, and EPA may withhold associated federal Drinking Water State Revolving Fund (DWSRF) funds for states that do not have an established capacity

development program. The DWSRF program provides loan funds for water system improvements through the Texas Water Development Board (TWDB). Set-asides from the DWSRF help support the Texas drinking water program at TCEQ, which includes capacity development. The Capacity Development Program includes the following main objectives and efforts:

- ensure that new systems are viable and assess and improve the viability of existing systems;
- provide onsite FMT assistance by contractors and TCEQ staff;
- monitor and assist systems affected by drought; and
- implement system restructuring and regionalization projects.

The state contracts with the Texas Rural Water Association (TRWA) to provide additional FMT assistance to assess and assist public water systems. TRWA provides FMT capacity assessments and onsite assistance, drinking water operator training, and consolidation assessments. FMT capacity assessments are required for water systems applying for certain types of funding from TWDB. The Texas Water Infrastructure Coordination Committee (TWICC) is also a resource for systems to obtain information regarding the various sources of loans and grants. TWICC consists of federal and state governmental entities and nonprofit groups such as TRWA. TWICC's goals are to provide Texas communities with funding and other assistance to develop, improve, and maintain compliant and sustainable water and wastewater systems.

DRINKING WATER STATE REVOLVING FUND

DWSRF financing is made available through an annual federal capitalization grant appropriated by the U.S. Congress. DWSRF provides financing to help public drinking water systems meet or maintain compliance with SDWA regulations. DWSRF funding addresses public health protection, maintains and brings systems into compliance, and supports affordable and sustainable drinking water pursuant to SDWA. DWSRF funding also may be used for staff augmentation, such as hiring temporary staff to oversee the construction of a project or handle the documentation requirements associated with federal financial assistance. DWSRF may not fund ongoing operations and maintenance for systems.

TWDB and TCEQ collectively administer the state's DWSRF program, and TWDB is responsible for reviewing and issuing financial assistance. The state must prepare an Intended Use Plan each year that describes how it intends to prioritize and use DWSRF program funds. TWDB committed approximately \$222.1 million per year, on average, in DWSRF funds from calendar years 2013 to 2017. Loan terms are variable, depending on the project. In 2017, 15 projects entered into repayment terms of 20 years or greater. According to the 2018 Intended Use Plan, for fiscal year 2018, \$250.0 million was available through DWSRF for financing options. Of this amount, \$229.0 million was made available at interest rates of less than the market rate. The remaining \$21.0 million was used for principal forgiveness of loans issued. DWSRF can forgive loans to very small systems of up to \$300,000 per project, and the plan allocated \$3.0 million for this purpose. Projects that are classified as urgent need were provided \$7.0 million for 2018, and could receive an additional \$500,000 in individual project forgiveness. Urgent need projects would address a supply shortage, natural disaster, or immediate water quality-related health threat. DWSRF funding also can issue zero percent interest loans up to approximately \$25.0 million.

State and federal laws require that the level of principal forgiveness TWDB chooses does not affect the DWSRF program negatively into perpetuity. The level of principal forgiveness that TWDB may offer is from 20.0 percent to 50.0 percent of the total capitalization grant. The 2019 DWSRF allocates 34.0 percent of the capitalization grant to principal forgiveness. Increasing this allocation to 50.0 percent would not affect program's viability, but it could result in increased borrowing costs (i.e., bond issuance) to the program or affect the amount of financial assistance available.

As required by the federal SDWA, systems proposing to solve the most serious water quality and quantity problems are given highest priority to use the fund. TCEQ ranks projects to receive DWSRF, which TWDB incorporates to determine eligibility for funding in accordance with the DWSRF loan program. Project ranking is based on health and compliance factors such as low pressure, low-disinfectant residuals, and maximum contaminant-level violations. A system with health-related violations that is interested in obtaining DWSRF for a project will receive a higher ranking than a system of similar size without violations. According to TCEQ staff, the DWSRF assistance provided to systems with populations of less than 1,000 has been instrumental in

FIGURE 9
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY ENFORCEMENT PROCESS, FISCAL YEAR 2018

PROCESS	ACTION
1. Documenting violations	A Notice of Violation documents the violations discovered during the inspection and specifies a period to respond.
2. Initiating enforcement action	Most enforcement cases are handled through the administrative order, which are Texas Commission on Environmental Quality (TCEQ) orders enforcing or directing compliance with specified provisions.
3. Penalty calculation	The penalty included in an enforcement action is calculated by the enforcement coordinator according to TCEQ's Penalty Policy, which considers factors including compliance history, efforts to comply, and the relative severity of the violation.
4. Reaching an agreement	If the respondent agrees with the terms of the agreed order and the penalty amount, the case is set for approval by the TCEQ commissioners.
5. Contesting an enforcement action	If the respondent contests the enforcement action, an agency attorney is assigned, who drafts an Executive Director's Preliminary Report and Petition. The respondent may request an administrative hearing, which is held in front of an administrative law judge with the State Office of Administrative Hearings.
6. Default actions	If the respondent does not file a timely answer to the Executive Director's Petition, TCEQ commissioners may issue a default order. If the respondent fails to comply with the default order, then the executive director may refer the case to the Office of the Attorney General for civil enforcement. This enforcement could lead to the system being put into receivership with another managing entity, if a third-party entity is willing to take on this responsibility and the underlying issue has not been resolved.

SOURCES: Legislative Budget Board; Texas Commission on Environmental Quality.

resolving several small-system water-quality violations. To provide assistance in navigating the state financial assistance process, from fiscal years 2015 to 2017, TCEQ and TWDB staff researched and prepared reports regarding 35 DWSRF applicants per year, on average. However, funding availability is dependent on the public water system having sufficient FMT capabilities to apply for and demonstrate sufficient resources to pay back a loan. Resources may be for the principal and interest or interest only, if the system applies to receive a principal forgiveness award.

ENFORCEMENT STRUCTURE

Public water systems retain liability for providing safe drinking water by adhering to SDWA provisions. TCEQ has a graduated process to enforce and address violations of systems, as shown in **Figure 9**.

ENSURE WATER QUALITY-TESTING ACCOUNTABILITY

TCEQ oversees the monitoring of 102 constituents in drinking water for public water systems to ensure that all regulatory requirements are met. Constituents represent how water quality is determined, and include pollutants such as pesticides, metals, bacteria, or dissolved oxygen that naturally occur in water but also can be influenced by human effects. Constituents are categorized into major groups, such as microorganisms, disinfectants, chemicals, and radionuclides,

and have distinct sample collection procedures and monitoring schedule requirements. All sample collection, analysis, and data reporting for compliance must adhere to federal and state data quality requirements. Systems are responsible for monitoring certain other drinking water constituents, including microbial contaminants, additional disinfectant residuals, lead, and copper.

According to TCEQ staff, systems sometimes fail to conduct monitoring, or do not submit required samples to accredited laboratories. Failure to submit a portion or all of the valid analytical data limits TCEQ's ability to verify compliance with drinking water standards. Therefore, the system receives a violation. Lab results are not released to TCEQ until the system pays the lab fees, unless chemical sample results exceed the associated maximum contaminant level. For the protection of public health, all maximum contaminant-level exceedances are reported to TCEQ regardless of fee payment, as part of the agreement between TCEQ and compliance laboratories.

According to TCEQ staff, 152 systems failed to pay for laboratory analytical fees during fiscal year 2017. TCEQ will issue monitoring and reporting violations for water systems that refuse collection or fail to pay laboratory fees. Continued noncompliance can result in enforcement actions and referral

to the Office of the Attorney General (OAG). Labs have their own individual collections procedures for nonpayment of fees when a sample has been submitted. However, eight systems refused to submit to chemical sample collection during fiscal year 2017. When systems refuse to collect and submit samples for analysis, TCEQ expends its resources to collect the samples. The Texas Water Code, Section 5.701, authorizes TCEQ to charge and collect fees prescribed by law. However, according to TCEQ staff, the agency only institutes a collections process on fees that are listed specifically in statute. Option 1 would amend the Texas Water Code to authorize TCEQ to engage in cost recovery for sample collection and lab analysis costs, through the collection of penalties, application of delinquent fee protocol, and charging of interest for late payments.

IMPROVE TIMELINESS OF PUBLIC NOTIFICATION

As shown in **Figure 2**, approximately one-third of all system violations during the 2016–17 biennium resulted from failure to properly notify the public. Small system administrators may find it difficult to understand and properly complete all required drinking water monitoring, including for 102 constituents and federal requirements. Among all Texas systems, 18.0 percent had monitoring or reporting violations during fiscal year 2016. The leading causes of violations related to monitoring disinfectant residuals, monitoring lead and copper, and providing adequate public notice. EPA, through the SDWA, prescribes the timing and format of notices that systems are required to issue to the public when drinking water violations occur. The timing requirements range from within 24 hours of discovering a situation that can harm human health to one year if a violation occurs but would not have direct, negative health effects. An example of this violation is if a system does not collect a sample in a timely manner. Systems can be understaffed and have a large workload regarding the monitoring and notification of various SDWA requirements. Option 2 would amend statute to require TCEQ to establish notification standards, which would include an automated service to remind systems of their various reporting obligations. Improving the responsiveness of systems to monitor, test, and report this information to the state and the public would improve overall system performance and decrease the number of systems that TCEQ staff must address. This approach also may prove beneficial with systems whose workforce changes to ensure continuity during staff transitions.

INTEGRATE ENFORCEMENT WITH STATE AND LOCAL GOVERNMENT INSPECTIONS

In addition to the TCEQ and PUC, other state agencies may oversee the performance of an entity that also operates a water system. The Health and Human Services Commission (HHSC) regulates all child-care operations and child-placing agencies in Texas to protect the health and safety of children in care. This regulation includes permitting and monitoring compliance with state licensing standards, rules, and laws every two years. The published minimum standards for child-care centers include a basic requirement that a supply of drinking water is always available. If a center is using its own water supply, it must maintain a safe and sanitary supply and records indicating that the water meets TCEQ standards. In examining TCEQ data for systems that have incurred multiple violations from fiscal years 2012 to 2017, three day-care facilities are included. According to HHSC staff, if TCEQ staff found any violations during the two-year HHSC inspection period, HHSC would not be aware of the findings unless TCEQ contacted HHSC. HHSC staff communicated that they were aware of one instance in which TCEQ contacted HHSC for this purpose.

The Texas Department of State Health Services (DSHS) and local municipalities or health departments are responsible for the monitoring and regulation of commercial establishments, including restaurants, within their territory. According to DSHS staff, the agency may consider water quality under certain circumstances, such as the inspection of restaurants. DSHS conducts risk assessments based on the type of food processed and how foods should be handled and maintained to ensure public safety, and inspects based on risk. The inspection schedule varies based on risk level: high-risk operations at least annually, medium-risk operations at least every 18 months, and low-risk operations at least once every 24 months. DSHS rules require that water used for the processing of food must come from approved source(s); therefore, DSHS or local jurisdictions may cite an operation for use of water from an unapproved source, including one that is not meeting standards. When a community water system has water that does not meet standards, a boil water notice may be issued, which would be communicated to the applicable health department or municipality for their knowledge and potential additional regulatory activity. However, DSHS staff did not indicate an equivalent requirement or process to inform local entities or non-TCEQ state agencies for non-community systems.

According to TCEQ staff, affected agencies are responsible for integrating a public water system's adherence to TCEQ requirements into agency monitoring practices. However, staff from agencies such as HHSC and DSHS have not indicated a consistent process to monitor the water quality status for entities within their purview that operate their water systems. Option 3 would amend the Texas Health and Safety Code, Chapter 341, to require TCEQ to notify local health departments, DSHS, and HHSC, as applicable, when health-based violations are identified at entities that operate water systems when those entities are subject to such agencies' inspection or certification. Additional health-based violation information communicated from TCEQ may also assist in informing future inspection schedules and risk designations determined by HHSC and DSHS, and would provide the opportunity for these agencies to take action as violations are discovered, outside of the regular inspection cycle.

INCREASE GOVERNMENT PARTICIPATION IN OBTAINING FINANCIAL ASSISTANCE

TCEQ data shows that the Texas Department of Criminal Justice and Texas Juvenile Justice Department have established and operated their own water supply systems. From fiscal years 2012 to 2017, these agencies combined incurred 99 violations for facilities across the state. Although the agencies have been able to return these facilities to compliance, 26.3 percent of these violations were health-based and posed potential adverse health effects on consumers. The majority of the health-based violations were for arsenic; the other incidents were predominately for monitoring and notification violations.

Similarly, HHSC incurred 21 violations from fiscal years 2012 to 2017 at four state supported living centers (SSLC) located in Brenham, Lufkin, Mexia, and San Angelo. Of these violations, 19 have returned to compliance. However, the SSLC in Lufkin has had two open violations since fiscal year 2014. These violations were related to nonhealth-based *escherichia coli* levels and are due to not collecting sufficient groundwater samples for monitoring purposes.

Independent school districts (ISD) in Texas also have incurred significant water quality violations. According to TCEQ data, as of August 2018, 142 ISD violations have not returned to compliance. Of these violations, 78.2 percent are health-based violations, some of which date to fiscal year 2012, and are for a variety of constituents, including lead, copper, arsenic, uranium, and nitrate. According to TCEQ data, violations that have not returned to compliance involve

14 ISDs. Klondike ISD in Dawson County has incurred 67.6 percent of the total number of violations among ISDs and 19.0 percent of total violations from fiscal years 2012 to 2017.

According to TWDB staff, governmental entities that are not federal are eligible recipients of DWSRF. However, government entities rarely apply for assistance. Option 4 would amend statute to direct any agency or school district that receives a Notice of Violation or other enforcement action from TCEQ to consider applying for DWSRF funds if the violation can be addressed through financial assistance. An agency with a relevant health-based violation that has been active for greater than one year that does not apply for financial assistance would be required to notify the Legislative Budget Board and provide a rationale for this decision. Independent school districts would provide this notification to the Texas Education Agency.

INCREASE FINANCIAL ACCOUNTABILITY STANDARDS FOR NEW AND DEFICIENT SYSTEMS

According to TCEQ staff and University of North Carolina research commissioned by EPA, management of finances is one of the most significant challenges that small drinking water systems face. A comprehensive understanding of a water system's financial health can help ensure that rates are set optimally. Optimal rates help enable small systems to finance projects while providing safe drinking water to their customers. According to the Environmental Finance Center at the University of North Carolina at Chapel Hill, key financial indicators for systems include the operating ratio, current ratio, debt service coverage ratio (cash flow available to pay current debt obligations, including principal interest and lease payments), days of cash on hand, and asset depreciation.

The Texas Health and Safety Code, Sections 341.035 and 341.0355, establishes requirements for business plans and financial assurance in certain instances for new system applicants. TCEQ's financial requirements are based on system type rather than size. The Texas Administrative Code, Title 30, Section 290.39(f), requires a new or proposed privately owned public water system to submit a business plan or acceptable financial information to TCEQ. TCEQ assesses the system's financial, managerial, and technical ability to ensure its ongoing operation in accordance with applicable laws. Business plan requirements vary based on the type of system that is proposed. Systems that are being constructed or are assuming new ownership also may be

required to provide financial assurance to ensure adequate drinking water. The amount of assurance is based on the cost to complete construction of the water system or to ensure the facility's continued operations during an ownership transfer. For noncommunity water systems, the financial requirement is that an applicant provides a signed and notarized Demonstration of Adequate Financial Ability form. This submission indicates that the financially responsible individual or company has funds available to operate the proposed public water system for at least one year.

Systems that charge directly for water, such as community water systems, must obtain approval for their tariff. Tariffs are a collection of rates that are used to calculate the ultimate cost of service that includes service charges, time of use, and consumption tiers from PUC. Although TCEQ consults with PUC through monthly coordination meetings, agency staff indicated that no formalized process is used to review whether system rates conform with PUC's adopted rates. PUC does not track or verify whether systems have rates set at less than their tariffs. According to PUC and TCEQ staff, the agencies have encountered this issue periodically in smaller systems.

Option 5 would amend statute to increase financial accountability standards for new and struggling systems. TCEQ, PUC, and its contracted partner, TRWA, would be required to periodically revisit financial criteria submitted by systems for potential amendment, to ensure adequate vetting of applicants and their abilities to maintain public water systems. TCEQ and PUC would be required to collaborate and examine trends in financial deficiencies by size and type when systems have incurred multiple violations. This examination is intended to determine whether financial information submitted through business plan or financial assurance documents should be revised. PUC is responsible for water rate-related activity. Therefore, the agency should be in a formal position to provide input and suggest revisions to practices when reviewing and vetting financial targets imposed on system applicants. TCEQ and PUC do not capture certain key financial indicators of water systems' ongoing fiscal health, as described by the Environmental Finance Center at the University of North Carolina. As applicable, TCEQ, PUC, or TRWA should examine incorporating these indicators for systems whose rates are less than the maximum allotment. TCEQ also should examine these financial indicators as part of its inspection of system facilities, which occurs every three years for community

water systems and every five years for noncommunity water systems.

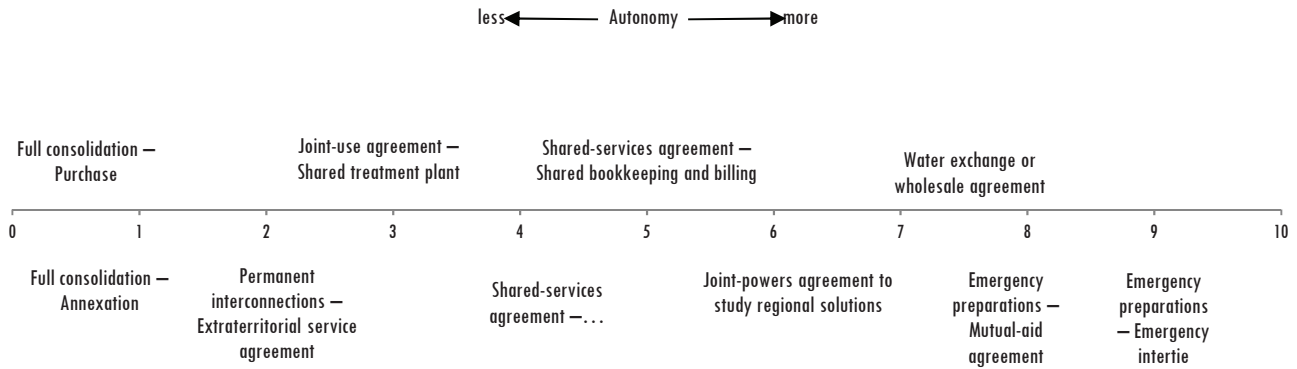
TCEQ has discretion in determining penalties for systems that have violated state or federal drinking water standards. Penalty amounts can be less than the maximum allowable value for various reasons, including compliance history, efforts to comply, and the relative severity of the violation. Penalty amounts also can be offset by being applied to Supplemental Environmental Projects, which a violator agrees to undertake in settlement of an enforcement action. Money directed to TCEQ-approved projects may be used to offset assessed penalties in enforcement actions. However, considering that some systems levy water rates at less than the PUC-determined threshold, the rationale to grant leniency in those cases is decreased. According to TCEQ, data from fiscal years 2015 to 2017, of the \$1.3 million in penalties assessed to systems during that period, 15.9 percent, or \$0.2 million, was deferred or applied to an offsetting project from the final penalty amount assessed. Option 5 would require that TCEQ, with the assistance of PUC, verifies whether a system has its rates set in accordance with PUC-determined thresholds as part of enforcement review. Setting rates at less than the threshold decreases the system's ability to maintain financial solvency and may be a contributing factor to the initial incurrence of the violation. As part of Option 5, TCEQ may consider whether a system has water rates set below the prescribed value, when determining appropriate penalty amounts.

REGIONALIZATION PARTNERSHIPS

TCEQ defines regionalization to mean the combining of certain aspects of two or more water and wastewater systems' operations or physical plants. The goal of regionalization is to achieve the best service at reasonable rates that will ensure that the system is maintained. Regionalization might involve water partnerships, including joint ventures and formal agreements that do not undertake the degree of integration typically associated with a full consolidation. According to TCEQ staff, regionalization has great potential to help systems become more stable.

Figure 10 shows examples of regionalization. A regionalization partnership can be as simple and informal as two or more water systems agreeing to share equipment or buy treatment chemicals together to achieve savings from bulk purchases. A more formal partnership could include contractual assistance or establishing a joint power agency to share operators; building an emergency interconnection; or

FIGURE 10
EXAMPLES OF DEGREES OF REGIONALIZATION FOR WATER SYSTEMS, FISCAL YEAR 2018



SOURCE: University of California, Berkeley, School of Law, Center for Law, Energy, and the Environment.

engaging in regional water planning with nearby water systems. Complex partnerships include ownership transfer, where two or more systems combine to form one system, or where the ownership of a system is transferred to another entity, also called full consolidation.

The number of public water systems in Texas, from fiscal years 2011 to 2017, has remained relatively the same with a decrease of 0.1 percent. In comparison, the number of systems throughout the U.S. decreased from federal fiscal years 2011 to 2017 by 3.5 percent. States that have undertaken significant numbers of consolidations, such as Alabama, have observed a significant decrease of noncompliance issues relating to water quality. The decrease in the number of nonviable water systems has not curtailed the expansion of water service. According to EPA and research performed by other entities, having existing viable systems extend service to new areas, rather than constructing new systems, eases the regulatory burden on the state. This practice also increases public health protection through improved system reliability and more stable rate structures to communities.

FEASIBILITY OF REGIONALIZATION FOR NEW SYSTEM APPLICANTS IN TEXAS

From fiscal years 2012 to 2017, 340 system consolidations have occurred statewide. Of these consolidations, TCEQ has assisted with approximately 114 successful full consolidations, through either the FMT assistance contract, staff assistance, or enforcement processes. Most deficient systems were consolidated into municipalities or other larger, more stable systems. None of the consolidations has resulted in nonviable

systems. TCEQ also has collaborated with 94 systems at risk of abandonment during this period. From fiscal years 2012 to 2017, approximately 50.0 percent of systems with violations that have been identified for consolidation are still active. According to TCEQ staff, the percentage of the remaining systems that have economically feasible options for consolidation is not known.

According to TCEQ staff, all new public water systems must evaluate the feasibility of regionalization before submitting plans, specifications, and business plans to TCEQ. TCEQ’s policy is that regionalization is feasible unless one of the following three exceptions applies:

- no public water systems are located within 0.5 miles;
- service has been requested from a neighboring utility but denied; or
- the nearby system approved the request for service, but an exception should be granted based on costs, affordable rates, and FMT capabilities of the proposed system.

TCEQ compares the costs of constructing a new stand alone system and connecting to an existing provider when a proposed privately owned system does not want to connect to an existing provider within 0.5 miles that is willing to extend service. As part of the cost comparison, annual operating and purchased water expenses are evaluated for a five-year period. The costs for connecting to the existing provider are amortized and spread across the system’s useful life, which is approximately 20 years to 30 years. Existing

utilities do not have any requirement or incentive to provide service to these entities.

When TCEQ staff evaluate whether new applicants should engage in regionalization before formation, staff do not require a technical report that compares the costs associated with the proposed new public water system to the costs associated with providing water through an existing public water system. As part of Option 5, TCEQ, in consultation with PUC and TRWA, would further examine and update requirements for new applicants to submit information necessary to analyze the cost and benefit of a new, independent system, versus one that engaged in regionalization. Updates to these requirements may involve reconsidering the public water system radius threshold of 0.5 miles TCEQ has established in the Texas Administrative Code. The states of Alaska and Georgia require applicants to consider interconnection to systems within 1.0 mile. Indiana requires applicants to notify all systems within a 10.0-mile radius of the proposal to develop a new system. Increasing TCEQ's radius could increase the number of nearby systems that would be asked to provide service, increasing the possibility of identifying a willing provider.

EFFORTS TO ASSIST EXISTING DEFICIENT SYSTEMS IN TEXAS

TCEQ, TRWA, and PUC use various methods to encourage poorly performing systems to restructure including:

- making referrals to TRWA for consolidation assessments and other assistance to facilitate restructuring, including looking for buyers or neighbors to merge with and helping the customers form a new entity;
- collaborating with the legal and enforcement departments at TCEQ and OAG to require certain nonviable systems that have serious issues to appoint temporary managers or receivers; and
- collaborating with funding agencies and members of TWICC to set up workshops and meetings to discuss restructuring ideas and funding sources.

According to TCEQ staff, water systems may resist regionalization because of concerns about loss of control, property, and funds. For example, according to TCEQ staff, a system identified as exceeding maximum contaminant levels for radionuclides was in the planning and design phase for consolidation as of August 2018. The system was identified as being able to feasibly connect to a nearby city,

which agreed to extend a pipeline to this service area. However, because the city would have required this system to transfer title of some of its property, the system refused to consolidate. Another small town might have compliance issues that would be corrected if it purchased water from a neighboring town, but the noncompliant system might rely on water sales revenue for budgetary purposes. Other poorly performing systems might not know the options available to them. Additionally, stronger-performing systems lack incentives or requirements to take on the potentially costly problems of poorly performing systems.

DRINKING WATER STATE REVOLVING FUNDS APPLIED TO DEFICIENT SYSTEMS

In Texas, priority scoring for DWSRF assigns additional points for projects that are consolidating or regionalizing with other public water systems. A project can receive ranking points if it is intended to solve deficiencies within the system. TWDB made 283 DWSRF awards from fiscal years 2013 to 2018. The majority of these awards, 56.9 percent, were distributed to entities with populations of 3,300 or less. In comparison to TCEQ data of the number of systems that had received multiple administrative orders from fiscal years 2012 to 2017, 20 of the 390 systems, 5.1 percent, had received assistance from either DWSRF or the federal Clean Water State Revolving Fund (CWSRF). CWSRF is used primarily for wastewater and not drinking water systems. These 20 entities received 8,197 violations during this period. In accordance with the DWSRF program, a project that will address a TCEQ violation receives a higher score. However, according to TWDB staff, the agency does not receive projects that would accomplish these goals often. It is the responsibility of the system, which might not have significant FMT expertise, to submit project information and a formal funding request to TWDB. According to TWDB staff, working with small systems is challenging because those systems often are understaffed and are difficult to communicate with and assist. Staff at PUC and TCEQ identified similar challenges.

Option 6 would amend statute to authorize TCEQ, PUC, its contracted entities (e.g., TRWA) or court appointed receiver to apply for funding on behalf of a public water system if staff determine that DWSRF would be an appropriate method to address a system deficiency. Any funding awarded by the state to the system could be accepted by the temporary manager or receiver. According to TCEQ staff, community systems have the ability to pursue a temporary or emergency change to their rate structure to help accommodate for

FIGURE 11
MANAGEMENT AND RECEIVERSHIP ACTIVITY FOR TEXAS PUBLIC WATER SYSTEMS, FISCAL YEARS 2015 TO 2018

YEAR	ACTIVITY
2015	Texas Commission on Environmental Quality (TCEQ) staff worked with the Public Utility Commission of Texas (PUC) to appoint one temporary manager and monitored 23 active cases of receivership and temporary management.
2016	TCEQ staff worked with PUC to appoint one temporary manager and monitored 15 active cases of receivership and temporary management
2017	TCEQ appointed or reappointed four temporary managers and monitored 15 active cases of receivership and temporary management
2018	TCEQ monitored nine public water systems in receivership, and seven systems that had temporary management

SOURCES: Legislative Budget Board; Texas Commission on Environmental Quality.

expected loan repayment obligations. This change would enable a more proactive response by the state to address chronic system deficiencies that could be addressed through DWSRF assistance. Improving the infrastructure of a particular system also may improve efforts to consolidate it within a more viable system. Option 6 also would amend statute to require TCEQ consult with TWDB and nearby systems before establishing a new system that is not undertaking regionalization. The purpose of this consultation would be to evaluate whether any financial resources at TCEQ or TWDB could be used to promote the economic feasibility of regionalization. This would help prevent new, unsustainable, small systems from being established, thereby decreasing needs for future consolidations.

AUTHORIZE MANDATORY REGIONALIZATION OR CONSOLIDATION

According to TCEQ staff, some situations in at-risk systems have been serious enough that technical assistance and voluntary consolidation assessments did not work. In those cases, more formal restructuring through enforcement and the appointment of temporary managers or receivers have been required. TCEQ or PUC may appoint a voluntary, temporary manager to operate a system that has discontinued or abandoned operations, or which has been referred to OAG for the appointment of a receiver. A temporary manager appointed by either agency has the powers and duties necessary to ensure continuous and adequate services to customers. A temporary manager is appointed for an initial term of 180 days and can be renewed for an additional 180 days. According to TCEQ staff, if the underlying issue is not resolved, at the request of either TCEQ or PUC, OAG would bring a lawsuit for the appointment of a receiver to collect the assets and carry on the business of a system. According to TCEQ staff, a receiver has greater authority over the finances of a system, potentially either selling the system or making permanent rate adjustments. This action can occur in relation

to various circumstances, primarily related to the abandonment of a system or violation of an order given by TCEQ or PUC. The receiver is obligated to execute a performance bond to ensure that duties are performed properly until a court dissolves the receivership, and assets and control of the system are returned to the owner. **Figure 11** shows the volume and type of management or receivership actions that have occurred since fiscal year 2015.

According to TCEQ staff, the agency does not track whether systems with significant violations were placed in receivership. The agency also does not track whether a system identified as a candidate for consolidation was required to submit a business plan or proof of financial assurance when it initially applied to become a system. As of August 2018, of the nine systems in receivership, one system had not had a business plan review.

According to data provided by TCEQ, 9,158 systems incurred health-based violations from fiscal years 2012 to 2017, and 55.9 percent of those systems have been brought back into compliance. These violations are frequently for hazardous levels of arsenic, radium, and other contaminants tested in the public drinking supply. Of the 2,621 systems that received violations during fiscal year 2017, TCEQ appointed or reappointed four temporary managers and tracked 15 active cases, 0.7 percent, of receivership and temporary management. Some systems that have temporary management or receivership incur violations again after the temporary assignment ends and have had to repeat this process.

Other states have additional options to require regionalization or consolidation when necessary, as shown in **Figure 12**.

Option 7 would amend statute to authorize TCEQ and PUC to establish a review process that could mandate the partial consolidation, full consolidation, or closure of a

**FIGURE 12
STATES WITH ABILITY TO REQUIRE REGIONALIZATION OR CONSOLIDATION OF WATER SYSTEM SERVICES
AUGUST 2017**

STATE	AUTHORIZATION
Alaska	The state can order public systems with conduits, pipes, pipelines, mains, or other distribution or transmission facilities to provide other public systems access to use these facilities when public convenience and necessity require it. The user must pay for any necessary modifications or additions and may be required to pay reasonable compensation for use of the facilities.
Arizona	The state can order a system to add, improve, or change an existing plant and to construct new structures, including interconnections to other systems. If any ordered changes require joint action by two or more systems, the systems must share the cost of those changes after notice from the state. If the systems cannot agree upon an apportionment of the costs, the state can order the systems to pay at a proportion determined by the state.
California	The state has the authority to order consolidation of a small water system within a disadvantaged community that has a receiving water system. Liability relief is provided for a "consolidated water system, wholesaler, or any other agency in the chain of distribution that delivers water to a consolidated water system." Since the law passed in 2015, one mandatory consolidation has been completed, and 15 mandatory consolidations are pending.
Connecticut	Restructuring and connecting nonsustainable systems can occur through formal enforcement actions, direct acquisition by another water system, or ordered acquisition approved by the state. In certain circumstances, entities can petition the court for attachment of the system's assets and to place the system in receivership. When the state orders consolidation of a system, the acquiring entity can recover associated costs through rates and can impose a rate surcharge to recover the current costs of the acquisition and necessary improvements.
Kentucky	Upon completion of a study to determine the merging of water systems, and after a public hearing, the state can order the merging of multiple systems into a single water district and make additional orders in connection with rates and charges.
Maryland	The state has the authority to require noncompliant water systems to install new water or sewage systems or to alter the system to another system.
New Hampshire	The state has the authority to require improvements, including consolidation or extension of water supplies. If the state determines that an extension of water service from an existing system is the most feasible and cost-effective alternative, that the extension is consistent with certain municipal rules, and that adequate capacity is available, the state can order an existing system to initiate the connection.
New Jersey	Through an administrative hearing process, the state can take multiple actions, including acquisitions. The state also can require expenditures, including acquisition costs, to make necessary improvements at small water systems that are in noncompliance with water quality regulations or that have failed to comply with a state order.

SOURCE: U.S. Environmental Protection Agency.

habitually poorly performing system. This process could be applied to a system that previously has been through a temporary management or receivership process, has continued to violate SDWA provisions, or poses a significant health risk to the public. TCEQ and PUC would engage in joint rule-making to prescribe specific thresholds that must be achieved to warrant this activity. A comparison could examine the cost of bringing the small system into compliance through consolidation versus what it would cost to bring the system into compliance alone during a multiyear period. To provide sufficient safeguards to the public, in case a voluntary manager or receiver cannot be applied, a community petition process also could request that the state pursues this review.

Water system partnerships would help small water systems achieve and maintain FMT capacity, and could decrease the oversight and resources necessary for these systems. DWSRF funding can finance legal fees and most fees associated with purchasing the system and assuming the system's water rights.

ESTABLISH A DRINKING WATER SUPPLY ASSISTANCE PROGRAM

The demand for state financial assistance to systems exceeds what is provided. According to TWDB staff, requests for funding included in the 2019 DWSRF Intended Use Plan included \$44.6 million for 47 TWDB-defined very small

system projects, serving populations of less than 1,000, and \$253.1 million for 59 small systems projects, serving populations of less than 10,000. In comparison, the DWSRF allocated \$3.0 million for very small system assistance, of which an individual system is eligible to receive up to \$300,000 in principal forgiveness. To assist small systems to meet federal SDWA-related health and safety requirements, additional resources could provide direct assistance to systems with violations and incentivize additional regional partnerships from more stable, established systems.

Other states, such as Kansas, provide an equal cost-share to study the feasibility of developing regional public water supply systems. Eligible projects must evaluate consolidation of two or more systems. Similarly, Maine's Capacity Development Program uses DWSRF set-aside money for grants to help systems prepare capital improvement plans, management review studies, system consolidation studies, and other reports to enhance system capacity. South Dakota provides grants to small systems for rate analysis, including technical assistance.

According to TCEQ staff, greater availability of grant funds could be effective in promoting additional consolidations. Option 8 would amend the Texas Health and Safety Code to establish a drinking water supply assistance program to be administered by TCEQ staff, with assistance from PUC and TWDB. The program's mission would be to provide funding to at-risk systems or local governments to address water supply-related health problems and to meet federal standards. This could be accomplished through various tactics, determined by TCEQ staff, in consultation with PUC and TRWA, including the acquisition, construction, improvement, or regionalization of systems. According to TCEQ staff, temporary managers do not have a source of financing available to assist in addressing system shortfalls, which could also be addressed through establishment of this grant program.

In lieu of additional appropriations of General Revenue Funds, an increase to a revenue source that is deposited to General Revenue–Dedicated Account No. 153 could be used to finance this grant program. The Texas Health and Safety Code, Chapter 341, authorizes TCEQ to apply fees to public water systems. The *Texas State Government Effectiveness and Efficiency Report*, "Revenue Enhancement Options for the Water Resource Management Account," LBB, 2015, includes additional information regarding fee revenues deposited into Account No. 153.

One of these fees, the Public Health Service Fee, is intended to support the testing and certification of drinking water supplies and to protect the state's water resources. The fee applies to a system of any type and encompasses approximately 9.0 million water service connections. TCEQ sets the fee rates and assesses it on all systems based on the number of retail connections that the system serves. TCEQ periodically has increased the fee, and the last increase was in June 2016. Systems with fewer than 25 connections pay \$125 per year; those with 25 to 160 connections pay \$200 per year; and systems with 161 connections or more pay \$2.45 per retail connection. The fee generated approximately \$24.3 million in revenue for fiscal year 2018. If the current \$2.45 rate per connection on systems with 161 or more connections was increased, additional revenue could be generated. TCEQ estimates, for example, that increasing the rate to approximately \$2.77—an additional \$0.32 per connection per year—for relatively larger systems would yield an additional \$3.0 million per fiscal year. This amount could be allocated to TCEQ to support increasing the viability of struggling water systems. Option 8 would direct TCEQ to increase the amount of the Public Health Service Fee to generate an additional \$6.1 million for the 2020–21 biennium. This amount is the equivalent of the amount of principal forgiveness provided to small systems through DWSRF. TCEQ would retain the authority to adjust Public Health Service Fee levels, if the agency deems additional funding for this assistance as a priority.

FISCAL IMPACT OF THE OPTIONS

Option 1 would amend statute to codify the ability for TCEQ to recover costs for performing functions on behalf of systems, including to assess penalties and late payments on a public water system for sampling and laboratory analysis costs. An indeterminate, but not significant, revenue gain to the state in General Revenue–Dedicated Account No. 153 is anticipated as a result of this option.

Option 2 would require TCEQ to establish notification standards, which would include an automated notification service to assist systems in meeting their reporting and notification requirements. LBB staff identified a company that advertised the cost of automated phone banking for 5,000 calls at \$105.00. Another company advertised monthly plans for calling up to 2,000 numbers at \$280.99 per month. Integrating a system to provide periodic calls or texts to system owners may require a certain degree of customization to integrate with existing TCEQ databases; however, total costs to the agency to implement Option 2 are not anticipated.

FIGURE 13
FIVE-YEAR FISCAL IMPACT OF OPTION 8, FISCAL YEARS 2020 TO 2024

YEAR	PROBABLE SAVINGS/(COST) IN GENERAL REVENUE—DEDICATED ACCOUNT NO. 153 FUNDS	PROBABLE REVENUE GAIN/(LOSS) IN GENERAL REVENUE—DEDICATED ACCOUNT NO. 153 FUNDS	PROBABLE ADDITION/ (REDUCTION) OF FULL-TIME-EQUIVALENT POSITIONS
2020	(\$3,036,387)	\$3,036,387	1.0
2021	(\$3,036,387)	\$3,036,387	1.0
2022	(\$3,036,387)	\$3,036,387	1.0
2023	(\$3,036,387)	\$3,036,387	1.0
2024	(\$3,036,387)	\$3,036,387	1.0

NOTE: The fiscal impact assumes that the Texas Commission on Environmental Quality increases the Public Health Service Fee from \$2.45 per year per applicable connection to approximately \$2.77 per year per connection.

SOURCES: Legislative Budget Board; Texas Commission on Environmental Quality.

to be significant and could be absorbed within existing resources.

Option 3 would require TCEQ to notify local health departments, DSHS, and HHSC, as applicable, when health-based violations are identified at entities that operate water systems when those entities are subject to such agencies’ inspection and certification. No significant fiscal impact is anticipated.

Option 4 would require any agency or school district that incurs drinking water-related violations to consider applying for DWSRF assistance to remediate the underlying issue. No significant fiscal impact is anticipated.

Option 5 would require TCEQ, PUC, and TRWA to examine financial processes related to the formation and monitoring of certain systems. It is assumed that additional responsibilities of the affected agencies and TRWA can be absorbed within existing resources. However, if additional expenditures are required, TCEQ is authorized to increase the Public Health Service Fee.

Option 6 would integrate state financial assistance from TWDB into TCEQ’s review of new system applicants, to assist in determining whether additional regionalization is possible. It is assumed that this review can be accomplished using existing resources at TCEQ and TWDB, and no significant fiscal impact is anticipated.

Option 7 would authorize TCEQ and PUC to adopt thresholds that would initiate mandatory regionalization, consolidation, or closure for systems with a history of health-based compliance issues. The state of California enacted similar legislation in 2015 that would initiate mandatory consolidation activity. According to California State Water Resources Control Board staff, as of July 2018, one

mandatory consolidation has been completed, and associated duties have been absorbed within existing resources. It is assumed that TCEQ and PUC could implement this provision within existing resources.

Option 8 would amend statute to establish a drinking water supply assistance grant program at TCEQ to assist at-risk water systems. As shown in **Figure 13**, TCEQ would be appropriated funds for this grant program contingent on the agency increasing the Public Health Service Fee to generate approximately \$6.1 million for the 2020–21 biennium. It is assumed that the agency would require 1.0 additional full-time-equivalent position to administer the new program and work with other TCEQ staff to review, prioritize, and award grant funds.

The introduced 2020–21 General Appropriations Bill does not include any adjustments as a result of these options.

IMPLEMENT STRATEGIES TO INCREASE CAPACITY AND MANAGE WORKLOAD AT STATE CRIME LABORATORIES AND IMPROVE STATE LABORATORY ACCREDITATION

Texas offers forensic analysis services to local law enforcement agencies to assist in investigations and offset the cost of forensic analysis testing. The Department of Public Safety administers 13 crime laboratories across the state, each with forensic science disciplines that service the surrounding counties at no charge. These crime labs are utilized widely by local, county, and state law enforcement agencies. As awareness of forensic analysis and its effect on criminal investigations increases, the volume of forensic analysis requests continues to increase. Currently, this demand is exceeding the ability of state crime labs to process requests within targeted timeframes, which contributes to a backlog of cases. To address the backlog and manage the increasing number of requests, the Department of Public Safety crime labs should increase capacity through additional work shifts and decrease or curb the volume of incoming forensic analysis requests by improving training for local law enforcement and rejecting improperly submitted requests.

FACTS AND FINDINGS

- ◆ Department of Public Safety crime laboratories have increased productivity. However, the labs are having difficulty processing the increasing number of incoming requests and demand for forensic science analysis. Backlog levels continue to increase despite increased appropriations specifically to decrease backlogs.
- ◆ According to a survey of Department of Public Safety forensic scientists, an estimated 25.0 percent of forensic analysis requests are submitted incorrectly, requiring action from the lab to correct mistakes.
- ◆ Most Texas district attorneys enforce policies that require crime lab reports before local law enforcement can file cases.
- ◆ During fiscal years 2017 and 2018, Department of Public Safety crime lab analysts traveled an average of 7,886.0 hours to provide court testimony. Analysts' significant time away from crime lab analysis is likely to affect labs' productivity negatively.
- ◆ Current national accreditation, as required by the Texas Forensic Sciences Commission, does not include all forensic science disciplines. The commission does

not require crime scene unit functions to acquire accreditation.

CONCERNS

- ◆ Crime labs are not equal stakeholders with law enforcement agencies, district attorneys, and judges in terms of demand for forensic analysis services. These stakeholders can choose which evidence samples to submit. However, labs must test every submission of evidence unless notified by the submitting agency before testing that it is unnecessary. Crime labs do not have an open line of communication to manage backlogs and high turnaround time for forensic analysis. County officials direct local and city law enforcement agencies to submit forensic evidence to state-funded crime labs. The drivers of forensic analysis demand often are city and county officials.
- ◆ Crime labs' staffing levels and resources are unable to accommodate incoming requests because the volume of requests has increased.
- ◆ Onboarding of new analysts requires approximately six months to two years of training, depending on the discipline. Subsequent turnover and vacancies often result in further delays in production, especially in smaller labs that have fewer than 10 scientist positions.
- ◆ The Texas Commission on Law Enforcement's required curriculum does not train local and county law enforcement specifically in evidence collection, documentation, storage, transportation, and submission, resulting in crime labs resources correcting mistakes before analysis can take place.
- ◆ Forensic science analysis has no accreditation requirement across all disciplines in Texas. This lack of required accreditation can result in unlicensed individuals testifying in courtroom settings with the authority of expert witnesses.

OPTIONS

- ◆ **Option 1:** Increase appropriations to the Department of Public Safety by an estimated \$13.8 million for crime laboratories to increase capacity by operating

state crime labs for two shifts five days per week, and \$4.8 million for laboratory equipment. Appropriate \$13.3 million to the Department of Public Safety to reclassify forensic science analysts in the State Salary Classification system and to provide salary increases to improve recruitment and retention.

- ◆ **Option 2:** Include a rider in the 2020–21 General Appropriations Bill to increase appropriations to the Office of Court Administration, Texas Judicial Council, for the Texas Forensic Science Commission by an estimated \$130,000 in General Revenue Funds. The rider would direct the Texas Forensic Sciences Commission to develop a curriculum for the collection, documentation, storage, transport, and submission of evidence. Direct the Texas Commission on Law Enforcement to add the curriculum to the required training regimen for certain law enforcement officers likely to gather evidence related to crime investigations. Direct the Department of Public Safety to enforce evidence submission requirements by rejecting improperly submitted requests.
- ◆ **Option 3:** Amend a rider in the 2018–19 General Appropriations Bill and require the Department of Public Safety to develop a fee schedule to provide revenue from local consumers to offset state costs for local evidence testing. Restore the decrease in General Revenue Funds to offset the increase in Other Funds from Appropriated Receipts from the Eighty-fifth Legislature, Regular Session, 2017, if the fees are not realized. Direct the Department of Public Safety to collect forensic analysis fees in accordance with the fee schedule, pursuant to the Texas Code of Criminal Procedure, Article 38.35.
- ◆ **Option 4:** Direct the Texas Forensic Science Commission to develop a state crime laboratory accreditation process and require all crime labs and all forensic analysis disciplines to become accredited through that process. Amend, pursuant to the Texas Code of Criminal Procedure, Article 38.35(a)(4) to include all forensic analysis disciplines in the forensic analysis definition. Include a rider in the 2020–21 General Appropriations Bill to increase appropriations to the Office of Court Administration, Texas Judicial Council, for the Texas Forensic Science Commission by an estimated \$2.7 million in General Revenue to develop the curriculum.

DISCUSSION

State crime laboratories provide forensic analysis services to state, county, and local entities at no charge. According to the Texas Forensic Science Commission (TFSC), forensic analysis is a medical, chemical, toxicological, ballistic, or other expert examination or test performed on physical evidence, including DNA evidence, to determine the evidence's connection to a criminal action. This analysis includes an examination or test requested by a law enforcement agency, prosecutor, criminal suspect or defendant, or court. The disciplines tested by Department of Public Safety (DPS) crime labs are controlled substances, blood alcohol, toxicology, latent fingerprints, biology or DNA, trace evidence, firearms and tool marks, digital multimedia, and questioned documents. Each of DPS' 13 state crime labs serves a geographical region of the state and performs specific forensic analysis disciplines, shown in **Figure 1**.

Each evidence sample is assigned a timeframe, which varies across disciplines, in which testing must occur before the evidence sample is considered backlogged. No definition of backlog is recognized nationally. However, the U.S. Department of Justice, National Institute of Justice, defines a case as backlogged if it is not completed within 30 days after a lab receives the request. DPS uses multiple backlog definitions, depending on the discipline. DPS worked with the Legislative Budget Board to develop backlog definitions based on crime labs' productivity and achievable goals, considering national benchmarks and feedback. An evidence sample that is submitted for testing is considered backlogged if it remains untested after the assigned timeframe for testing completion. Evidence awaiting testing that has not surpassed the assigned timeframe for completion is not considered backlogged. Labs experience an ongoing influx of forensic analysis requests, resulting in a continuous balance of untested or uncompleted items. These items may or may not be considered part of the backlog, depending on the amount of time for testing.

The Eighty-third Legislature, Regular Session, 2013, appropriated \$8.7 million in General Revenue Funds to increase crime lab capacity. The Legislature appropriated an additional \$10.9 million in General Revenue Funds to provide additional testing services to eliminate the backlog of sexual assault evidence samples that had accumulated before August 2011. The Eighty-fourth Legislature, 2015, provided unexpended balance authority for an estimated \$5.0 million of the \$10.9 million previously appropriated for the same purpose. By the end of the 2016–17 biennium, the pre-2011 backlog of sexual assault samples was eliminated. However,

**FIGURE 1
ANALYSIS SERVICES BY DEPARTMENT OF PUBLIC SAFETY CRIME LABORATORY, AS OF JANUARY 1, 2018**

LOCATION	DRUGS	ALCOHOL	BIOLOGY	DNA	FIREARM	TRACE	LATENT PRINTS	TOXICOLOGY	QD	AFIS	GSR	DIGITAL EVIDENCE
Abilene	X	X										
Amarillo	X											
Austin	X	X	X	X	X	X	X	X	X	X	X	X
Corpus Christi	X	X	X	X								
El Paso	X	X	X	X	X							
Garland	X	X	X	X	X	X	X					
Houston	X	X	X	X	X	X						
Laredo	X			X	X							
Lubbock	X	X	X	X	X		X					
Midland	X	X	X									
Tyler	X	X	X		X							
Waco	X	X	X	X								
Weslaco	X		X	X	X		X					

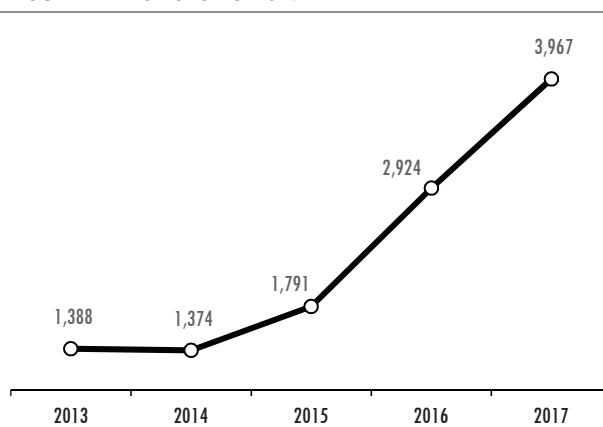
NOTE: QD=questioned documents, AFIS=Automated Fingerprint Identification System, GSR=gunshot residue.
SOURCE: Department of Public Safety.

sexual assault kits submitted after fiscal year 2011 continued to accumulate. **Figure 2** shows sexual assault kit backlogs from fiscal years 2013 to 2017.

The Eighty-fifth Legislature, Regular Session, 2017, appropriated crime lab funds with the expectation that DPS would collect forensic analysis fees from local agencies for certain evidence samples submitted for testing. The Legislature decreased fiscal year 2019 appropriations of General Revenue Funds by \$5.8 million, offset by an Appropriated Receipts (Other Funds) increase of \$11.5 million, representing the anticipated revenue collection. The Texas Code of Criminal Procedure, Article 38.35, authorizes DPS to collect forensic analysis fees from local law enforcement agencies (LEA) that request evidence analysis. However, the agency did not assess or collect such fees. In addition, the Legislature appropriated \$4.1 million in General Revenue Funds for continued testing of backlogged sexual assault evidence. The Legislature also provided direction for specific DPS cost-containment strategies, including communication with LEAs to verify that forensic analysis still was necessary at the time of testing and a stop-work policy when testing was determined unnecessary.

The Office of the Governor directed DPS on July 28, 2017, to not implement the fee schedule adopted by the Legislature. Because General Revenue Funds were decreased to anticipate an Appropriated Receipts increase that ultimately will not come to

**FIGURE 2
SEXUAL ASSAULT EVIDENCE SAMPLE BACKLOGS IN DEPARTMENT OF PUBLIC SAFETY CRIME ANALYSIS LABORATORIES
FISCAL YEARS 2013 TO 2017**



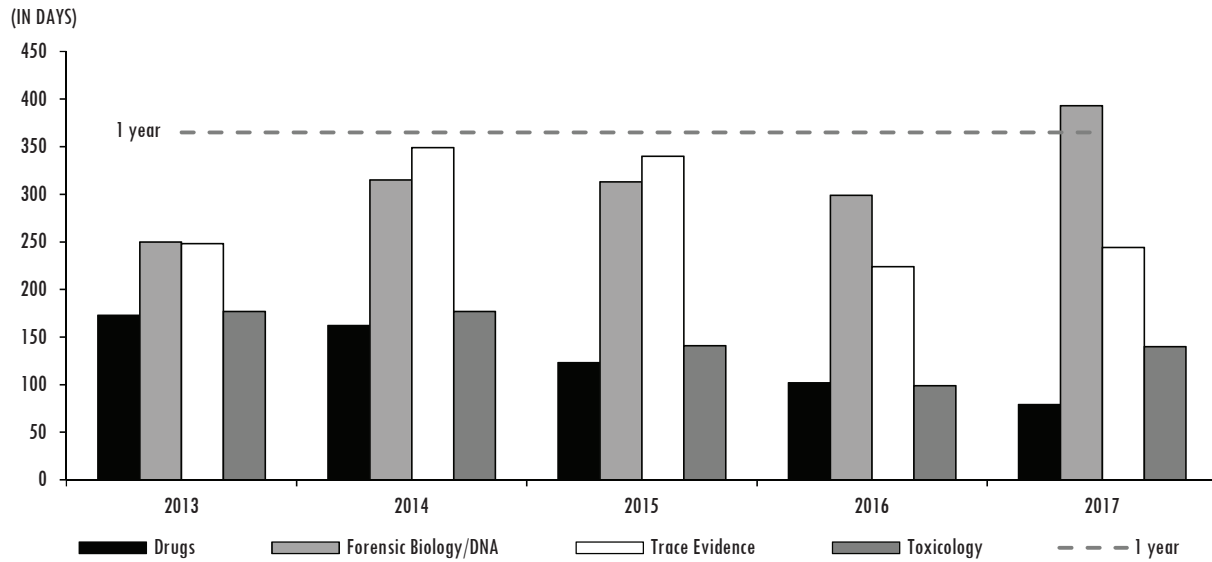
SOURCE: Department of Public Safety.

fruition, crime labs are operating with \$5.8 million less in General Revenue Funds for fiscal year 2019 than in the previous fiscal years. Despite these efforts, the number of forensic analysis requests submitted by LEAs continues to increase.

CAPACITY

According to a 2003 study published in the *Journal of Forensic Sciences*, optimal crime lab staffing is one forensic scientist

FIGURE 3
TURNAROUND TIME FOR ANALYZING EVIDENCE IN SELECT DISCIPLINES AT DEPARTMENT OF PUBLIC SAFETY CRIME ANALYSIS LABORATORIES, FISCAL YEARS 2013 TO 2017



SOURCE: Department of Public Safety.

per 30,000 population. Using that standard, Texas would require 943.5 forensic scientists. DPS crime labs currently employ 385 forensic analysts at the 13 locations. The labs also fund 31 additional positions through memorandums of understanding with 13 local and county governments to perform analysis of controlled substances, blood alcohol, and DNA to work through each contributing entity’s specific backlog and decrease turnaround time. **Figure 3** shows turnaround times for select disciplines from fiscal years 2013 to 2017. DPS crime labs are not meeting expectations for timely turnaround of forensic evidence, based on forensic discipline definitions.

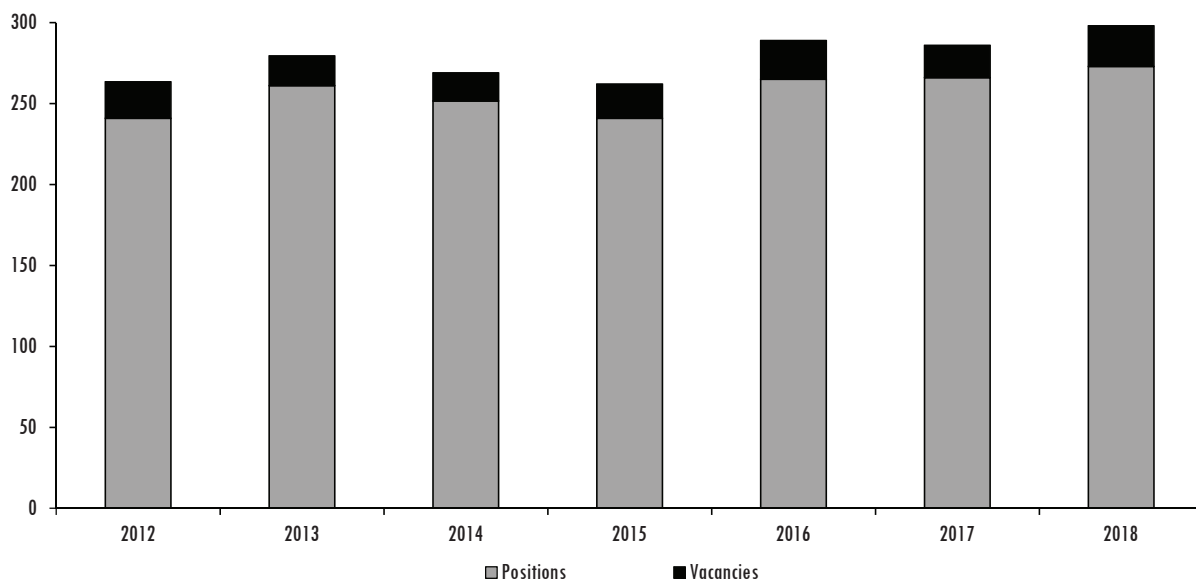
Comparatively low salaries and high work volume or excessive overtime contribute to turnover. Multiple managers in DPS labs reported that they often encourage analysts to work overtime to keep up with the influx of requests received. According to DPS, analysts are more productive during overtime hours because they are not expected to perform other tasks such as administrative work, court testimony, training, or other duties. DPS estimates that 18.7 percent of casework was performed during overtime hours during the last three fiscal years, in an attempt to decrease the backlog and manage the influx of incoming requests. DPS reported that 34,389.0 hours of overtime were worked during fiscal year 2017, and 25,293.0 hours during fiscal year 2018, at time-and-a-half pay. The total cost for overtime worked is

\$1.7 million for fiscal year 2017 and \$1.2 million for fiscal year 2018. Of these amounts, federal grants account for \$1.3 million for fiscal years 2017 and 2018, according to DPS. Even with overtime, crime labs have not managed the influx of incoming requests or significantly decreased or eliminated the backlog.

Most DPS labs have tenured analysts train and onboard new analysts and staff. The amount of time required for the trainer or staff responsible for onboarding is subtracted from forensic analysis casework. When an analyst is in training, the staff responsible for onboarding is not working cases independently. In smaller labs, this training time can result in a significant slow-down or stoppage of services. According to DPS, when an analyst leaves the position, up to two years are required to find a replacement and train the new hire into a full analyst.

For forensic scientists at DPS crime labs, the average turnover rate was 8.7 percent from fiscal years 2012 to 2017. Although this rate is relatively low compared to other state agencies, the specialized nature of the field results in an environment where recruitment is difficult if salaries are not competitive. The time necessary for training significantly decreases productivity, especially in labs or disciplines that have fewer than five analysts. According to DPS, the forensic biology backlog had an average increase of 6,434 and the controlled substances

FIGURE 4
VACANT SCIENTIST POSITIONS AT DEPARTMENT OF PUBLIC SAFETY CRIME LABORATORIES
FISCAL YEARS 2012 TO 2018



SOURCE: Department of Public Safety.

backlog increased by an average of 7,934 per year, which are attributed directly to vacant scientist positions. **Figure 4** shows vacant scientist positions compared to filled positions across all DPS crime labs for fiscal years 2012 to 2018.

Forensic science is a highly specialized field; therefore, labs often have difficulty filling vacancies. Turnover and vacancies can have a significant effect on a lab's ability to manage workflow, leading to overloaded queues at different points in the analysis process and contributing to backlog levels. The average starting annual salary for DPS crime lab analysts for fiscal year 2018 was \$43,388. DPS estimates that a 20.0 percent increase in salary would make state salaries competitive with the private sector and other publicly funded labs in the southwestern U.S. Hiring additional analysts per lab, decreasing the overtime burden, and providing competitive salaries could decrease backlog levels and manage the increasing levels of incoming requests.

Option 1 would increase appropriations to DPS for crime laboratories to increase capacity by operating state crime labs for two shifts five days per week. The option would include in DPS' bill pattern 122.0 additional noncommissioned, full-time-equivalent (FTE) positions for scientists and administrative staff, and additional laboratory equipment. This totals \$13.8 million for the FTEs and \$4.8 million for equipment for the 2020–21 biennium. Also included is a

20.0 percent salary increase for all 471.0 DPS crime lab FTE staff positions, costing approximately \$13.3 million for the 2020–21 biennium.

INCREASED DEMAND FOR SERVICES

Several factors contribute to the increased demand for forensic analysis, such as significant scientific advances that have been made in the field. For example, lab analysts can obtain DNA profiles from smaller amounts of biological evidence. This capability has increased the amount of evidence that is eligible to be analyzed, and thus has increased the demand for DNA testing.

Additionally, several state statutes require testing of all evidence for certain crimes. Senate Bill 1292, Eighty-third Legislature, Regular Session, 2013, required DPS to perform DNA testing on all state biological evidence collected during the investigation of a capital case. Senate Bill 1626, Eighty-second Legislature, Regular Session, 2011, required that all sexual assault evidence from September 1, 1996, and subsequently that has not been analyzed is submitted to DPS or a publicly accredited crime lab for testing.

National studies also show that decrease in turnaround time results in higher demand for services. According to the U.S. Government Accountability Office (GAO), a federal auditing and evaluation agency, "In a market environment, if a price

decreases, quantity demanded generally increases. State and local labs are generally funded by state or local appropriations and thus are free for submitting law enforcement agencies. In this context, turnaround time may be a substitute for price—and thus when turnaround time decreases, it can be expected that quantity demanded from law enforcement will increase in response.” **Figures 5 and 6** show that DPS crime labs received an increase in requests from fiscal years 2013 to 2018 in controlled substances and forensic biology. The agency reports similar increases in requests in most of the other disciplines during this period.

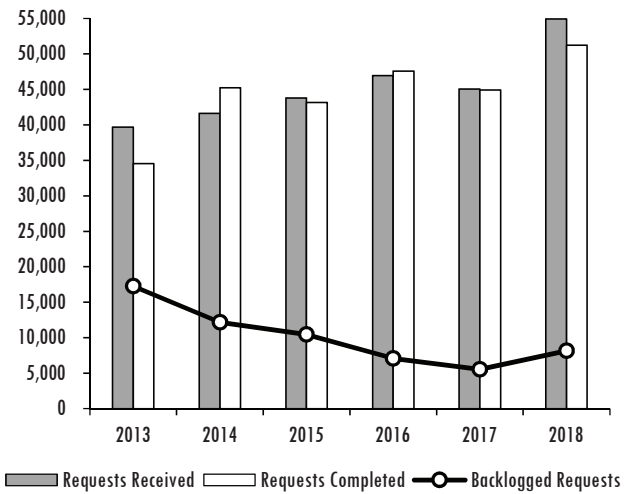
Forensic science is becoming more useful to law enforcement and prosecutors alike. Law enforcement agencies recognize the value of forensic analysis for solving current and older cases. Prosecutors may consider jurors’ expectations that DNA or other forensic analysis is presented in evidence at trial. The usefulness of forensic analysis contributes to the higher demand for services, which in turn contributes to the backlog.

In addition to forensic analysis, DPS crime lab analysts are responsible for testifying in court for cases on evidence they analyzed. Travel to court for testimony requires significant time away from analysts doing casework. During fiscal year 2017, DPS crime analysts traveled 8,280.0 hours to provide testimony in court; during fiscal year 2018, analysts traveled 7,491.0 to testify. In terms of forensic analysis work lost, analysts contributed 92.77 months, at 170 hours of work per month, to provide court testimony and travel. This work loss amounts to 12,988 blood alcohol cases, 348 forensic biology cases, and 324 controlled substance cases. A scientist’s time away from forensic analysis contributes to the case backlog.

According to the GAO, the reported aggregate backlog of crime scene DNA analysis requests has increased by 77.0 percent from calendar years 2011 to 2016 nationwide. DPS crime labs have experienced similar increases in demand, as shown in **Figure 5**. GAO reports that growth in this aggregate backlog is the result of crime labs receiving more requests than they were able to complete, although productivity and tests completed are increasing. This phenomena, as shown in **Figure 6**, is consistent with what DPS crime labs are experiencing in Texas. Backlog of crime scene DNA analysis requests have increased by 64.0 percent in DPS crime labs from 2013 to 2018.

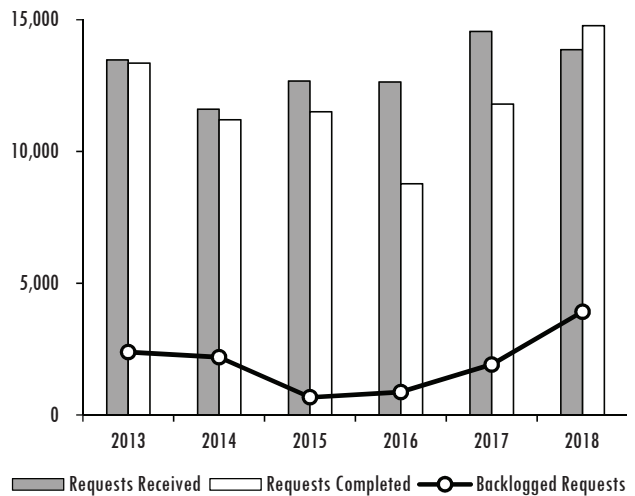
Figure 5 shows the number of controlled substance evidence samples received, completed, and backlogged for fiscal years 2013 to 2018. For controlled substances, the backlog trend is going down, due to DPS crime labs outsourcing to private

FIGURE 5
REQUESTS FOR EVIDENCE ANALYSIS OF CONTROLLED SUBSTANCES AT DEPARTMENT OF PUBLIC SAFETY CRIME ANALYSIS LABORATORIES
FISCAL YEARS 2013 TO 2018



NOTE: Backlogged cases indicate requests that are not completed within 30 days of receipt.
 SOURCE: Department of Public Safety.

FIGURE 6
REQUESTS FOR EVIDENCE ANALYSIS OF FORENSIC BIOLOGY SAMPLES AT DEPARTMENT OF PUBLIC SAFETY CRIME ANALYSIS LABORATORIES
FISCAL YEARS 2013 TO 2018



NOTE: Backlogged cases indicate requests that are not completed within 90 days of receipt.
 SOURCE: Department of Public Safety.

labs to keep up with the increasing number of incoming requests. Although the controlled substances backlog has decreased, the increasing amount of requests submitted to

the lab makes it difficult to decrease the backlog and manage incoming requests in-house. For example, controlled substance requests increased 22.0 percent from fiscal years 2017 to 2018, which coincided with a 46.9 percent increase in the number of backlogged requests in that discipline. This increase is a concern for all disciplines.

The Eighty-fifth Legislature, Regular Session, 2017, appropriated funds to crime labs with the expectation that DPS would collect fees. One goal of this funding structure was to encourage LEAs to use discretion and best practices in collecting evidence and submitting it to DPS for testing. Several LEAs reported to DPS that they do not have the resources to pay for forensic analysis testing, as dictated by DPS' fee schedule released in June 2017 (which did not go into effect). LEAs may attempt to limit the requests sent to DPS crime labs, but LEAs often are not the drivers of the demand.

The Texas District and County Attorneys Association estimates that most district attorneys in the state have a policy requirement of receiving a crime lab report before filing a case. Many LEAs reported that district attorneys require crime lab reports on drug cases before filing with the district attorneys' office. In large metropolitan areas, LEAs often have options regarding where they submit evidence for analysis; for example, several municipalities and counties operate their own crime labs, including Houston, Dallas, Austin, and San Antonio. Outside the large metropolitan areas, DPS commonly is the only provider of forensic science analysis. The labs have increased productivity, but they cannot manage the increasing number of incoming requests and demand for forensic science analysis.

LAW ENFORCEMENT TRAINING

The Texas Commission on Law Enforcement (TCOLE) does not train law enforcement specifically in evidence collection, documentation, storage, and transport. Law enforcement agencies reported that their senior field agents train new officers and detectives, but the agencies provide no formal training unless they had excess budget to send officers to Federal Bureau of Investigation trainings. Most small LEAs do not have the resources available to provide this type of training.

The training required of LEAs is not sufficient to ensure that forensic evidence is identified, collected, documented, stored, and submitted correctly, according to TCOLE and TFSC. The evidence available for collection may not meet the quality of expectations set by the forensic analysis community or may not be likely to develop a probative DNA profile.

One lab reported receiving more requests that are untestable than samples that can produce a DNA profile. Consistently, labs have reported a significant amount of time lost as the result of the following factors:

- improperly submitted evidence, including documented samples not included in the submission, incomplete or incorrect information on submission forms, or items that do not match what is described on submission forms;
- destroyed evidence due to mishandling;
- untestable evidence because incorrect methods were used for extraction;
- mistakes in the lab because documents and labels were completed incorrectly; and
- other issues.

Option 2 would include a rider in the 2020–21 General Appropriations Bill to increase appropriations to the Office of Court Administration, Texas Judicial Council (OCA), for TFSC by an estimated \$130,000 in General Revenue Funds. The rider would direct TFSC to develop a curriculum for the collection, documentation, storage, transport, and submission of evidence. Option 2 also would direct TCOLE to add the curriculum to the required training regimen for certain law enforcement officers likely to gather evidence related to crime investigations. Additionally, Option 2 would direct DPS to enforce evidence submission requirements by rejecting improperly submitted requests.

Labs across the state reported the improper submission of evidence results in overloaded intake queues and slows the process down when analysts have to correct the submission mistakes. **Figure 7** shows survey results from analysts in the DPS crime labs regarding improper and unnecessary evidence submission.

A DPS crime lab analyst does not begin work on a case until all necessary materials are submitted to the lab. This practice decreases the number of retests or work stoppages due to incomplete or incorrect information. Additionally, casework is affected by investigators' response time when analysts have questions. Each time a case is set aside, the lab's efficiency decreases. Many of these issues can be traced to the submission process, and they result in the lab stopping analysis processes before testing is complete.

FIGURE 7
SURVEY RESPONSES FROM STAFF AT DEPARTMENT OF PUBLIC SAFETY CRIME ANALYSIS LABORATORIES
AUGUST 2018

SURVEY QUESTION	RESPONSE
1. Estimate the percentage of requests submitted to the lab that require staff action to correct the submission form before forensic analysis work can begin.	25.0%
2. Estimate the percentage of cases or requests that have unnecessary evidence submitted for testing that appears duplicative or of questionable significance (in the analyst's opinion).	41.0%
3. Estimate the percentage of cases or requests that cannot be tested due to poor collection, storage, or other factors before laboratory submission.	8.0%

NOTE: Responses compiled from 190 respondents.
 SOURCE: Department of Public Safety.

Option 3 would continue legislation passed by the Eighty-fifth Legislature, Regular Session, 2017, that requires DPS to develop a fee schedule to provide revenue from local consumers to offset state costs for local evidence testing. The option would direct DPS to collect forensic analysis fees in accordance with the fee schedule, pursuant to the Texas Code of Criminal Procedure, Article 38.35.

ACCREDITATION

Most forensic science disciplines are required to meet standards by a national accrediting service, as directed by TFSC pursuant to the Texas Code of Criminal Procedure, Article 38.35. However, latent fingerprint and breath alcohol testing are exempted from this policy due to high work volume, as reported by TFSC. Texas has 2,671 LEAs, many of which perform these types of analysis. TFSC could not determine how many LEAs perform analysis onsite. Therefore, TFSC cannot account for all of the agencies performing forensic analysis and mandate accreditation in these disciplines. Because no requirement for accreditation is in place, some expert witnesses who testify in court are not affiliated with an accredited lab, and consequently have no requirement to be licensed with TFSC.

No entity in Texas or the U.S. has the authority to oversee, audit, and enforce regulations within public or private crime labs. National accreditations provide guidelines instead of specific standards with which labs must comply. Although most labs attempt to follow best practices, auditors do not monitor their procedures. The only requirement for a lab is to have a testing protocol, which typically is a set of best practice standards that a lab develops internally.

TFSC was established in May 2005 with a mission to investigate allegations of professional negligence or professional misconduct that would affect the integrity of the forensic analysis result conducted by an accredited laboratory.

Senate Bill 1238, Eighty-third Legislature, Regular Session, 2013, expanded TFSC’s authority to include investigating complaints that are not subject to accreditation. Senate Bill 1287, Eighty-fourth Legislature, 2015, transferred Texas’ Crime Laboratory Accreditation Program oversight from DPS to TFSC. The legislation also required TFSC to develop licensing programs for forensic disciplines that are subject to accreditation in Texas. It also authorized TFSC to establish, by agency rule, licensing requirement programs for disciplines that are not subject to accreditation requirements. Senate Bill 1124, Eighty-fifth Legislature, Regular Session, 2017, administratively attached TFSC to OCA.

Option 4 would amend the Texas Code of Criminal Procedure, Article 38.35(a)(4), to delete exemptions to the definition of forensic analysis to include all forensic disciplines. The option would direct TFSC to develop a state crime lab accreditation process and require all crime labs to become accredited through that process. Option 4 also would add a rider to the 2020–21 General Appropriations Bill to increase appropriations to OCA for TFSC by \$2.7 million for the 2020–21 biennium, including approximately \$1.0 million in ongoing costs. The rider also would add 12.0 FTE positions, including accreditation managers, a curriculum specialist, lead assessors, and an administrative assistant.

The state currently pays a national accrediting entity approximately \$204,000 per biennium. If this amount, in addition to accreditation fees paid by other labs in the state, instead is applied to the state’s forensic science oversight body (TFSC), development and implementation of a state accrediting entity with requirements rather than guidelines could be possible.

ONGOING IMPROVEMENT EFFORTS BY THE AGENCY

Increased demand, resource challenges, and lab capacity constraints all contribute to forensic analysis backlogs. DPS

made the following advances in efficiency and production to address the increasing backlog levels:

- implemented a training requirement utilizing the business process system Lean Six Sigma for all laboratory managers;
- established a narcotics team to analyze and recommend efficiency changes for the drug discipline;
- established an outsourcing system when new analysts are onboarding;
- altered the onboarding process to limit downtime;
- published monthly backlog levels for awareness;
- published submission guidelines in the physical evidence handbook for law enforcement; and
- required that all labs enforce submission guidelines.

DPS recently was rewarded for its efforts in streamlining workflow processes and increasing efficiency. The American Society of Crime Laboratory Directors presented the 2018 Foresight Maximus Award to nine DPS crime labs. The organization seeks to improve efficiency and productivity of every forensic laboratory, globally. DPS crime labs have been nationally recognized in this effort.

In addition to these changes, DPS has requested approximately \$49.7 million in Exceptional Items to address crime lab capacity constraints and turnover. The request would add 122.0 FTE positions to DPS’ bill pattern in the Crime Laboratory strategy and add a second work shift at labs to increase efficiency and decrease the number of evidence items awaiting testing. DPS estimates that increasing salaries for existing lab staff by 20.0 percent will enable the state to compete with private-sector salaries.

According to the State Auditor’s Office’s Employment Exit Survey, 20.0 percent of crime lab employees left DPS employment for increased pay at other labs.

FISCAL IMPACT OF THE OPTIONS

Option 1 would cost approximately \$13.8 million in General Revenue Funds to implement a two-shift work schedule, including 122.0 FTE positions and \$4.8 million for equipment. The option would cost an additional \$13.3 million in General Revenue Funds to reclassify forensic science analysts in the State Salary Classification system and to provide salary increases to attract qualified candidates and promote retention. **Figure 8** shows the estimated five-year fiscal impact of Option 1.

Option 2 would cost \$130,000 for the 2020–21 biennium for TFSC to develop curriculum and would require 1.0 FTE position. TCOLE reports it is able to restructure training and implement the program within existing resources.

Option 3 would continue to direct DPS to collect forensic analysis fees, and would restore the \$5.8 million decrease in General Revenue Funds for the 2018–19 biennium to offset the increase of \$11.5 million in Other Funds from Appropriated Receipts. The option would maintain the current fee schedule or revise it according to legislative determinations. Revenues collected would vary depending on the fee schedule adopted by the Legislature.

Option 4 would include a rider in the 2020–21 General Appropriations Bill to appropriate \$2.7 million to OCA for TFSC to develop, implement, and oversee a state accreditation process and approximately \$1.0 million for each subsequent fiscal year to maintain the program. This cost could be offset if state and local labs were required to obtain state accreditation and paid these fees to TFSC. This option would

**FIGURE 8
FIVE-YEAR FISCAL IMPACT OF OPTION 1, FISCAL YEARS 2020 TO 2024**

YEAR	PROBABLE SAVINGS/(COST) FOR SECOND ANALYST SHIFT IN GENERAL REVENUE FUNDS	PROBABLE SAVINGS/(COST) FOR 20.0% SALARY INCREASE IN GENERAL REVENUE FUNDS	PROBABLE SAVINGS/(COST) FOR EQUIPMENT IN GENERAL REVENUE FUNDS	PROBABLE ADDITION/(REDUCTION) OF FULL-TIME-EQUIVALENT POSITIONS
2020	(\$6,767,157)	(\$6,624,626)	(\$4,833,144)	122.0
2021	(\$7,022,643)	(\$6,675,723)		122.0
2022	(\$7,022,643)	(\$6,675,723)		122.0
2023	(\$7,022,643)	(\$6,730,411)		122.0
2024	(\$7,022,643)	(\$6,730,411)		122.0

NOTE: Amounts are estimated by the Department of Public Safety in its 2020–21 Legislative Appropriation Request, Exceptional Item No. 3.
SOURCE: Department of Public Safety.

require agency rule amendment and statutory revision. **Figure 9** shows the estimated five-year fiscal impact of Option 4.

The Senate introduced 2020–21 General Appropriations Bill includes a rider to implement Option 1.

FIGURE 9
FIVE-YEAR FISCAL IMPACT OF OPTION 4
FISCAL YEARS 2020 TO 2024

YEAR	PROBABLE SAVINGS/ (COST) IN GENERAL REVENUE FUNDS	PROBABLE ADDITION/ (REDUCTION) OF FULL- TIME- EQUIVALENT POSITIONS
2020	(\$1,379,226)	12.0
2021	(\$1,318,208)	12.0
2022	(\$1,018,818)	12.0
2023	(\$1,048,815)	12.0
2024	(\$1,020,815)	12.0

NOTE: Amounts are estimated by the Office of Court Administration.
 SOURCE: Texas Forensic Science Commission.

OVERVIEW OF BLOCKCHAIN AND DISTRIBUTED LEDGER TECHNOLOGY FOR STATE GOVERNMENT FUNCTIONS

Distributed ledger technology is a decentralized approach to manage information and transactions. Blockchain, the distributed ledger on which the cryptocurrency Bitcoin is built, is the most notable example of distributed ledger technology. According to the National Association of State Chief Information Officers, blockchain technology is a new and growing capability for initiating, recording, and verifying transactions instantaneously.

Distributed ledger applications are used to process financial transactions, monitor supply chains, and make cross-border payments in the private sector. Several states have explored the potential of using this technology in the public sector. According to states that have studied implementing blockchain for state government functions, the technology has potential to be useful in the future, but some challenges must be overcome. Some of these challenges are related to the relative immaturity of the market for this technology, and others are technological challenges. For instance, the approaches that distributed ledgers use to verify transactions can be energy-intensive. As the size of ledgers increase, they become less useful for everyday users because of the amount of computing power they require. According to a report by the Illinois General Assembly Blockchain and Distributed Ledger Task Force, distributed ledgers need to be compatible with multiple legacy information technology systems in order to be implemented properly. Ledgers also are highly specific in their application and can make adapting blockchain for new uses challenging, if not financially and technically prohibitive. The Department of Information Resources has conducted an internal pilot of a selection of distributed ledger technologies. The agency found that the current market for distributed ledger technology has not developed sufficiently to warrant state investments at this time.

FACTS AND FINDINGS

- ◆ Distributed ledgers are decentralized and distributed data management technologies that are used to maintain a growing list of connected records and keep track of transactions. Each participant within a network has its own copy of the ledger. Any changes to the ledger are updated in all copies of the ledger.
- ◆ The phrase blockchain and distributed ledger often are used interchangeably; however, blockchain represents

a specific type of distributed ledger in which the data are grouped together and organized in blocks. The blocks are linked to one another and secured using cryptography. Cryptocurrencies such as Bitcoin are familiar examples of blockchain distributed ledger applications.

- ◆ The National Association of State Chief Information Officers identified several potential applications for blockchain, including managing property deeds, professional licenses, criminal records, and vital statistics.
- ◆ A 2016 report by the State of Vermont recommended against state agencies adopting blockchain because the costs and challenges of implementing the technology outweigh any productivity gains that could be achieved.

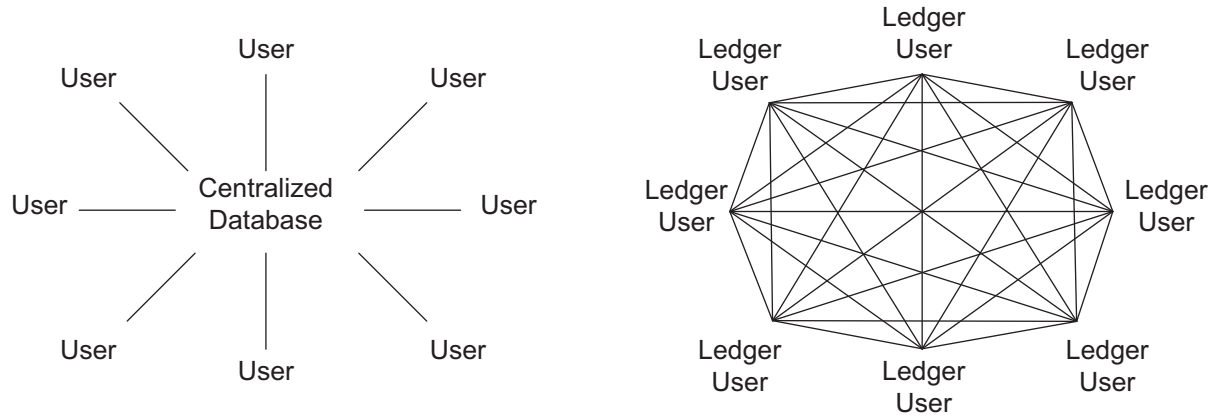
DISCUSSION

In October 2008, Satoshi Nakamoto published *Bitcoin: A Peer-to-Peer Electronic Cash System*. This white paper attempted to identify a technology solution that would enable peer-to-peer commerce with digital currency and without the need for a central authority such as a bank or financial institution to verify transactions. Without a central authority, digital peer-to-peer markets suffered from the double-spending problem. This issue is a potential flaw in a cryptocurrency or other digital cash transaction system whereby the same digital token can be spent more than once, because the token digital file can be duplicated or falsified.

Nakamoto suggested that an electronic payment system based on cryptographic proof would enable willing parties to make transactions without the need for a third party. Cryptography is the process of converting information into a form that only the intended audience can read and process. The technical solution is to develop a ledger that publicly announces each transaction to all market participants, and a system that enables participants to agree on the order in which transactions occurred. The result of this work was the distributed ledger that came to be known as blockchain and included the following components:

- development and maintenance of an electronic register of transactions;

FIGURE 1
DIFFERENCE IN STRUCTURE OF CENTRALLY ADMINISTERED DATABASES AND DISTRIBUTED LEDGERS
FISCAL YEAR 2019



SOURCE: Legislative Budget Board.

- encryption of hashes (digests) of transactions;
- verification of those transactions through a consensus protocol; and
- time-stamping those transactions.

Although the potential uses of cryptocurrencies may be limited, the distributed ledger technology upon which Bitcoin is built has generated interest among various sectors of the economy.

DISTRIBUTED LEDGER TECHNOLOGY

A distributed ledger is a type of database that is held and updated independently by each participant, known as a node, in a large network. This database is different from a standard central database that is held in a central server and to which network participants have access. Instead of networks communicating records to nodes through a central authority, each node processes each transaction independently. Each network has rules for verifying and approving transactions known as consensus protocols. When consensus is reached, the ledger is updated on each node, and the data stored are secured cryptographically. Rules established for or by the network determine whether some or all of the participants can update the ledger. **Figure 1** shows a visual representation of the difference in structure between distributed ledgers and centrally administered databases.

Distributed ledgers can be held and administered publicly or privately. A public distributed ledger is open to the public so that any user can initiate transactions on the ledger. A private

distributed ledger can be updated only by members of a single organization. Public and private distributed ledgers can be permissionless or permissioned. A permissionless ledger enables any user to participate in the consensus protocol to validate transactions. A permissioned distributed ledger requires permission from a governing entity to participate in the consensus protocol. Bitcoin uses a permissionless blockchain. An application tracking health records or other confidential information that needs to comply with data protection regulations would use a permissioned blockchain.

Distributed ledgers use different consensus mechanisms to approve and authorize transactions. The Bitcoin application of blockchain uses a consensus mechanism known as proof-of-work. Proof-of-work typically involves using computing power to solve algorithms to deter negative behavior by participants in a network. Proof-of-work assumes that malicious actors will never have a majority of the computing power in a network. If malicious actors do have a majority of the computing power in a network, they can overwrite the ledger. This situation is known as the 51.0 percent problem. The proof-of-work consensus mechanism requires significant computing power and energy consumption, and it is relatively slow at processing transactions. According to testimony provided to the U.S. Senate Committee on Energy and Natural Resources by computer science professor Arvind Narayanan in August 2018, the proof-of-work consensus protocol used by Bitcoin, known as mining, accounted for an estimated 1.0 percent of the world’s electricity consumption on August 21, 2018, or slightly more than the electricity

used by Ohio. Bitcoin is the first example, or use case, of a publicly distributed ledger. As a result, the term blockchain has been adopted widely to refer to technologies inspired by Bitcoin that have implemented distributed ledgers.

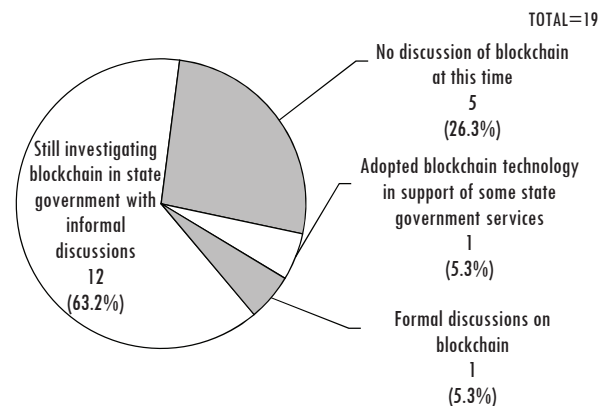
BLOCKCHAIN

Blockchain and distributed ledger often are used interchangeably; however, blockchain is a type of distributed ledger. Distributed ledger technology was intended to process transactions in a shared, trusted environment. Blockchain was intended to facilitate peer-to-peer transactions without the need for a trusted third party.

The characteristic that distinguishes blockchain from other distributed ledgers is that information about transactions—including a time stamp, a digital signature, and relevant information—is grouped together in blocks and then linked cryptographically. One benefit of blockchain is that it eliminates the risk to a centralized database posed by a hacker gaining access to the system and destroying or corrupting the data it holds. Because of this risk, centralized databases depend on administrators to maintain the security of the databases. Blockchain uses cryptographic hashing to save space. Hashing is the encryption of the contents of transactions and some metadata using an algorithm to compile a short digest of the data, known as a hash. A hash cannot be used to replicate the original document or information, but it can be used to verify the original document. Each record has a unique hash.

The blockchain data structure is append-only, which means that data cannot be removed. This structure has been called immutable or tamper-proof. However, it technically is possible to overwrite previous transactions if malicious actors can control a majority of the computing power in the network, which is known as a 51.0 percent attack. According to the management consulting firm McKinsey & Company, control of a majority of computing power in a network by malicious actors is considered largely impractical. However, there has been an increase in these types of attacks on cryptocurrencies during calendar year 2018. Although the blockchain is protected by immutable data structures and cryptography, the overall security of the blockchain system depends on the applications that are built to work with it. For example, the user interface for the system and databases are stored off-chain. Most of the software that is implemented to support a blockchain does not operate directly on the blockchain. Blockchain stores hashes, not documents. Other technology solutions are needed to work with the blockchain

**FIGURE 2
STATE CHIEF INFORMATION OFFICERS RESPONSES TO
NATIONAL ASSOCIATION OF STATE CHIEF INFORMATION
OFFICERS SURVEY REGARDING BLOCKCHAIN ADOPTION
MAY 2017**



SOURCE: National Association of State Chief Information Officers.

to store the records, which can be subject to their own, unique cybersecurity threats.

Blockchain originally was developed as open-source software, which means that the source code was publicly available for other software developers to modify and adapt. This practice has led to many different applications being called blockchain. As a result, no standards for blockchain technologies or the networks that operate them are widely accepted, which presents challenges for assessing the quality of available blockchain solutions and determining how to integrate them. According to McKinsey & Company in 2017, although some large software companies offer blockchain solutions, many of the providers are small start-up companies. For this reason, it is difficult to assess which firms are going to be successful and remain in business long enough to support any information technology (IT) upgrades related to blockchain.

BLOCKCHAIN AND DISTRIBUTED LEDGERS IN STATE GOVERNMENT

In 2017, the National Association of State Chief Information Officers (NASCIO), a national non-profit organization that represents state chief information officers (CIO), surveyed state CIOs about the extent to which blockchain technology is part of each state’s agenda. Of the CIOs who responded, a majority said that they were investigating blockchain use in state government through informal discussions. **Figure 2** shows the results of the NASCIO survey.

FIGURE 3
POTENTIAL STATE GOVERNMENT APPLICATIONS OF BLOCKCHAIN TECHNOLOGY
MAY 2017

- Managing property deeds
- Submitting healthcare providers reimbursement
- Evaluating and managing professional licenses
- Administering tickets, fines, and citations, including payments and processing
- Managing birth and death certificates
- Managing microgrid transactions in the energy section
- Managing lineage of patents, trademarks, reservations, and domain names
- Authenticating academic credentials
- Filing and managing insurance claims
- Tax calculations and payment
- Managing, updating, and transmitting criminal records
- Managing, updating, and transmitting healthcare records
- Recording and reporting financial transactions and financial statements
- Managing voting in elections

SOURCE: National Association of State Chief Information Officers.

Many of the government use cases that are being evaluated are functions in which the government serves as the trusted holder of an official record, such as a property record. NASCIO has identified several areas in which the use of blockchain technology could assist with monitoring or making transactions. **Figure 3** shows potential government applications for blockchain technology that NASCIO identified.

NASCIO suggests that governments should consider whether using blockchain is appropriate for a particular program. For example, blockchain theoretically could be useful for managing grants, but many applicants for grant programs already face technological or financial impediments that make their participation in a blockchain unlikely.

According to NASCIO, states initially should focus any blockchain or distributed ledger efforts on a permissioned network, so that a restricted number of users have the rights to validate transactions. This requires decisions about the network to be overseen through governance rather than through energy-intensive, permissionless blockchain that has limited scalability.

A 2018 report by the Brookings Institute, a nonprofit, public policy organization, assessed each state’s level of engagement with blockchain technology and cryptocurrency. It found that some states, such as Illinois, envision a broader role for blockchain in their economies. Other states, including Texas, are taking a more reserved approach to research and adoption.

BLOCKCHAIN EVALUATION IN OTHER STATES

According to the National Conference of State Legislatures (NCSL), in 2018, three states—Colorado, Connecticut, and

Wyoming—passed legislation; two other states, New York and Virginia, filed legislation to establish working groups to study issues related to implementing blockchain in state government. Illinois and Vermont previously had blockchain and distributed ledger working groups. The working group in Illinois has been supportive of the potential for blockchain technology. Vermont published its results in 2016 and recommended against state agencies adopting blockchain technology because the likely costs associated with adoption exceed the potential benefits.

House Joint Resolution 25, One-Hundredth Illinois General Assembly, 2017, established the Illinois General Assembly Blockchain and Distributed Ledger Task Force to study the following factors:

- opportunities and risks associated with using blockchain and other distributed ledger technologies;
- types of blockchain, public and private;
- projects and use cases from other state and national government entities that Illinois should consider;
- how current state laws could be modified to support this technology;
- encryption technology, including Illinois’ digital signature infrastructure, and
- official reports and recommendations from the Illinois Blockchain Initiative.

In 2018, the Illinois task force published a report of its findings. It found that blockchain technology and its built-in encryption could facilitate highly secure methods for public interaction with government, keeping paperless records,

increasing data accuracy, and providing better cybersecurity protections for Illinois residents. The task force also found that scalability in blockchain technology must improve before government adoption can become widespread.

The task force's findings were positive overall about the potential to use blockchain technology in Illinois state government, particularly to manage real estate records. However, it also identified the following challenges associated with adopting blockchain and distributed ledgers for state functions:

- some consensus mechanisms are energy-intensive;
- as the size of ledgers increase, they become less useful for everyday users;
- ledgers must be compatible with multiple legacy IT systems to be useful, but the ledgers are highly specific in their application and lack flexibility that can make adapting blockchain for new uses challenging, if not financially and technically prohibitive;
- hundreds of blockchain technologies are unique variations on the open-source technology, of which each has its own proprietary standards and protocols that may cause compatibility issues between systems; and
- information entered onto a public ledger is permanent, and no mechanism removes information that is entered inappropriately or illegally after it is approved by the consensus mechanism.

A 2016 report by the Vermont Secretary of State, Attorney General, and Department of Financial Regulation found that blockchain provides a reliable way of confirming the party submitting a record to the blockchain, the time and date of its submission, and the contents of the record, which can eliminate the need for third-party intermediaries in certain situations. The report also found that blockchain is limited because the blockchain does not verify or address the reliability or the accuracy of the contents, nor does it provide storage for the records. The report recommended against state agencies adopting blockchain technology because the likely costs associated with adoption exceed the potential benefits.

According to the Department of Information Resources (DIR), as of May 2018, no state agencies in Texas were using blockchain or distributed ledger technology for state functions. DIR used existing agency resources to fund an

internal distributed ledger pilot project to track permissions for internal applications. The goal of the project was to familiarize DIR staff with using distributed ledger technology. Although DIR is optimistic overall about the potential of distributed ledger technology, the agency advises that the current market for distributed ledger technology has not developed sufficiently to warrant state investments at this time.

DIR provides guidance to state agencies that explore blockchain applications. DIR suggests that any agency exploring the use of blockchain consider the following questions:

- Does the agency need a structured central repository?
- Are multiple entities accessing the database?
- Does the agency need to ensure trust?
- Would centralized administration be inefficient? and
- Can business rules be automated?

If the agency answers yes to each question, DIR advises the agency to consider whether transactions need to be private (permissioned) or public (permissionless).

OVERVIEW OF WOMEN'S HEALTH PROGRAMS

The women's health programs in Texas provide access to women's health, family planning, prenatal, and preventive care services to eligible women in need. In addition to improving health outcomes, the women's health programs save state resources that are expended on other programs, including the Texas Medicaid program.

After undergoing significant restructuring, the current women's health programs include the Healthy Texas Women program, the Family Planning Program, the Breast and Cervical Cancer Screenings program, and the Title V Prenatal Medical and Dental Programs at the Health and Human Services Commission. This overview of these health programs includes information regarding recent initiatives to improve participation in the programs.

FACTS AND FINDINGS

- ◆ The Legislature's funding for the women's health programs has increased significantly in recent years, increasing 30.9 percent from the 2014–15 biennium to appropriations of \$284.6 million in All Funds for the 2018–19 biennium.
- ◆ The Health and Human Services Commission estimates that from fiscal years 2017 to 2020, the women's health programs will save the state \$12.8 million in General Revenue Funds (\$157.8 million in All Funds) by decreasing healthcare costs to the Children's Health Insurance Program and the Texas Medicaid program.
- ◆ Each of the women's health programs provides a unique set of services and has its own eligibility requirements. Although the goals of each program vary, overall they seek to improve the pregnancy, birth, and general health outcomes of low-income women in the state.
- ◆ Initiatives at the Health and Human Services Commission such as client outreach and auto-enrollment of clients has increased participation in the women's health programs. During fiscal year 2017, monthly enrollment in the Healthy Texas Women program more than doubled, from 105,406 clients to 220,154 clients. During the same year, 38,959 women were autoenrolled into the Healthy

Texas Women program. Other initiatives related to the women's health programs include provider outreach and increasing access to long-acting reversible contraception.

DISCUSSION

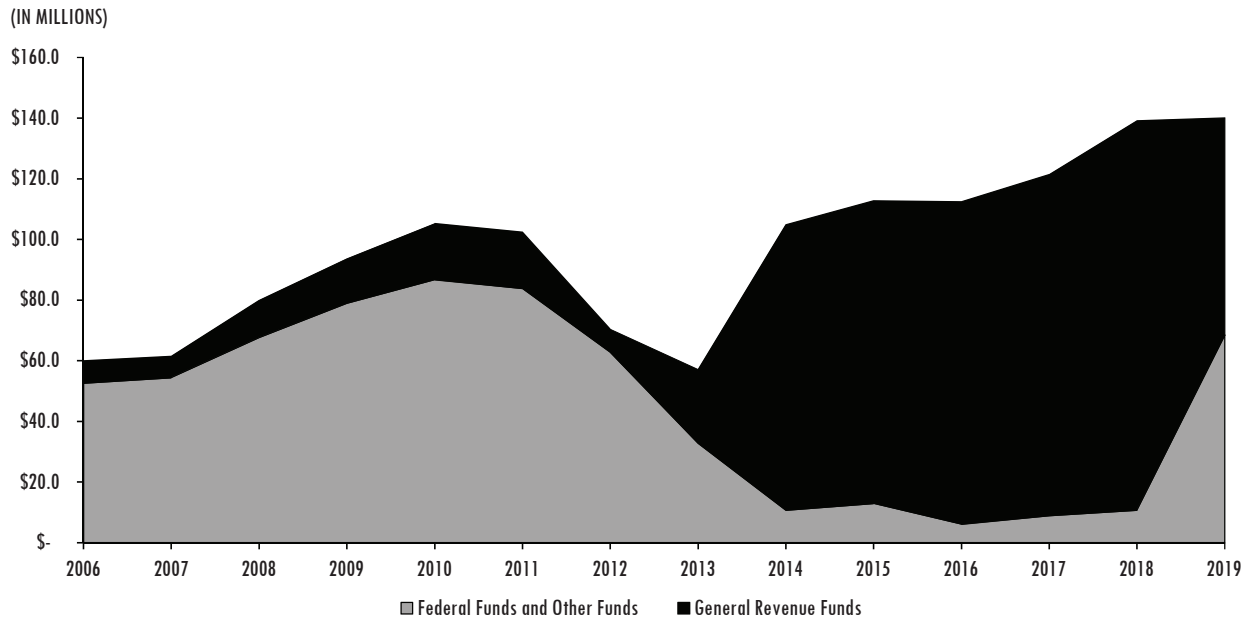
Rapid population growth and comparatively high rates of poverty and uninsurance challenge the state's ability to provide healthcare to women facing barriers to accessing healthcare. From fiscal years 2010 to 2017, the state population grew by 12.6 percent to 28.3 million people, slightly more than half of whom are female. Among women ages 19 to 64, 14.0 percent live in poverty and 19.0 percent are uninsured.

Research suggests that access to care is an issue for women in Texas and that many women may experience difficulty receiving medical care, family planning, and prenatal care. For instance, from fiscal years 2014 to 2016, 15.0 percent of adult women in Texas reported that they did not see a doctor during the previous 12 months due to cost. The state's birth rate is the seventh highest in the U.S., and the birth rate for teens ages 15 to 19 is the fourth highest. Survey data indicate that slightly more than half of births in Texas are intended. Moreover, 71.6 percent of mothers in the state entered prenatal care within the first trimester, less than the U.S. rate of 83.0 percent.

The women's health programs in Texas seek to address these challenges by providing access to no-cost or low-cost health services for eligible women. The women's health programs provide women's health, family planning, and prenatal services that help families to decrease unintended pregnancies and improve pregnancy and birth outcomes. These programs also provide preventive care and treatment services to improve general health outcomes.

In addition to promoting better health, the women's health programs can save money through the cost-effective use of state resources. For instance, increased access to family planning services decreases unintended pregnancies, thereby averting potential pregnancy and infant-related costs to Texas Medicaid and the Children's Health Insurance Program (CHIP). The Texas Health and Human Services Commission (HHSC) estimates that from fiscal years 2017 to 2020, the

FIGURE 1
WOMEN'S HEALTH PROGRAMS, FUNDING BY METHOD OF FINANCE
FISCAL YEARS 2006 TO 2019



SOURCES: Legislative Budget Board; Health and Human Services Commission.

women’s health programs will save the state \$157.8 million in All Funds, including \$12.8 million in General Revenue Funds.

The Legislature’s funding for women’s health programs has increased significantly in recent years. During the 2018–19 biennium, appropriations for the women’s health programs increased to \$284.6 million in All Funds, which is \$67.2 million (30.9 percent) greater than All-Funds expenditures for the 2014–15 biennium.

RECENT CHANGES TO WOMEN'S HEALTH PROGRAMS

The Family Planning Program (FPP) and the Breast and Cervical Cancer Screenings (BCCS) program historically have provided women’s health services in Texas. The Title V Prenatal Medical and Dental Programs began providing services to eligible pregnant and postpartum women during fiscal year 2013.

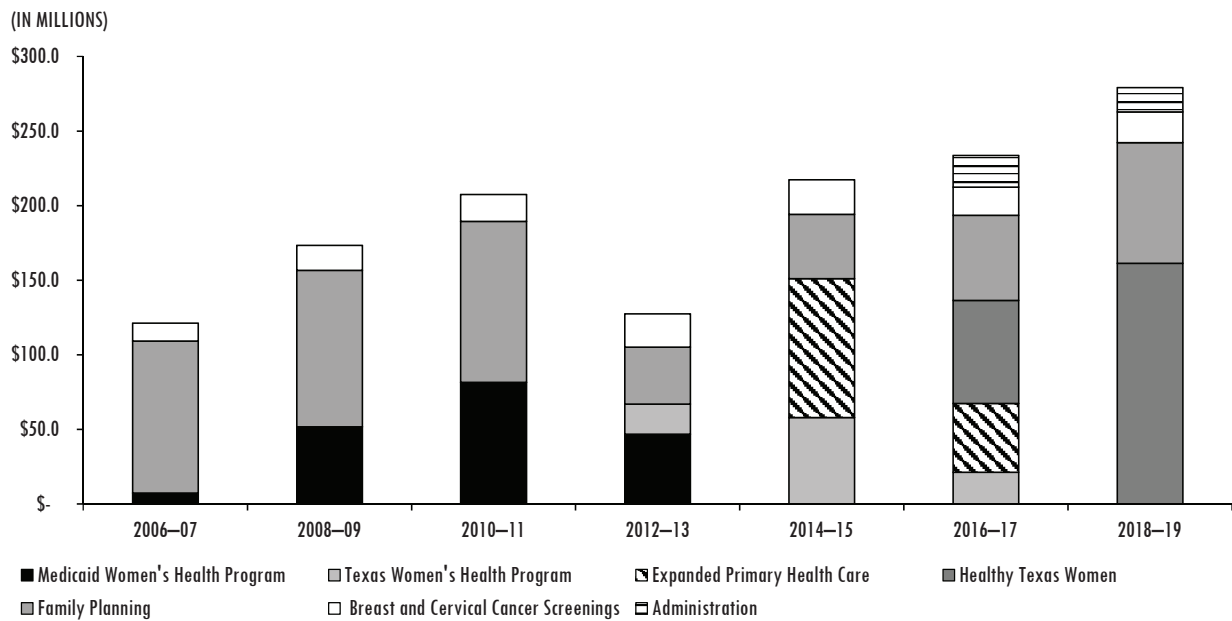
The Medicaid Women’s Health Program operated from January 2007 to December 2012. It ended after HHSC was unable to receive approval from the federal Centers for Medicare and Medicaid Services (CMS) to continue it through a Medicaid waiver after changes in state law prohibited certain providers from participating. The state-

funded Texas Women’s Health Program (TWHP) replaced the program on January 1, 2013.

The Expanded Primary Health Care (EPHC) program was established during fiscal year 2014. The discontinuation of the Medicaid Women’s Health Program and establishment of TWHP and EPHC led to the women’s health programs being financed primarily with General Revenue Funds rather than Federal Funds or Other Funds. **Figure 1** shows funding for the women’s health programs by method of finance.

The Eighty-fourth Legislature, 2015, acted on the findings and recommendations of the Sunset Advisory Commission and passed Senate Bill 200, which reorganized and consolidated the health and human services system to achieve greater efficiencies and coordination across programs. This restructuring included the consolidation of the women’s health programs at HHSC to improve efficiency and effectiveness for clients and providers. Services from EPHC and TWHP were combined to establish the Healthy Texas Women (HTW) program, which HHSC instituted in July 2016. At that time, FPP also was reconfigured to offer additional services. **Figure 2** shows biennial All Funds expenditures for the women’s health programs, excluding Title V Prenatal Medical and Dental Programs, during the past 10 years.

FIGURE 2
WOMEN'S HEALTH PROGRAMS BIENNIAL ALL FUNDS EXPENDITURES BY PROGRAM
FISCAL YEARS 2006–07 TO 2018–19



SOURCES: Legislative Budget Board; Health and Human Services Commission.

On June 30, 2017, HHSC applied for a federal Medicaid 1115 demonstration waiver for HTW. The proposed effective date of the waiver was September 1, 2018, for a five-year period ending August 31, 2023. If approved, the waiver would enable the state to receive federal Medicaid matching funds to operate the program. As of January 2019, the waiver application is pending with CMS.

CURRENT WOMEN'S HEALTH PROGRAMS

Four programs primarily support women's health: HTW, FPP, BCCS, and the Title V Prenatal Medical and Dental programs. The Eighty-fifth Legislature, General Appropriations Act, 2018–19 Biennium, Article II, HHSC, Strategy D.1.1, Women's Health Program, appropriated \$284.6 million in All Funds, including \$170.9 million in General Revenue Funds, to these programs. **Figure 3** shows the benefits available through each women's health program. **Figure 4** shows eligibility requirements for each of the programs.

HEALTHY TEXAS WOMEN

HTW provides women's health, family planning, and preventive health services to eligible women at no cost to clients. Preventive health services include screening and treatment for hypertension, diabetes, and high cholesterol.

The goals of the program are to decrease unintended pregnancies, improve maternal health outcomes, and promote the early detection of breast and cervical cancers. Most of the services received by clients during fiscal year 2017 were for contraceptive and sexually transmitted infection (STI)/sexually transmitted disease (STD) services, family planning annual exams, and supplies and services, such as dispensing certain contraception.

HHSC reimburses HTW providers for the provision of client services on a fee-for-service basis. HHSC also pays contracted organizations for support services that enhance client service delivery. These activities include assisting clients with enrollment, client-based and community-based educational activities, and direct clinical care for clients deemed presumptively eligible for services, among other activities. HTW-contracted entities are required to report whether they attained the goals and objectives that are developed in the work plans they submitted to HHSC.

HTW services are available to women that are U.S. citizens or eligible immigrants of childbearing age (ages 15 to 44) with an income at or less than 200 percent of the federal poverty limit (FPL), which is \$24,280 for a single person for 2018. In addition, eligible clients must be uninsured Texas residents who are not pregnant, shown in **Figure 4**.

After a client is determined to be eligible for the program, she can receive services for one year and can renew enrollment every year if she still qualifies. Enrollment is effective on the first day of the month in which the application is received.

According to HHSC, during fiscal year 2017, the average monthly number of unduplicated women enrolled in HTW was 167,178. The unduplicated number of enrolled women accessing services through the program for that year was 132,542. On average, 15.0 percent of women enrolled in HTW accessed services during any month of fiscal year 2017.

HTW expenditures during fiscal year 2017 were \$58.6 million in All Funds. The majority of these expenditures, \$48.2 million, was for client services provided through the fee-for-service component of the program. The remaining \$10.3 million were for support services provided by contracted entities.

FAMILY PLANNING PROGRAM

FPP provides low-cost or no-cost reproductive healthcare, family planning, prenatal, and preventive screening services to eligible individuals. Eligible clients with incomes at greater than the FPL may be charged a copayment not to exceed \$30. Women and men may access services through FPP. The goal of the program is to help individuals plan the timing of having children, decrease unintended pregnancies, and improve pregnancy, birth, and general health outcomes.

Program benefits are similar to those for HTW, shown in **Figure 3**. Most of the services received by clients during fiscal year 2017 were for contraceptive and STI/STD services, family planning annual exams, and supplies and services, such as providing certain contraception.

HHSC reimburses FPP providers of client services on a fee-for-service basis. In addition, HHSC pays family planning contractors to develop and maintain infrastructure related to providing client services. This funding supports clinic facilities, staff salaries, and utilities. As with HTW, FPP-contracted entities must report on whether they met the goals they developed in their applications to participate in the program.

FPP services are available to individuals age 64 and younger with incomes at or less than 250 percent of the FPL, which is \$30,350 for a single person for 2018. Clients also must be Texas residents, shown in **Figure 4**. Eligibility is determined at a contracted clinic. When eligible, clients can receive

services for one year and can renew enrollment every year if they still qualify.

FPP served 96,991 clients during fiscal year 2017 at a cost of \$35.7 million, according to HHSC. Client services through the fee-for-service component of the program accounted for \$27.3 million of the expenditures. Costs to family planning contractors to develop and maintain infrastructure for the provision of client services accounted for the remaining \$8.4 million.

BREAST AND CERVICAL CANCER SCREENING PROGRAM

BCCS helps low-income women access screening and diagnostic services for breast cancer and cervical cancer at no cost to clients. Breast and cervical cancers are easier to treat when detected early. **Figure 3** shows that program benefits include breast cancer and cervical cancer screenings, diagnostic services, and cervical dysplasia treatment. HHSC reimburses BCCS providers for client services on a fee-for-service basis.

Eligible women must be Texas residents who do not have access to programs or benefits offering the same services. Age requirements vary for the different screening, diagnostic, and treatment services covered. In addition, eligible women must have an income at or less than 200 percent of the FPL, shown in **Figure 4**. Clients may receive services as long as they remain eligible.

According to HHSC, during fiscal year 2017, BCCS spent \$5.3 million in All Funds and provided services to 32,075 clients.

TITLE V PRENATAL MEDICAL AND DENTAL PROGRAMS

The federal Social Security Act, Title V, Maternal and Child Health Services Block Grant, is a state–federal partnership to improve maternal and child health. In Texas, one component of this program is the Title V Prenatal Program, which provides prenatal services for up to 60 days to pregnant women who are in the process of applying for and enrolling in the CHIP Perinatal Program. Another component, the Title V Prenatal Dental Program, provides dental services to pregnant women and up to three months postpartum. All medically indicated prenatal and dental services are covered. In addition, high-risk pregnant women qualify for two case-management visits, shown in **Figure 3**. HHSC reimburses providers in both programs through a fee-for-service model.

Clients with incomes at greater than the FPL may be assessed copayments not to exceed 25.0 percent of the total

**FIGURE 3
WOMEN'S HEALTH PROGRAMS SERVICES, FISCAL YEAR 2017**

HEALTHY TEXAS WOMEN	FAMILY PLANNING PROGRAM	BREAST AND CERVICAL CANCER SCREENINGS	TITLE V PRENATAL MEDICAL AND DENTAL PROGRAMS (1)
Annual family planning and preventive healthcare visit	Annual family planning and preventive healthcare visit	Clinical breast examination	Prenatal medical services
Contraceptive services	Contraceptive services	Mammogram	Two case-management visits for high-risk pregnant women
Preconception care	Preconception care	Pelvic examination and pap test cervical screening	Two postpartum care visits
Basic infertility services	Basic infertility services	Human papillomavirus DNA test	Prenatal and postpartum dental services up to three months postpartum
Cervical cancer screening and diagnosis	Cervical cancer screening and diagnosis	Diagnostic services	
Screening and treatment of cervical intraepithelial neoplasia	Screening and treatment of cervical intraepithelial neoplasia	Cervical dysplasia management and treatment	
Breast cancer screening and diagnosis	Breast cancer screening and diagnosis		
Screening and treatment for sexually transmitted infection (STI) and sexually transmitted disease (STD)	Screening and treatment for STI/STD		
Human immunodeficiency virus (HIV) testing	HIV testing		
Pregnancy testing	Pregnancy testing		
Recommended immunizations	Recommended immunizations		
Screening and treatment of diabetes, hypertension, and elevated cholesterol	Screening for diabetes, hypertension, and elevated cholesterol		
Screening and treatment of postpartum depression	Prenatal care services		

NOTE: The Title V Prenatal Medical Program and Title V Dental Program are part of the state–federal partnership to improve maternal and child health provided in the federal Social Security Act, Title V, Maternal and Child Health Services Block Grant.
SOURCES: Health and Human Services Commission; Department of State Health Services.

reimbursement amount for the visit. However, clients who declare an inability to pay copayments cannot be denied services.

Figure 4 shows that eligible women must be pregnant or postpartum Texas residents with incomes at or less than 185 percent of the FPL, which is \$22,459 for a single person for 2018.

According to HHSC, the Title V Prenatal Medical and Dental programs served 4,285 women age 22 and older during fiscal year 2017 at a cost of \$1.1 million in All Funds.

**OTHER PROGRAMS PROVIDING
WOMEN'S HEALTH SERVICES**

In addition to the four women's health programs, eligible women may access women's health services through the Texas Medicaid and CHIP Perinatal programs.

Texas Medicaid provides health coverage to certain categories of individuals, including pregnant women, related caretakers of dependent children, and people with disabilities. In addition, the Medicaid for Breast and Cervical Cancer Program provides access to cancer treatment services through full Medicaid benefits to certain women with qualifying cancer diagnoses. Age and financial eligibility requirements vary among eligibility categories, but a client must be a Texas resident and a U.S. citizen or qualified noncitizen to qualify.

**FIGURE 4
WOMEN'S HEALTH PROGRAMS ELIGIBILITY, FISCAL YEAR 2017**

REQUIREMENT	HEALTHY TEXAS WOMEN	FAMILY PLANNING PROGRAM	BREAST AND CERVICAL CANCER SCREENINGS (1)	TITLE V PRENATAL MEDICAL AND DENTAL PROGRAMS (2)
Citizenship	U.S. citizen or eligible immigrant			
Texas Resident	X	X	X	X
Without access to programs providing same services	X		X	X
Women	X		X	X
Income limit	200% of the federal poverty level (FPL)	250% of the FPL	200% of the FPL	185% of the FPL
Age	15 to 44	64 and younger	breast cancer screening: 40–64; cervical cancer screening: 21–64; breast and cervical cancer diagnostic services: 18–64	
Other	Not pregnant		breast and cervical cancer diagnostic services: must have abnormal test result; cervical dysplasia management and treatment: must have qualifying diagnosis	must be pregnant or postpartum; prenatal medical services: must be in the process of applying for and enrolling in CHIP Perinatal (3)

NOTES:

- (1) Some coverage of these Breast and Cervical Cancer Screenings services is available to certain women age 65 and older.
- (2) The Title V Prenatal Medical Program and Title V Dental Program are part of the state–federal partnership to improve maternal and child health provided in the federal Social Security Act, Title V, Maternal and Child Health Services Block Grant.
- (3) CHIP=federal Children’s Health Insurance Program.

SOURCES: Health and Human Services Commission; Department of State Health Services.

The CHIP Perinatal program provides prenatal and limited postpartum services to pregnant women that are not eligible for Texas Medicaid due to income or immigration eligibility requirements.

RECENT INITIATIVES

The state has undertaken several initiatives to improve participation in the women’s health programs. These efforts include provider and client outreach activities and autoenrollment of Texas Medicaid for Pregnant Women clients into HTW. State agencies also are working to increase access to long-acting reversible contraception, the most effective method of reversible contraception.

PROVIDER AND CLIENT OUTREACH

When HTW and the restructured FPP were instituted, HHSC conducted client and provider outreach to increase awareness and enrollment. Client outreach activities included media advertising campaigns and a reformatted website. Since the program began, HTW has seen an increase in enrollment each month. During fiscal year 2017, monthly enrollment grew 109.0 percent, from 105,406 clients to 220,154 clients. During fiscal year 2017, 132,542 enrolled HTW clients and 96,991 FPP clients accessed program services.

Provider outreach activities included training, contact through community partners and professional organizations, and outreach at professional or community-related events.

During fiscal year 2017, 5,342 fee-for-service providers were enrolled in HTW to serve eligible program clients. This enrollment is a 16.1 percent increase from fiscal year 2015, the last full year that TWHP was in operation. During fiscal year 2017, 2,896 fee-for-service providers billed for services provided to HTW clients. According to HHSC, this amount may undercount the actual number of providers serving clients in the program, because providers may not always file claims through their personal identification numbers. For the same year, HTW had 39 contracted providers with 201 clinic sites. HHSC is recruiting new HTW providers to increase access and provide additional options to clients.

During fiscal year 2017, FPP had 53 contracted providers with 258 clinic sites.

AUTOENROLLMENT INTO HEALTHY TEXAS WOMEN

Texas Medicaid for Pregnant Women clients ages 18 to 44 automatically are enrolled in HTW upon conclusion of their Medicaid coverage. Automatic enrollment decreases the burden of reenrollment for clients and promotes continuity of care. Furthermore, access to family planning during the postpartum period can improve health outcomes for mothers and children. Coordination between HTW and Texas Medicaid has enabled many clients to keep the same providers as they transition between programs. During fiscal year 2017, 38,959 women were autoenrolled from Texas Medicaid for Pregnant Women into HTW.

Currently, women age 19 who no longer are eligible by age for CHIP or Children's Medicaid coverage must apply for HTW coverage. HHSC has determined that if these women also were autoenrolled into HTW, a significant number of unintended pregnancies would be averted. In addition, because most teen births occur from ages 18 to 19, autoenrolling previously eligible CHIP or Children's Medicaid clients into HTW may decrease the state's teen birth rate. According to HHSC, autoenrolling previously eligible CHIP or Children's Medicaid clients into HTW would require updating the Texas Integrated Eligibility Redesign System, the state's system of record for eligibility determinations for health and social programs.

LONG-ACTING REVERSIBLE CONTRACEPTION

Long-acting reversible contraception (LARC) refers to intrauterine and subdermal contraceptive devices. LARC is considered highly effective and easy to use, which decreases the likelihood that it will be used inconsistently or incorrectly compared to other contraceptive methods. In addition,

LARC lasts for several years and often does not require follow-up visits with a physician. Despite these benefits, LARC is used by 8.0 percent of women of childbearing age nationally, according to data from the Centers for Disease Control and Prevention.

Texas state agencies are working to increase access to these devices because of their potential to avert unintended pregnancies and to improve birth outcomes through planning healthy pregnancy spacing. For example, HHSC has developed a toolkit for providers to support access to LARC. In addition, HHSC has changed certain policies to ensure that providers are reimbursed appropriately for providing LARC. HHSC anticipates that increasing access to LARC will save state resources through the aversion of unintended births. HTW, FPP, and Texas Medicaid cover LARC. During fiscal year 2017, 10,203 HTW and 7,675 FPP unduplicated clients received LARC.

FISCAL IMPACT OF HURRICANE HARVEY ON STATE AGENCIES

The 2017 hurricane season was one of the most active in U.S. history, causing widespread damage to both public and private property, livelihoods, and critical infrastructure. Hurricane Harvey made landfall on August 25, 2017, as a Category 4 hurricane near Rockport. As it stalled over parts of southern Texas, Harvey produced flooding that temporarily closed ports, airports, and roads, preventing access to the disaster-stricken area. Twenty-four hospitals were evacuated, 61 communities lost drinking water capability, 23 ports were closed, and more than 781 roads became impassible. Nearly 780,000 Texans were evacuated from their homes.

The early aftermath of Hurricane Harvey left more than 18 inches of standing floodwater in nearly 80,000 homes, with more than five feet of floodwater in almost 30.0 percent of those homes. Eighty percent of households affected by Hurricane Harvey did not have flood insurance. Initial estimates projected that approximately 32,500 households would need direct housing assistance. At the storm's peak, community partners in Texas sheltered approximately 42,400 survivors, and approximately 1,400 survivors remained in shelters 30 days after Harvey made landfall.

The cost of Hurricane Harvey likely will play a significant role in budget and policy decisions during the Eighty-sixth Legislature, 2019. The National Centers for Environmental Information estimated Hurricane Harvey's total cost at \$125.0 billion in damages, second only to Hurricane Katrina in 2005.

This overview examines Hurricane Harvey's fiscal impact on state agencies.

FACTS AND FINDINGS

- ◆ More than 70 state agencies and institutions of higher education responded to Hurricane Harvey by providing financial assistance, goods, and services including evacuation assistance, debris removal, shelter, food, and clothing.
- ◆ The fiscal impact to state agencies has reached an estimated \$3.3 billion in All Funds, including \$377.5 million in General Revenue Funds, \$5.3 million in General Revenue–Dedicated Funds, \$246.9 million in Other Funds, and \$2.7 billion in Federal Funds.

- ◆ Federal Funds received by state agencies total \$2.3 billion as revenues.
- ◆ Of the \$3.3 billion in All Funds, a reported \$1.7 billion was passed through to local entities and individuals through various federal programs for Public Assistance, Direct Housing, Other Needs Assistance, Disaster Supplemental Nutrition Assistance, and Dislocated Worker grants.
- ◆ Institutions of higher education reported \$96.8 million in actual expenditures including \$86.9 million in Other Funds, such as institutional funds.
- ◆ The U.S. Department of Housing and Urban Development awarded an estimated \$5.0 billion in Community Development Block Grant–Disaster Recovery grants to Texas in November 2017, which will help pay for housing infrastructure, public facilities, and business needs in areas affected by Hurricane Harvey.

DISCUSSION

State and federal agencies performed approximately 122,331 rescues and evacuations throughout Texas in the days after Hurricane Harvey's landfall. Another 5,249 rescues targeted pets and animals. State agencies spent more than \$321.5 million for Harvey relief. On February 13, 2018, the Governor announced that Texas would receive \$1.0 billion in hazard mitigation funding from the Federal Emergency Management Agency (FEMA) for Texas cities and counties affected by the hurricane. This amount was in addition to Texas' share of the \$90.0 billion relief package that the U.S. Congress approved for states hit by hurricanes, wildfires, and other disasters.

More than 300 voluntary organizations worked to support Hurricane Harvey survivors, including Texas and national Voluntary Organizations Active in Disasters and locally based groups. Volunteers removed debris from homes, supported shelters, provided food, distributed supplies, provided emotional and spiritual support, repaired and rebuilt housing, and provided crisis support. The Salvation Army deployed 4,457 volunteers who worked more than 40,714 hours providing food, donations, and shelter services.

STATE RESPONSE

The Governor has the responsibility to declare a state emergency or disaster. However, multiple state agencies coordinate disaster preparation, response, and recovery. The Trusteed Programs within the Office of the Governor provided financial disaster assistance to state agencies and local governments. These awards were generally treated as short-term repayable grants.

The Department of Public Safety (DPS), Texas Division of Emergency Management (TDEM), is responsible for coordinating the state's emergency management program, which is intended to ensure that state and local government entities implement plans and programs to help prevent or lessen the effects of emergencies and disasters. TDEM also coordinates the efforts of state agencies, local governments, schools, hospitals, and other entities through DPS' State Operations Center located in Austin. Supported by the U.S. Department of Energy (DOE), TDEM helped coordinate the restoration of power to more than 300,000 customers. In a coordinated response, utility companies activated their mutual support networks and assigned more than 10,000 workers, including crews, line workers, and support personnel, from at least 21 sites for response and recovery efforts. DOE coordinated with the U.S. Environmental Protection Agency to issue waivers authorizing supply pipelines to carry more fuel. The U.S. Secretary of Energy authorized the release of 5.3 million barrels of crude oil from the Strategic Petroleum Reserve as a resource. With DPS, TDEM coordinated the provision of more than 3,000 full-time staff to assist with security, search and rescue, and other response-related activities. DPS reported approximately \$958.4 million in hurricane-related expenditures, which includes \$852.1 million in Federal Funds, and 946.3 million passed through to other state agencies, institutions of higher education, and local entities.

The Health and Human Services Commission (HHSC) provided assistance to individuals before, during, and after Hurricane Harvey. HHSC processed and approved more than 280,000 applications for FEMA Other Needs Assistance totaling approximately \$300.0 million. FEMA provided 75.0 percent of the funding.

The Department of State Health Services (DSHS) provided emergency medical service personnel and ambulances to evacuate hospital and nursing home patients. DSHS' medical response functions included assessing public health and medical needs, conducting health surveillance, coordinating the provision of patient care, and providing medical

personnel, and medical and veterinary equipment and supplies. The agency also worked to ensure the safety and security of food, drugs, and medical supplies. DSHS assessed the health and medical infrastructure of affected areas and provided resources necessary to expedite recovery, including staff, supplies, and equipment. Following the hurricane's aftermath, the agency spent approximately \$13.0 million, most of which is expected to be reimbursed by the federal government.

The Texas Department of Criminal Justice (TDCJ) provided approximately 3,000 staff to assist with response and recovery operations. TDCJ evacuated more than 5,000 offenders and 900 parolees and probationers from facilities located in Beaumont, Houston, Richmond, and Rosharon.

The Texas Parks and Wildlife Department (TPWD) responded to the hurricane by providing approximately 500 TPWD officers and conducting water-related rescues. Strike teams from across the state shuttled equipment, cleared debris, gutted buildings, restored facilities, and preformed essential tasks. TPWD's State Parks Division waived fees for more than 8,000 displaced individuals who stayed temporarily in numerous state parks. Of the estimated \$53.0 million in reported expenses and lost revenue, \$32.0 million are attributed to state park infrastructure damages.

The Texas Military Department (TMD) deployed staff to perform search-and-rescue operations in areas affected by hurricanes and other natural disasters. TMD mobilized more than 17,000 Texas Air National Guard, Texas Army National Guard, and Texas State Guard Service members in coordination with Texas Task Force 1 to support evacuations in flooded areas, conduct air and land search and rescue operations, and provide security in conjunction with TDEM.

The Texas Workforce Commission began accepting unemployment insurance claims from affected Texans the day that Hurricane Harvey made landfall. FEMA activated Disaster Unemployment Assistance (DUA) for Texans who lost their jobs due to the storm. The agency processed more than 141,000 disaster unemployment insurance claims and distributed approximately \$21.0 million in federal DUA benefits and an estimated \$175.0 million in Unemployment Insurance benefit payments.

The Texas Commission on Environmental Quality (TCEQ), as directed by the Office of the Governor, transferred \$90.0 million to TDEM to help local governments pay their required local matches for federal debris-removal assistance.

FEDERAL SUPPORT

FEMA coordinates most of the federal government’s natural disaster assistance efforts. The Public Assistance (PA) program is the agency’s largest disaster assistance program, through which FEMA provides supplemental aid to communities and states to facilitate recovery efforts. It provides assistance for debris removal, implementation of emergency protective measures, and permanent restoration of infrastructure. The program is centered on a partnership among FEMA and state and local officials. The federal share of the program typically is 75.0 percent, and state and local agencies provide the remaining 25.0 percent. This ratio is subject to change at the President’s discretion.

Before reimbursement, applicants must submit project work sheets to FEMA for review. This review often requires additional information and documentation before final assistance is determined. After FEMA has approved all project worksheets, the agency processes state payments through TDEM. As a condition of the financial assistance, recipients must obtain and maintain insurance on affected properties. **Figure 1** shows the types of eligible projects for public assistance grants and the state and federal shares for each type.

After a presidential disaster declaration, FEMA awards grants to state and local governments for long-term projects designed to prevent and mitigate future damages. The Hazard Mitigation Grant Program is intended to decrease the loss of life and property due to natural disasters. Types of projects funded by the program include elevating flood-prone structures and retrofitting property to decrease wind, flood, and fire damage. Like most PA grants, FEMA may fund up to 75.0 percent of project grants.

On February 9, 2018, the President signed the federal Bipartisan Budget Act of 2018, which includes a provision amending the federal Stafford Act to codify the following changes to FEMA rules:

- religious institutions that provide service to local communities can be eligible immediately for federal aid during a disaster;
- private nonprofit facilities that do not provide critical services must apply to the U.S. Small Business Administration for disaster loans and either be determined ineligible for such a loan or have obtained such a loan in the maximum amount for which the SBA determines the facility to be ineligible; and

**FIGURE 1
FEDERAL EMERGENCY MANAGEMENT AGENCY PUBLIC ASSISTANCE GRANTS CALENDAR YEAR 2017**

CATEGORY AND TYPE OF WORK	FEDERAL SHARE	STATE SHARE
A – Debris removal	90.0%	10.0%
B – Emergency protective measures (1)	100.0%	0.0%
C – Roads and bridges	75.0%	25.0%
D – Water control facilities	75.0%	25.0%
E – Buildings and equipment	75.0%	25.0%
F – Utilities	75.0%	25.0%
G – Parks, recreational facilities, and other items	75.0%	25.0%

NOTE: (1) Emergency protective measures are funded at a federal–state ratio of 90.0 percent to 10.0 percent after the first 30 days.
SOURCES: Legislative Budget Board; Federal Emergency Management Agency.

- new construction is prohibited in coastal high hazard areas.

The U.S. Department of Housing and Urban Development (HUD) distributes and manages the Community Development Block Grants–Disaster Recovery (CDBG–DR) grants to state and local governments. The General Land Office (GLO) is the designated state agency in Texas that manages CDBG–DR grant funding to rebuild infrastructure and housing in affected areas. CDBG–DR grants are based on a formula that accounts for recovery needs not met by other types of federal assistance. These grants are intended primarily to assist low-income residents in presidentially declared disaster areas. Activities funded with CDBG–DR grants include relocating residents; conducting transportation, water, and sewage improvement projects; developing jobs; and purchasing flood-prone property.

In response to Hurricane Harvey, HUD allocated \$57.8 million in CDBG–DR funds to Texas in December 2017. GLO’s State Action Plan allocates 80.0 percent of the award to address unmet needs, with the remaining 20.0 percent allocated to the 33 CDBG–DR-eligible counties.

Texas was awarded \$5,035.2 million in CDBG–DR funds in April 2018 for disasters that occurred during fiscal years 2015 to 2017. These funds are in addition to the \$57.8 million and \$5,024.2 million in CDBG–DR funds previously awarded to the state. HUD’s most recent award of CDBG–DR funds serves two purposes: \$652.2 million to help rebuild severely damaged homes, businesses, and critical

infrastructure; and \$4,297.2 million to support mitigation activities, including elevating homes, buying out property, and hardening structures against wind and water.

GLO developed a State Action Plan for the \$57.8 million allocation, which received HUD approved in June 2018. The plan details the proposed use of all funds, including criteria for eligibility and how funds will address long-term recovery and restoration of infrastructure, housing, and economic revitalization in the most distressed areas that GLO identified. The allocation is limited to unmet recovery needs from Hurricane Harvey. HUD identified Aransas, Brazoria, Chambers, Fort Bend, Galveston, Hardin, Harris, Jefferson, Liberty, Montgomery, Nueces, Orange, San Jacinto, San Patricio, Victoria, and Wharton counties as the most distressed areas. **Figure 2** shows the counties most affected by Hurricane Harvey.

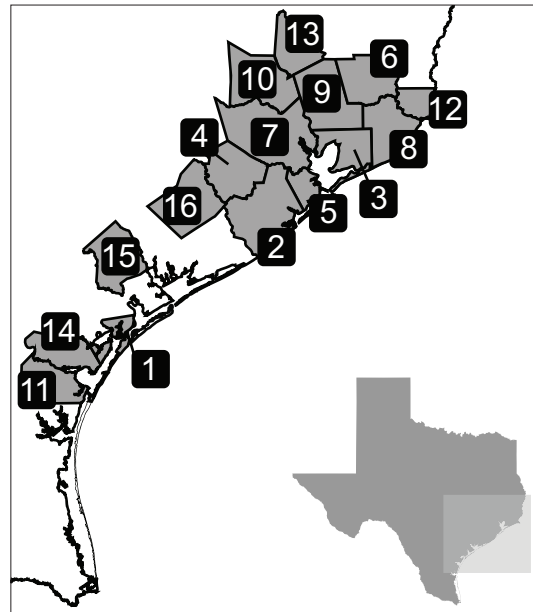
The U.S. Small Business Administration (SBA) coordinated with the Texas Gulf Coast Small Business Development Center to open five business recovery centers for businesses affected by the hurricane. SBA extended the first payment deferment for loans from the standard five months to 11 months. SBA also provided an automatic 12-month deferment of principal and interest payments for eligible business and disaster loans.

DISASTER-RELATED FUNDING SOURCES

Texas agencies utilized various federal resources in response to the state’s hurricane needs. The major sources of Federal Funds totaling \$2.3 billion that Texas agencies allocated included the following sources:

- FEMA – Public Assistance Grants, Hazard Mitigation Grants, Fire Management Assistance Grants, Individual and Housing Program (including Other Needs Assistance), and Disaster Unemployment Assistance;
- HUD –CDBG Disaster Recovery;
- U.S. Department of Health and Human Services – Medicaid, Children’s Health Insurance Program, and Temporary Assistance for Needy Families;
- U.S. Department of Agriculture – Supplemental Nutrition Assistance Program and Disaster Supplemental Nutrition Assistance Program;
- U.S. Department of Education – Disaster Assistance for Students;

**FIGURE 2
TEXAS COUNTIES MOST AFFECTED BY HURRICANE HARVEY, FISCAL YEAR 2018**



TEXAS COUNTIES

1	Aransas	9	Liberty
2	Brazoria	10	Montgomery
3	Chambers	11	Nueces
4	Fort Bend	12	Orange
5	Galveston	13	San Jacinto
6	Hardin	14	San Patricio
7	Harris	15	Victoria
8	Jefferson	16	Wharton

SOURCE: General Land Office.

- U.S. Department of Labor – National Dislocated Workers Grants;
- Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies Act, Gulf Coast Ecosystem Restoration Council funds; and
- other federal funding sources, such as Federal Highway Administration, Emergency Relief Program funds.

Other federal funding sources include the Federal Highway Administration, the Emergency Relief Program, the U.S. Army Corps of Engineers (USACE). In July 2018, USACE announced nearly \$5.0 billion in funding for critical flood-mitigation projects, including high-priority projects

identified by the Office of the Governor. In addition, \$16.0 million will fund studies for projects to help make the state more resilient following storms.

In July 2018, TCEQ submitted the Texas State Expenditure Plan (SEP) to the Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast States' (RESTORE) Gulf Coast Ecosystem Restoration Council. The council must approve the SEP to secure RESTORE grant funds in accordance with the RESTORE Act's Spill Impact Component. Approximately \$31.0 million is available to fund activities in an approved Texas SEP. Due to the devastating and long-range effects of Hurricane Harvey, the Governor and the TCEQ Commissioner determined that Texas' SEP will focus on hurricane recovery efforts, ecological improvements, and economic programs for the area. Specific projects will be selected following the council's approval of the SEP.

PUBLIC EDUCATION AND FOUNDATION SCHOOL PROGRAM

Hurricane Harvey's effect on area school districts include displaced students, damaged facilities, and loss of local property tax revenue. Certain disaster-related costs are statutorily required through the Foundation School Program (FSP), which is the principal vehicle for distributing state aid to school districts to provide educational services, while other disaster-related FSP costs are subject to the discretion of the Legislature.

Preliminary estimates of statutorily required state costs to the FSP total \$685.4 million in the 2018-19 biennium, and \$715.1 million in the 2020-21 biennium. Estimates of discretionary costs total \$1,114.3 million. TEA continues to collect and analyze data to provide options for school district relief through the state's school finance system.

The following statutorily required state costs of \$685.4 million for the 2018–19 biennium includes:

- \$421.9 million in increased state aid for fiscal year 2019 for 12 school districts that voted to reappraise 2017 taxable values to account for property damaged by the hurricane. The Texas Tax Code, Section 23.02, authorizes school districts to reappraise properties affected by an officially declared disaster;
- \$147.0 million in additional funding through the compensatory education allotment, which provides additional weighted FSP funding for economically disadvantaged students. Compensatory education

funding is based on a school district's highest six months of participation in the National School Lunch Program during the previous federal fiscal year. The number of students eligible for the lunch program and, thus, compensatory education funding increased after school districts affected by the hurricane received a waiver from the Texas Department of Agriculture to provide free lunch to all students from August to October 2017. TEA estimates the increased compensatory education costs to the FSP to be \$103.0 million for fiscal year 2018 and \$44.0 million for fiscal year 2019;

- \$86.5 million for a onetime average daily attendance adjustment during school year 2017–18 to hold school districts harmless for hurricane-related decreases in student attendance; and
- \$30.0 million in decreased recapture payments from school districts not subject to recapture whose facilities were damaged by the storm. The Texas Education Code, Section 41.0931, authorizes these districts to decrease their recapture payments by the amount of their unreimbursed disaster remediation costs for two years following the disaster.

The statutorily required state cost for the 2020–21 biennium totals \$715.1 million in increased state aid due to decreased property values during tax year 2018. This analysis does not attempt to quantify the effect of decreased property values that may persist during future tax years.

The following potential costs to the FSP are not statutorily required but are subject to potential actions of the 86th Legislature:

- \$1,054.3 million in additional state aid to offset decreased maintenance and operations tax collections. Because state aid within the FSP is calculated based on lagged property values, affected school districts realized decreased property tax collections a year before the state aid was adjusted, potentially causing them financial hardship.
- \$60.0 million in facilities damage remediation costs for school districts not subject to recapture, pursuant to the Texas Education Code, Chapter 42, after accounting for FEMA and insurance payments. The Eighty-sixth Legislature, 2019, could make an appropriation to provide remediation for these school districts, or to districts that already have offset

their recapture payments fully, pursuant to the Texas Education Code, Chapter 41; and

- \$2.0 million for substantial costs that, according to the Texas Education Agency (TEA), Regional Education Service Centers have incurred as they help districts with hurricane-related technical assistance.

UNMET LOCAL AND STATE NEEDS

Current estimates for hurricane-related expenditures total approximately \$3.2 billion. Agencies estimate offsetting revenues totaling \$2.5 billion in Federal Funds. Based on current information, the total fiscal impact to the state (i.e., actual and estimated) could reach \$6.3 billion, not including education costs. These costs could be offset by an estimated \$5.5 billion in revenues, of which \$5.3 billion is Federal Funds.

If these estimates are realized, unmet needs could be realized at \$700.0 million, which is 11.0 percent of total hurricane-related expenditures in the state.

OVERVIEW OF TEXAS EXPORTS DURING CALENDAR YEAR 2017

Goods and services produced in Texas and sold in foreign countries represented 15.6 percent of the total Texas economy in calendar year 2017. Texas has ranked as the largest exporting state in the country in total dollar value of exports every year since 2002. Texas ranks second, behind only Louisiana, in having the largest percentage of a state economy based on exports. This relatively large exposure to international markets presents the Texas economy with larger fluctuations from any overall increase or decrease in the demand for and relative competitiveness of U.S. exports.

FACTS AND FINDINGS

- ◆ Exports of goods and services from Texas totaled \$264.1 billion in calendar year 2017, a 14.3 percent increase from the previous year. This growth rate represented the highest value in Texas since calendar year 2011. However, total exports remain at less than the 2014 peak level of \$285.6 billion.
- ◆ During calendar year 2017, Texas exporters were aided by two exogenous factors: the depreciating value of the U.S. dollar, and improving economic growth of several of the state's largest trading partners.

- ◆ Recent events such as the repeal of an export ban will have important effects on the exports of natural gas and crude oil from Texas.

DISCUSSION

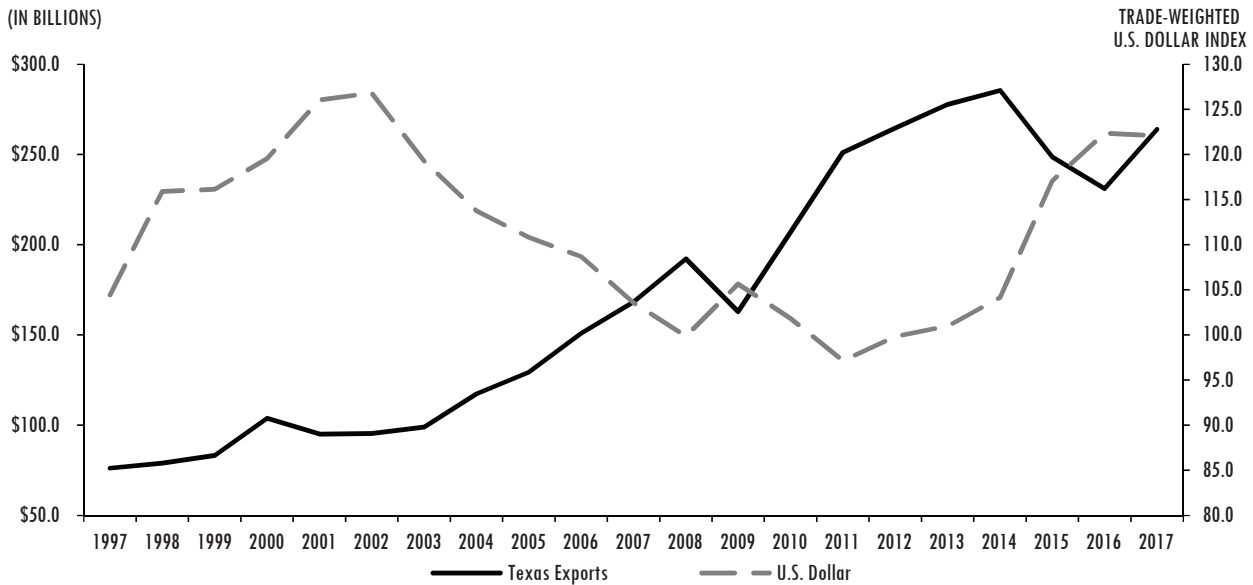
After two consecutive years of decreasing export growth, the total value of Texas goods and services sold internationally increased during calendar year 2017. The total dollar value of all goods and services produced in Texas and sold in foreign countries was \$264.1 billion during calendar year 2017, a 14.3 percent increase from the \$231.1 billion sold during calendar year 2016. In addition, Texas outperformed the U.S. as a whole for the year, with the total value of all U.S. exports increasing by 6.6 percent during 2017 to \$1,546.7 billion. Among the 50 states, Texas' 2017 performance ranked as the seventh highest in percentage change from the previous year. Depreciation of the U.S. dollar in 2017, shown in **Figure 1**, helped the competitiveness of Texas products in international markets. The value of the U.S. dollar, as measured by the Federal Reserve Bank of St. Louis' Trade Weighted U.S. Dollar Index, decreased by 7.0 percent during calendar year 2017, the largest annual decrease since 2007.

FIGURE 1
TRADE-WEIGHTED U.S. DOLLAR INDEX, CALENDAR YEAR 2017



NOTE: The index represents a weighted average of the foreign exchange value of the U.S. dollar against the currencies of 26 major U.S. trading partners. A value of 100 represents the value of the index in January 1997.
SOURCE: Federal Reserve Economic Data.

FIGURE 2
TEXAS EXPORTS, CALENDAR YEARS 1997 TO 2017



SOURCE: World Institute for Strategic Economic Research WISERTrade Federal Reserve Economic Data.

The weakening of U.S. currency makes Texas goods and services cheaper for foreign buyers and, thus, increases their demand for Texas products. As shown in **Figure 2**, the value of the U.S. dollar and the value of Texas exports typically have an inverse relationship. Aside from currency markets, a pickup in overall world economic growth also contributed to the relative strength of both U.S. and Texas exports in 2017. According to the International Monetary Fund, total world economic output, as measured by Real Gross Domestic Product (GDP), increased by 3.7 percent in 2017, an increase from the 3.2 percent growth recorded in 2016. It is worth noting that Texas’ two largest trading partners, Mexico and Canada, who combine to purchase almost half of all Texas exports, both experienced GDP growth rates of less than the worldwide average, at 2.0 percent and 3.0 percent, respectively, during 2017. However, GDP for China, Texas’ third-largest trading partner, grew by 6.9 percent, fueling a 50.9 percent increase in its purchase of Texas goods and services in 2017.

EXPORTS BY INDUSTRY

Among the North American Industry Classification System (NAICS) categories, Computer and Electronic Products remained the leading export industry in Texas for the third consecutive year, with a value of \$47.0 billion in 2017, or 17.8 percent of the Texas total. However, despite remaining the largest export industry, Computer and Electronic

Products decreased slightly, by 0.4 percent, from the previous calendar year. The next largest industries were Petroleum and Coal Products and Chemicals, exporting a total of \$44.4 billion and \$40.0 billion, respectively, during calendar year 2017. Collectively, these top three industries accounted for half of all Texas imports during the year. Of the 29 major NAICS industry groups with export data, 19 increased during 2017, and 10 decreased relative to their 2016 levels.

In growth rates, the top three performing industries in 2017 were Oil and Gas, Petroleum and Coal Products, and Agriculture Products, which grew 132.1 percent, 25.3 percent, and 24.7 percent, respectively. Conversely, the fastest contracting industries during the year were Fish and Other Marine Products, Furniture and Fixtures, and Printing, Publishing, and Similar Products, whose values decreased by 40.7 percent, 13.1 percent, and 12.6 percent, respectively. **Figure 3** shows export data for the largest exporting industries in Texas during 2017.

EXPORTS BY STATE

Texas continues to be the largest exporter among U.S. states, a position it has had since 2002. State exports were 17.1 percent of the U.S. total during calendar year 2017, an increase from 15.9 percent during calendar year 2016. Despite brief decreases during 2015 and 2016, largely caused by hydrocarbon-related sectors, the Texas share of U.S. total exports has been increasing

FIGURE 3
TEXAS EXPORTS BY INDUSTRY, CALENDAR YEARS 2016 AND 2017

INDUSTRY	VALUE (IN BILLIONS)		PERCENTAGE CHANGE		PERCENTAGE OF TEXAS TOTAL	
	2016	2017	2016 FROM 2015	2017 FROM 2016	2016	2017
Computer and Electronic Products	\$47.1	\$47.0	4.1%	(0.4%)	20.4%	17.8%
Petroleum and Coal Products	\$35.4	\$44.4	(17.8%)	25.3%	15.3%	16.8%
Chemicals	\$36.6	\$40.0	(7.9%)	9.3%	15.9%	15.2%
Oil and Gas	\$13.8	\$32.0	2.2%	132.1%	6.0%	12.1%
Transportation Equipment	\$23.5	\$22.4	5.8%	(4.7%)	10.2%	8.5%
Machinery, Except Electrical	\$20.1	\$21.0	(18.9%)	4.8%	8.7%	8.0%
Electrical Equipment, Appliances, and Components	\$11.7	\$11.9	(9.4%)	2.2%	5.1%	4.5%
Fabricated Metal Products	\$7.7	\$7.6	(21.7%)	(1.5%)	3.3%	2.9%
Agricultural Products	\$4.6	\$5.7	10.9%	24.7%	2.0%	2.2%
Primary Metal Manufacturing	\$4.6	\$5.3	(25.8%)	13.7%	2.0%	2.0%
All Other Industries	\$25.9	\$26.8	(3.5%)	3.1%	11.2%	10.1%

SOURCE: World Institute for Strategic Economic Research WISERTrade.

steadily during the last two decades. Texas' largest state competitors, in order, are California, Washington, New York, Illinois, and Michigan, which exported \$171.9 billion, \$77.0 billion, \$75.3 billion, \$64.9 billion, and \$59.8 billion, respectively, of goods and services during 2017. Nine states' exports decreased during 2017, and 41 states had varying levels of increases. The top three fastest-growing states for exports during 2017 were West Virginia, Nevada, and New Hampshire; the slowest-growing states for exports were Idaho, Maine, and Vermont. At 14.3 percent, the 2017 export growth

rate in Texas was more than double the 6.6 percent rate of growth in the U.S. as a whole. Texas ranked seventh among the 50 states in export growth rate for 2017. **Figure 4** shows export data for the 10 states that are the largest exporters in the U.S. for 2017.

EXPORTS BY COUNTRY

The two largest buyers of Texas goods, Mexico and Canada, purchase a significant portion of the total amount of the state's exported goods. In 2017, Texas exporters sold \$97.2

FIGURE 4
TOP TEN STATES WITH LARGEST EXPORTING VALUES, CALENDAR YEARS 2016 AND 2017

STATE	VALUE (IN BILLIONS)		PERCENTAGE CHANGE		PERCENTAGE OF U.S. TOTAL	
	2016	2017	2016 FROM 2015	2017 FROM 2016	2016	2017
Texas	\$231.1	\$264.1	(7.0%)	14.3%	15.9%	17.1%
California	\$163.5	\$171.9	(1.1%)	5.2%	11.3%	11.1%
Washington	\$79.6	\$77.0	(7.9%)	(3.2%)	5.5%	5.0%
New York	\$76.7	\$75.3	(7.7%)	(1.9%)	5.3%	4.9%
Illinois	\$59.8	\$64.9	(5.8%)	8.6%	4.1%	4.2%
Michigan	\$54.7	\$59.8	1.4%	9.3%	3.8%	3.9%
Louisiana	\$48.4	\$56.5	(0.6%)	16.7%	3.3%	3.7%
Florida	\$52.0	\$55.0	(3.4%)	5.7%	3.6%	3.6%
Ohio	\$49.3	\$50.1	(3.6%)	1.6%	3.4%	3.2%
Pennsylvania	\$36.5	\$38.6	(7.5%)	5.9%	2.5%	2.5%
U.S. Total	\$1,451.0	\$1,546.7	(3.5%)	6.6%	N/A	N/A

SOURCE: World Institute for Strategic Economic Research WISERTrade.

FIGURE 5
TOP 10 LARGEST TEXAS EXPORT MARKETS, CALENDAR YEARS 2016 AND 2017

COUNTRY	VALUE (IN BILLIONS)		PERCENTAGE CHANGE		PERCENTAGE OF TEXAS TOTAL	
	2016	2017	2016 FROM 2015	2017 FROM 2016	2016	2017
Mexico	\$91.7	\$97.3	(1.3%)	6.0%	39.7%	36.8%
Canada	\$20.0	\$22.8	(21.8%)	14.1%	8.6%	8.6%
China	\$10.8	\$16.3	(6.2%)	50.9%	4.7%	6.2%
Brazil	\$7.1	\$9.9	(2.2%)	40.5%	3.1%	3.8%
South Korea	\$6.9	\$9.8	(14.8%)	42.0%	3.0%	3.7%
Japan	\$6.2	\$8.9	22.1%	43.4%	2.7%	3.4%
Netherlands	\$6.4	\$7.2	(5.3%)	13.1%	2.8%	2.7%
Singapore	\$4.7	\$5.8	(4.0%)	23.3%	2.0%	2.2%
United Kingdom	\$4.0	\$5.8	(6.7%)	44.6%	1.7%	2.2%
Taiwan	\$4.3	\$4.7	31.4%	8.9%	1.9%	1.8%
Texas Total	\$231.1	\$264.1	(7.0%)	14.3%	N/A	N/A

SOURCE: World Institute for Strategic Economic Research WISERTrade.

billion (an increase of 6.0 percent from 2016) and \$22.8 billion (an increase of 14.1 percent from 2016) of goods and services in Mexico and Canada, respectively. These amounts constituted 45.5 percent of the total value of all exports during the year. Other top markets for Texas exporters included China, South Korea, and Brazil, which purchased \$16.3 billion, \$9.9 billion, and \$9.8 billion, respectively, of the state's exports in 2017. In percentage increases, the fastest-growing export markets among major trading partners (defined as purchasing more than \$100.0 million in Texas exports during the year) in 2017 were the Cayman Islands, Togo, and the Bahamas, all of which more than doubled their purchases of Texas exports in 2017. Among the same group of major trading partners, the three worst performing countries were Qatar, Angola, and Gibraltar, which decreased 69.9 percent, 52.9 percent, and 51.0 percent, respectively, from 2016 to 2017. **Figure 5** shows export data for the 10 largest Texas export markets worldwide.

LIQUEFIED NATURAL GAS EXPORTS

Texas natural gas production averaged 21.7 billion cubic feet per day (Bcf/d) during calendar year 2017, which was 23.9 percent of total U.S. production. Total U.S. production represents a 37.2 percent increase since calendar year 2000. This increase is due in large part to drilling technological advances that have made large quantities of natural gas that are locked in shale and other rock formations commercially viable to produce. Such production previously was thought to be uneconomical. The large production increases have

been concentrated in the following states and formations: Pennsylvania – Marcellus; Ohio – Utica; Texas – Barnett, Eagle Ford, and Permian; and Louisiana – Haynesville. During the same period, growth of total U.S. commercial and residential consumption has increased 16.1 percent, leading to an excess of supply over demand. Most of that growth was due to natural gas displacing coal in power generation. The resulting excess of natural gas supplies has led to several large companies making or planning capital expenditures intended to increase exports of U.S. natural gas.

In 2017, the U.S. exported 8.7 Bcf/d of natural gas, or 9.5 percent of total production, which represented a record high total. Of this amount, 6.7 Bcf/d was exported via pipeline to Mexico and Canada and 1.9 Bcf/d was exported via vessel to 25 different countries. Of the total LNG exports in 2017, 46.0 percent were to Asia, 29.0 percent were to Latin America and South America, 14.0 percent were to Europe, and 10.0 percent were to the Middle East. To make natural gas exportable by vessel, it must be liquefied by lowering the temperature of the gas to approximately -260 degrees Fahrenheit, which occurs in a liquefaction facility called a train. Liquefaction of the gas decreases the volume by 99.8 percent, making it suitable for transport by ship, rail, or truck. The gas must then be shipped to a location with a regasification (regas) terminal at the importing destination. Before the production boom during the last 10 years, the U.S. was predicted to consume more natural gas than was produced domestically. Subsequently, several regas facilities

were constructed along the Atlantic and Gulf coasts. However, since the supply and demand balance has reversed, several of these facilities are adding liquefaction capabilities known as liquefaction trains to export the gas by ship to global markets. At the end of 2017 two facilities exported liquefied natural gas (LNG) from the U.S., and four facilities are expected to commence exporting in the next one to two years, including the following facilities:

- **Cheniere Energy** – Sabine Pass LNG: Located in southwest Louisiana, across the Texas border from Port Arthur on the Sabine River. Sabine Pass shipped its first LNG cargo in February 2016. Four trains are fully commissioned (operational), and a fifth train is being constructed. When complete, Sabine Pass LNG will process and export more than 3.5 Bcf/d;
- **Dominion Cove Point LNG** – The second operating LNG liquefaction terminal is Dominion Energy’s Cove Point LNG, located on the western shore of the Chesapeake Bay, approximately 70 miles south of Baltimore, Maryland. The liquefaction facilities began exporting LNG in March 2018. Dominion Cove Point has a total export capacity of 0.8 Bcf/d;
- **Cheniere Energy** – Corpus Christi LNG: Located on the La Quinta Channel on the northeast side of Corpus Christi Bay, this is the first facility to operate in Texas. Of the six, this is the only facility that is a new, or greenfield project, and not an expansion of an existing regas facility. Construction on the first two trains began in May 2015, and began operation in November 2018. Cheniere’s total export capacity of the facility will be 1.3 Bcf/d;
- **Freeport LNG** – Located on Quintana Island, southeast of Freeport. Construction of the liquefaction facilities began in November 2014, and the first train is expected to be operational in late 2019. Two additional trains are expected to be completed in 2020. Freeport LNG will have a total export capacity of 2.1 Bcf/d;
- **Cameron LNG** – Located on the western shore of the Calcasieu Ship Channel, approximately 20.0 miles south of Lake Charles, Louisiana. Construction of the liquefaction facilities began in October 2014, and the first train is expected to be operational in early 2019. Cameron LNG will have three trains with total export capacity of 2.0 Bcf/d; and

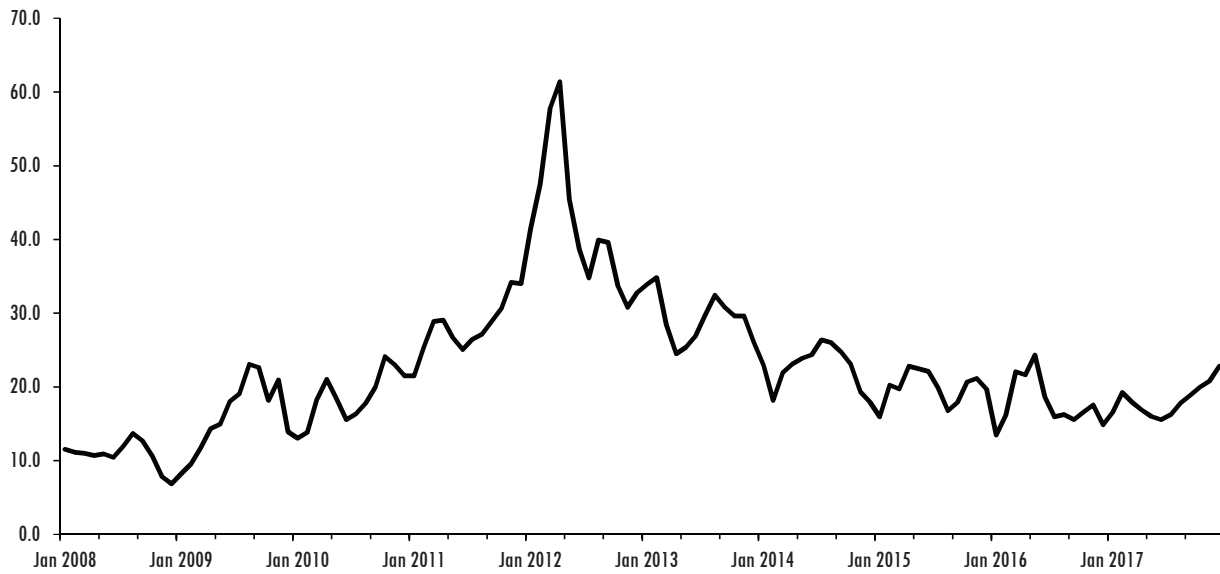
- **Elba Liquefaction Project** – Located on Elba Island, just east of Savannah, Georgia. Construction of 10 mini trains began in 2016 and is expected to be completed in 2019. Elba will have a total export capacity of 0.4 Bcf/d.

These facilities are the only six U.S. projects that have begun LNG export-related construction or operation. Several other liquefaction projects are seeking regulatory approval or final investment decisions, so export capacity could increase further. When operational in 2021, the combined export capacity of these six facilities will be 10.0 Bcf/d. For a sense of scale, that amount is nearly half of the total natural gas produced in Texas.

Global trade of LNG reached 37.8 Bcf/d in 2017. This amount represented an increase of 3.7 Bcf/d, or 11.0 percent, from 2016 levels. Asian countries are the largest consumers of LNG, with Japan, China, and South Korea representing the top 3 importers of LNG in 2017. The opening of the expanded Panama Canal in June 2016 has decreased LNG shipping costs from the U.S. Gulf Coast to Asian markets. These decreased costs make Texas-sourced gas more cost-competitive with its top LNG-producing rivals: Qatar, Australia, Malaysia, Nigeria, and Indonesia. The canal decreases the distance the LNG needs to travel, and the number of ships available to ship LNG will be expanded. Before the canal’s expansion, less than 10.0 percent of the global LNG fleet could travel through it; however, more than 90.0 percent will be able to pass through the completed expansion. Although the U.S. ranks as the sixth largest exporter of LNG, it is projected to become the second-largest exporter when all of the liquefaction projects are completed, exceeded by only Qatar.

Asian markets represent the bulk of potential export destinations. However, Europe and South America are expanding their uses of natural gas. European countries import more than half of the natural gas they consume, and approximately two-thirds of those imports arrive by pipeline from Russia. Recent actions by Russia have prompted other European countries to diversify their imported gas suppliers. European countries imported 6.2 Bcf/d of LNG in 2017, and demand is expected to increase, particularly because the continent already has a large amount of regasification infrastructure built, much of which is unused. Several South American countries also are expected to increase their consumption of LNG, most notably Brazil and Argentina.

FIGURE 6
GLOBAL CRUDE TO DOMESTIC GAS PRICE RATIO, JANUARY 2008 TO DECEMBER 2017



SOURCE: Federal Reserve Economic Data.

Besides the expected new U.S. LNG supply coming online, several other large liquefaction facilities, primarily in Australia and Russia, have combined to result in a global supply excess. At the end of 2017, total worldwide LNG nameplate liquefaction capacity (i.e., the maximum amount of LNG production) exceeded global demand by 10.4 Bcf/d. When construction projects are completed by 2023, this surplus is expected to increase by 29.8 percent, to 13.5 Bcf/d. This excess has the potential to hinder Texas LNG export prospects by decreasing LNG prices.

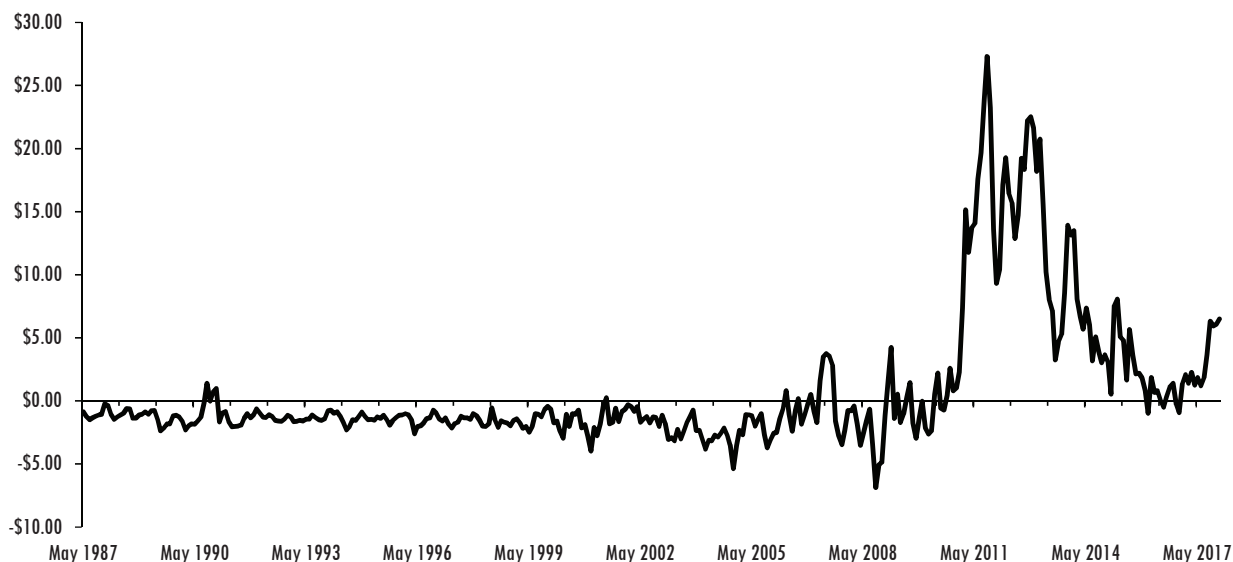
In addition to the LNG supply excess, the collapse of crude oil prices that began in late 2014 also represents a setback for potential Texas LNG exports. It is helpful to understand that, internationally, the price of LNG typically is linked to the energy-equivalent price of crude oil. However, domestic producers receive a price that usually is tied to the price at Henry Hub in Louisiana and is independent of crude oil prices. **Figure 6** shows the ratio of international crude oil prices to U.S. natural gas prices during the last 10 years. The higher this ratio is, the more attractive it becomes for Texas producers to export their natural gas as LNG instead of selling the gas domestically. The large spike in 2011 and 2012 helped spur the development of the six projects mentioned previously. These types of projects typically enter into long-term purchase agreements that essentially lock in prices during a period of many years. Therefore, the U.S.

liquefaction facilities in development should not be affected adversely by the subsequent decrease of the crude-to-gas ratio caused by recent crude oil price decreases. However, several liquefaction expansions previously announced by other companies could be delayed or cancelled because of these recent price movements and the excess LNG supply.

CRUDE OIL EXPORTS

Exports of unprocessed crude oil from the U.S. typically have been statutorily banned for the last four decades. The original ban was made in response to the 1973 Organization of the Petroleum Exporting Countries (OPEC) oil embargo to the U.S. and the corresponding shortage of oil in the U.S. Despite the ensuing normalization of crude oil trade after the embargo ended, the ban has remained; however, market conditions made the ban largely irrelevant until recently. U.S. consumption of crude oil has remained greater than domestic production since the 1980s, making the country a large net importer of oil. In certain circumstances, producers have been granted an exception to the regulations and exported crude oil, almost all of which has gone to Canada. These instances have been rare; exports have averaged only 1.5 percent of domestic production since the ban took effect. The economic justification is that, as long as domestic demand exceeds supply, U.S. producers have no incentive to export crude oil unless the price in international markets exceeds the cost of transport.

FIGURE 7
BRENT–WEST TEXAS INTERMEDIATE CRUDE OIL PRICE SPREAD, MAY 1987 TO DECEMBER 2017



SOURCE: Federal Reserve Economic Data.

This price differential typically has been represented by the spread between the Brent crude price, which is approximately what producers could receive internationally, and the West Texas Intermediate (WTI) crude price, which is approximately what producers could receive domestically. **Figure 7** shows this differential during the past three decades. As **Figure 7** shows, before 2010, the spread has been essentially zero, providing producers little incentive for the export of U.S. crude oil. However, the beginning of the U.S. shale oil boom in 2010 led to an oversupply of certain types of U.S. crude in some areas of the country and a corresponding spike in the Brent–WTI spread. The spread reached a high of \$27.3 per barrel in late 2011, substantially greater than the cost of shipping to foreign markets. Unsurprisingly, U.S. producers began to push for relief from the crude export restrictions that previously had garnered little attention.

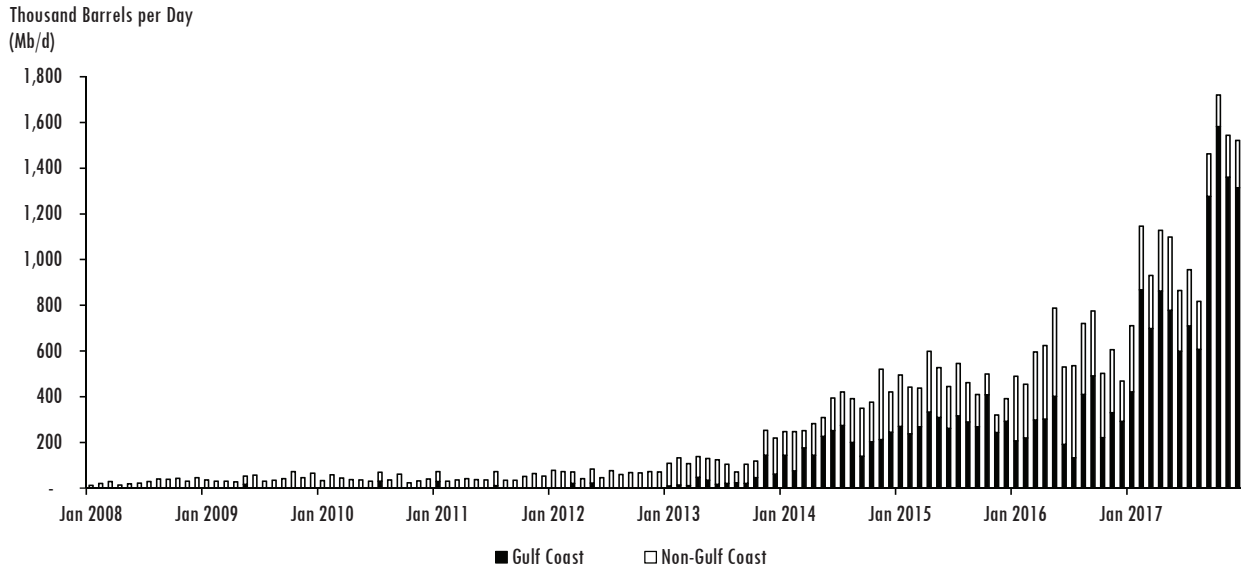
Relief for exporters from the federal ban has come in two parts. First, in summer 2014, the Bureau of Industry (BIS) relaxed certain interpretations of what constituted processing, or refining crude oil. The export ban only applies to crude, or unprocessed, oil; refined petroleum products have never been subject to the ban. The BIS ruled that a certain type of ultra-light crude oil, known as condensate, would qualify as processed, making it not subject to the export ban, if the condensate passed through a stabilization unit at the wellhead. Almost all condensates are extracted from the crude oil stream using a stabilizer. Therefore, the ruling

enabled the export of most produced condensates. Second, in December 2015, the U.S. repealed the crude oil export ban in its entirety. This repeal has made the export of all types of crude oil legal to almost any international market. **Figure 8** shows total U.S. crude oil exports during the last decade.

Before the repeal of the export ban at the end of 2015, almost all of the U.S. exports have been to Canada, and most have been condensate. Crude oil produced in Canada is extremely heavy and often cannot flow through pipelines without being diluted by a lighter-weighting oil. The result is that Canada has instituted a strong need for U.S. condensates. After the BIS ruling in 2014, several small shipments of U.S. condensate also have shipped to refineries in Europe and Asia. During calendar year 2016, the first year without the export ban, U.S. crude oil exports increased to 591.0 thousand barrels per day (Mb/d), which represented 6.7 percent of total U.S. crude oil production. In 2017, crude oil exports increased by 96.1 percent, to average 1,158.0 Mb/d, or 12.4 percent of total U.S. crude oil production. Of total U.S. exports in 2017, 923 Mb/d, or 79.7 percent of the total, came from either Louisiana or Texas. **Figure 9** shows the largest buyers of U.S. crude oil in 2017. Canada and China were the largest purchasers of U.S. crude oil, accounting for half of all export purchases in 2017.

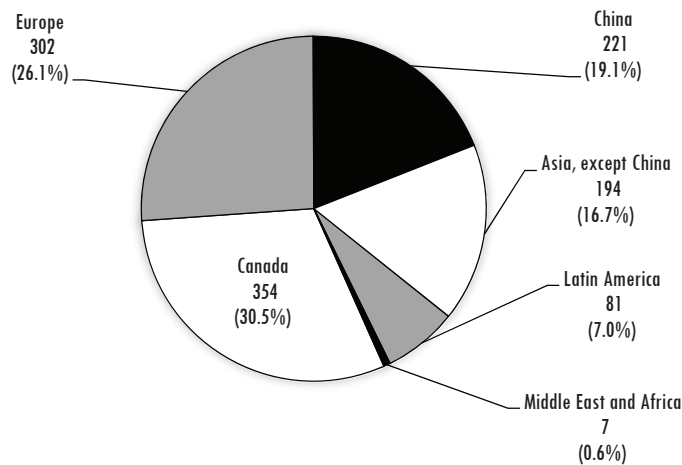
Unfortunately for U.S. producers, the timing of the crude oil export ban at the end of 2015 has coincided with a collapse

FIGURE 8
U.S. CRUDE OIL EXPORTS, JANUARY 2008 TO DECEMBER 2017



SOURCE: U.S. Energy Information Administration .

FIGURE 9
U.S. CRUDE OIL EXPORT DESTINATIONS, CALENDAR YEAR 2017



SOURCE: U.S. Energy Information Administration.

of the Brent–WTI spread to less than \$5 per barrel, greatly decreasing the incentive to ship crude oil abroad. However, a quirk of the U.S. refinery complex has helped offset this disincentive and spurred rapid growth of crude oil exports during the last two years. Crude oil quality can vary significantly based on the underground formation from which the crude is extracted. Different crudes are graded on

factors such as weight relative to water, known as the American Petroleum Institute gravity measure, and the amount of sulfur contained in the oil, known as sweetness. U.S. crude oil refineries, most of which were constructed before 1980, were set up to largely refine heavy sour crude grades imported from countries such as Mexico and Canada and from the Middle East. Much of the new crude oil

produced in areas such as the Permian Basin and Eagle Ford is relatively much lighter and sweeter; therefore, U.S. refineries are limited regarding how much of this new crude they can process. If not for refineries in Europe, Asia, and Latin America that can process the light sweet crude grades, U.S. producers would have no domestic demand for a portion of their crude oil and therefore are incentivized to export, regardless of the Brent–WTI price spread.

Finally, lack of infrastructure presents a headwind that will constrain U.S. export growth for the short term. Because of depth and width constraints, no U.S. onshore ports can load the largest crude oil tankers known as very large crude carriers (VLCC). VLCCs are tankers with capacity of approximately 2.0 million barrels. Economies of scale lower the per-barrel shipping cost as the capacity of a tanker increases, so exporters and importers would prefer shipping on a VLCC rather than smaller tanker classes such as the Aframax (750.0 thousand barrel capacity) or Suezmax (1.0 million barrel capacity). A temporary solution involves a process known as reverse lightering, wherein a VLCC is loaded partially at an onshore port, driven to deep water offshore, and loaded fully with ship-to-ship transfers from smaller vessels. Although reverse lightering can fully load a VLCC, the process is not ideal because ship-to-ship transfers are more expensive than fully loading the ship at port. Long-term solutions to this infrastructure constraint include: (1) dredging waterways such as the Houston Ship Channel or the Corpus Christi Ship Channel to increase their depth; (2) modifying the lone U.S. offshore deep-water crude oil import terminal, located 18.0 miles off the coast of Port Fourchon, Louisiana, to send out exports; or (3) building new offshore deep-water crude oil export terminals. The pace at which one or more of these options are undertaken will have a great effect on the export of crude oil from Texas producers.

PROMOTE USE OF THE FEDERAL COMMUNITY ELIGIBILITY PROVISION FOR SCHOOL MEALS

The National School Lunch Program and School Breakfast Program provide meals to students in participating public and nonprofit private schools across the U.S. Meals are served to students free, at reduced cost, or at full cost, depending on the student's eligibility status.

The Community Eligibility Provision is a federal program that authorizes certain schools to serve meals free to all enrolled students, regardless of their eligibility status. The program offers a number of benefits for students and schools, including that it may increase students' access to school meals and improve student nutrition. In addition, the Community Eligibility Provision may increase federal reimbursement for school meal programs, conserve school resources, and eliminate unpaid meal charges.

Although many Texas school districts are implementing the Community Eligibility Provision at their eligible schools, others have not applied for the program. One of the reasons that eligible school districts, including charter schools, may not be participating is lack of awareness or confusion about the program. The state's 20 regional Education Service Centers provide services to school districts, including services related to food and nutrition. Requiring the Education Service Centers to conduct outreach to eligible school districts that are not participating in the Community Eligibility Provision program could increase participation. Outreach could be targeted to school districts whose federal reimbursement would increase the most from participating in the program.

FACTS AND FINDINGS

- ◆ According to data from the Texas Department of Agriculture, approximately 323 school districts are implementing the Community Eligibility Provision program at one or more schools during school year 2018–19. These districts include 2,694 participating schools. Participating in the program authorizes these schools to serve school meals to the approximately 1.6 million enrolled students at no cost to students for the school year.
- ◆ Approximately 493 school districts were eligible to elect the Community Eligibility Provision program for one or more schools but chose not to participate

during school year 2018–19. These districts include 2,013 individually eligible schools with a total enrollment of approximately 1.1 million students. Approximately 29 of these school districts and 525 of these schools could have served every meal free to all enrolled students and received the highest rate of federal reimbursement if they chose to participate in the program.

- ◆ By eliminating the collection of school meal applications, Community Eligibility Provision participation affects certain school district funding streams that traditionally are calculated using data from the applications, including the State Compensatory Education allotment. Greater participation in the program is expected to increase these allotments to participating school districts and, therefore, increase costs to the Foundation School Program.

CONCERNS

- ◆ Eligible school districts that have chosen not to participate in the Community Eligibility Provision program may not have enough information or may have inaccurate perceptions about the program requirements.
- ◆ Misconceptions about ramifications of the Community Eligibility Provision, especially how participation may affect other state and federal funding streams to school districts, is a source of confusion and apprehension to some eligible school districts that are not participating in the program.

OPTION

- ◆ **Option 1:** Include a rider in the 2020–21 General Appropriations Bill to direct the regional Education Service Centers to conduct outreach to eligible school districts that are not participating in the Community Eligibility Provision program. Outreach could be targeted to school districts whose federal reimbursement would increase the most from participating in the program.

DISCUSSION

Established in 1946 by the Richard B. Russell National School Lunch Act, the National School Lunch Program (NSLP) provides low-cost or free lunches to children in public and nonprofit private schools and residential childcare institutions across the U.S. During 2016, 30.4 million children participated in the program. The School Breakfast Program (SBP), which operates in a similar manner as NSLP, became a national program in 1975. In 2016, the program served 14.6 million children.

NSLP and SBP benefit students by providing access to meals in school. Research shows that inadequate nutrition can negatively affect a student’s health and educational outcomes. NSLP and SBP have demonstrated success in decreasing food insecurity and improving diet quality and health status, including obesity reduction. In addition, participating in SBP has shown to have educational benefits for students such as improved attendance, behavior, academic performance, and academic achievement as well as decreased tardiness.

Schools that participate in NSLP and SBP offer nutritious meals to all students free, at reduced cost, or at full cost, depending on the student’s eligibility status. Eligibility is determined through an application process or by using data from another means-tested program, known as direct certification.

Students may receive meals for free if they participate in certain federal and state programs. This qualification is known as categorical eligibility. **Figure 1** shows the programs that meet this requirement.

Students also may receive free meals if they meet income eligibility requirements. Income eligibility for free meals is at or less than 130 percent of the Federal Poverty Level (FPL), which is \$21,398 for a family of two in 2018. Students in families with income at or less than 185 percent of FPL (\$30,451 for a family of two in 2018) can purchase meals at a reduced cost, which amounts to no more than \$0.40 for lunch and \$0.30 for breakfast. Other students may purchase meals at the price established by the school district and in accordance with the paid lunch equity requirements in federal statute.

School districts, which include public school districts and charter schools, must track which students receive school meals and whether those students qualify for free, reduced-cost, or full-cost meals to receive federal reimbursement by the U.S. Department of Agriculture (USDA). In Texas,

**FIGURE 1
FEDERAL AND STATE PROGRAMS THAT QUALIFY
PARTICIPATING STUDENTS FOR CATEGORICAL ELIGIBILITY
SCHOOL YEAR 2018–19**

- Supplemental Nutrition Assistance Program;
- Temporary Assistance for Needy Families;
- Food Distribution Program for Indian Reservations;
- Medicaid;
- homeless, including runaways and individuals displaced by declared disasters;
- foster;
- migrant; and
- designated state or federally funded early literacy and prekindergarten programs

NOTE: Some Medicaid-eligible students may receive free meals.
SOURCE: Texas Department of Agriculture.

USDA reimbursement funds are received by the Texas Education Agency (TEA) and disbursed to public school districts and charter schools. School districts are reimbursed different amounts based on the number of meals served free, at reduced cost, or at full cost. Meals served free receive the highest reimbursement amount, known as the federal free rate, and meals served at full cost receive the lowest reimbursement amount, known as the federal paid rate. For instance, among lunches served in the contiguous states during school year 2018–19, the USDA reimbursed a maximum of \$3.54 per lunch served free and a maximum of \$0.45 per lunch served at full cost.

COMMUNITY ELIGIBILITY PROVISION

Authorized by the Healthy, Hunger-free Kids Act of 2010, the Community Eligibility Provision (CEP) is a federal program that authorizes schools located in high-poverty-level areas to serve breakfast and lunch free to all enrolled students, regardless of their eligibility status.

Schools participating in CEP do not collect school meal applications. Instead, every student may receive a free meal if they attend a school or district in which at least 40.0 percent of enrolled students are certified for free school meals through direct certification. These students are known as identified students. A school or school district’s percentage of enrolled students that are certified for free school meals is referred to as its identified student percentage (ISP).

Each school is reimbursed using claiming percentages based on its ISP. The ISP multiplied by a factor of 1.6 equals the percentage of total meals served that are reimbursed at the federal free rate, known as the Free Claiming Percentage. The remaining percentage of total meals served is reimbursed at

the federal paid rate. A school or school district with an ISP of 62.5 percent or greater is reimbursed for all meals at the federal free rate. Although CEP claiming percentages can remain in effect for up to four years, schools and districts may reestablish claiming percentages annually if their ISP increases.

School districts decide whether to adopt CEP and, if so, for which eligible schools. Districts may implement CEP for an individual school, group of schools, or districtwide. A school that is not eligible to participate in CEP based on its ISP can become eligible after being grouped with one or more schools with higher ISPs within the same district. Different grouping options may maximize CEP claiming percentages.

School districts that participate in CEP may withdraw participating schools from the program at any time.

BENEFITS OF THE COMMUNITY ELIGIBILITY PROVISION

Schools that adopt CEP can increase students' access to school meals. Research from USDA's Food and Nutrition Service indicates that schools participating in CEP have increased participation in school meal programs. Considering that increased participation in school meal programs improves student nutrition, participation can affect a student's health and educational outcomes positively.

CEP enables all students to receive meals at no cost, which may benefit students who would prefer not to be identified as someone in need of assistance. Some students who are not able to receive free meals may have difficulty paying for them. This group includes those who are eligible for free or reduced-price meals but are not certified yet and those who pay the reduced price or full price of meals. When students do not have sufficient funds to pay for a meal, schools may allow students to charge the meal or provide these students with alternative meals. Such students may experience feelings of embarrassment or stigmatization as peers and staff become aware of their difficulty paying for meals.

Schools also benefit from adopting CEP through receiving greater federal reimbursement for school meal programs. Factors that may increase federal reimbursement include the school or district's ISP; whether the school qualifies for a higher reimbursement rate because of its percentage of meals served free or at reduced price or for meeting a performance benchmark; its level of student participation in the school meal programs; and anticipated participation increase due to adopting CEP.

Participation in CEP also may conserve school resources and enable more of them to be used for instruction and administrative functions. For instance, by eliminating the need for eligibility determinations for meals, CEP may result in cost savings for school administrators. Cost savings could include fewer staff hours required to determine student eligibility, lower printing costs, and a decrease in other costs associated with processing applications.

Moreover, school resources may be conserved because CEP simplifies the meal counting process and may increase efficiency in the serving line. This efficiency could decrease administrative burdens on cafeteria staff, enabling them to focus on preparing and serving meals. In addition, as CEP increases participation in school meal programs, these programs may achieve economies of scale regarding food and labor costs.

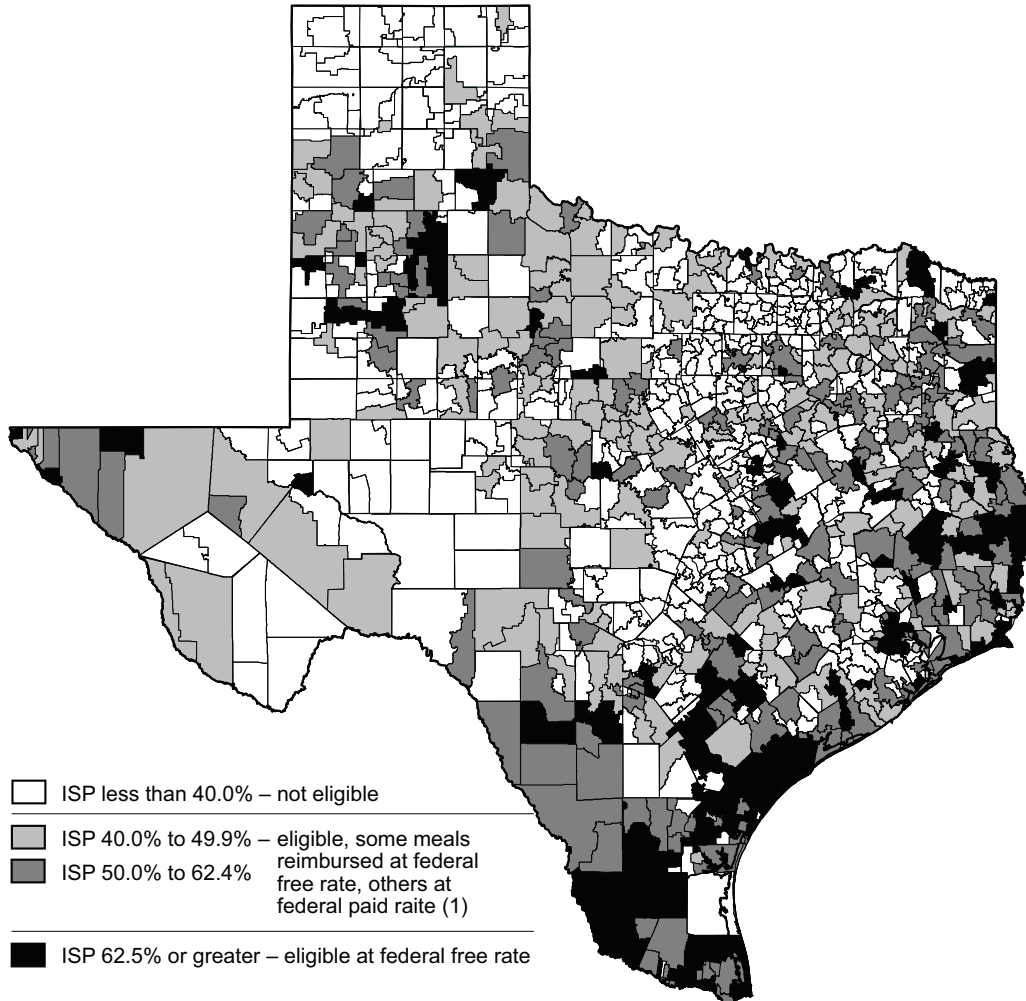
Additionally, schools that participate in CEP do not incur unpaid meal charges because they do not collect funds from students for meals served. Schools commonly have a significant amount of delinquent school meal debt, which they must absorb if they are unsuccessful in collecting it. This amount varies across school districts based on factors such as student enrollment, the number of students who qualify for free meals, and a school district's policy on students charging meals or providing students with alternative meals. Contacting families to request payment of unpaid charges or to encourage submission of an application for free or reduced-price meals is time-consuming and affects staff ability to perform other duties.

ADOPTION OF THE COMMUNITY ELIGIBILITY PROVISION IN TEXAS

According to data from the Texas Department of Agriculture (TDA), 816 school districts were eligible to elect CEP for one or more schools for school year 2018–19. These 816 school districts include 4,925 individual schools that were eligible to participate in CEP. An unknown additional number of schools also could be eligible if grouped with one or more other schools within the same district. Approximately 648 school districts were eligible to implement CEP districtwide.

Figure 2 shows Texas public school districts that were eligible to elect CEP for one or more schools according to their districtwide ISPs. A school district participating in CEP with an ISP of 62.5 percent or greater is reimbursed for all meals served across the district at the federal free rate; in comparison, a school district with an ISP of less than 40.0 percent is not

FIGURE 2
TEXAS PUBLIC SCHOOL DISTRICTS ELIGIBLE TO ELECT FEDERAL COMMUNITY ELIGIBILITY PROVISION MEAL PROGRAM BY DISTRICTWIDE IDENTIFIED STUDENT PERCENTAGE SCHOOL YEAR 2018–19



NOTES:

- (1) Within these ranges, 64.0% of meals are reimbursed at the federal free rate at a district with an Identified Student Percentage (ISP) of 40.0%, and 99.8% of meals are reimbursed at the federal free rate at a district with an ISP of 62.4%. Any meal that is not reimbursed at the federal free rate is reimbursed at the federal paid rate.
- (2) Districts may implement the Community Eligibility Provision for an individual school, group of schools, or districtwide. The ISP of a school may be different from the ISP of the district in which it is located.

SOURCE: Texas Department of Agriculture.

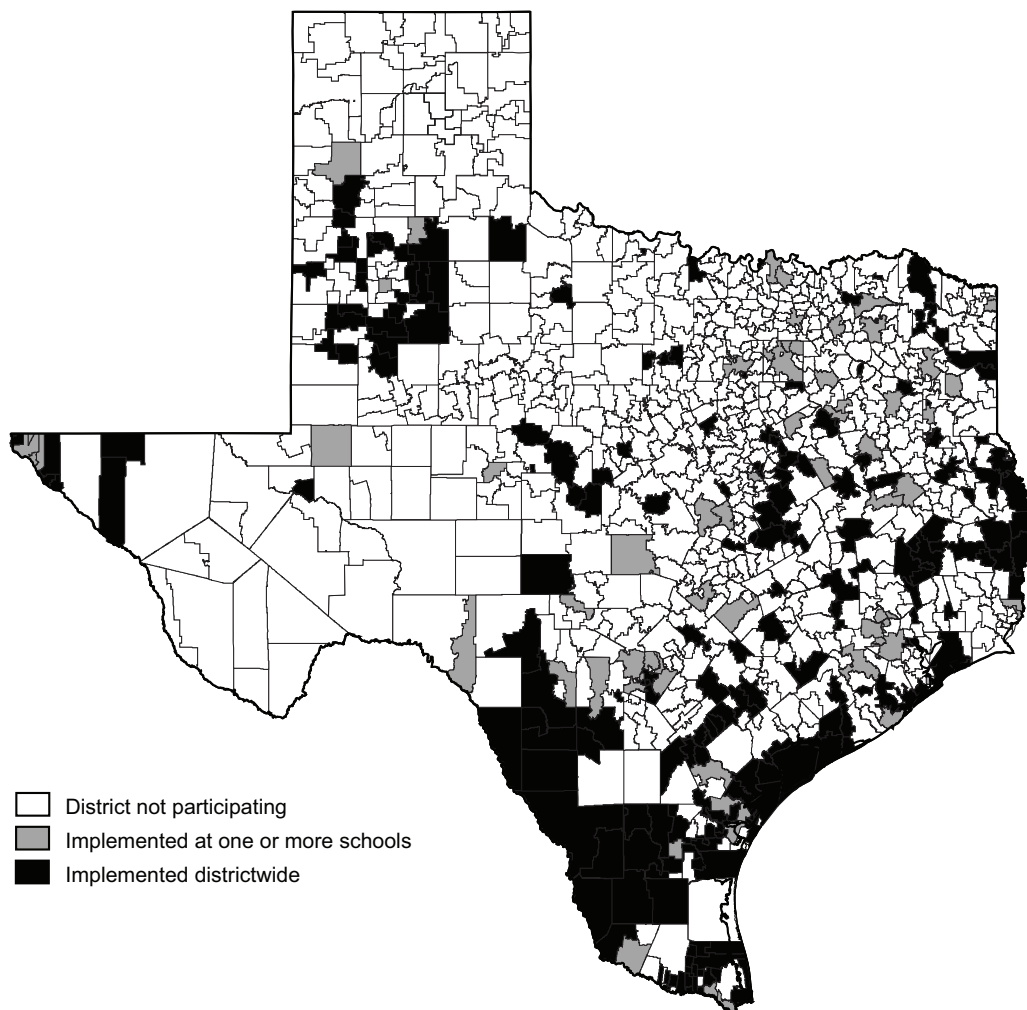
eligible for CEP districtwide. School districts with ISPs situated between these thresholds are eligible to elect CEP, but their Free Claiming Percentage, the percentage of total meals served that are reimbursed at the federal free rate, will vary based on the ISP of each district.

Approximately 323 Texas school districts are implementing CEP at one or more schools for school year 2018–19. These districts include 2,694 participating schools with

approximately 1.6 million enrolled students, according to TDA enrollment data. Approximately 240 school districts chose to implement CEP districtwide, and 83 school districts chose to implement CEP at one or more schools. **Figure 3** shows public school districts that elected CEP for one or more schools or implemented the program districtwide.

Conversely, approximately 493 Texas school districts were eligible to elect CEP for one or more schools but chose not

FIGURE 3
TEXAS PUBLIC SCHOOL DISTRICTS IMPLEMENTING FEDERAL COMMUNITY ELIGIBILITY PROVISION MEAL PROGRAMS
SCHOOL YEAR 2018–19



SOURCE: Texas Department of Agriculture.

to participate for school year 2018–19. These districts include 2,013 individually eligible schools. Total enrollment for these schools was approximately 1.1 million, according to TDA enrollment data. Approximately 525 of these schools and 29 school districts had ISPs of 62.5 percent or greater.

Some eligible school districts that chose not to participate in CEP elected instead for one or more schools to participate in an alternate federal program, Provision 2. This program is similar to CEP in that students are able to receive school meals free, regardless of their eligibility status. The benefits of Provision 2 also are similar to those for CEP, including the potential to increase access to school meals, conserve school resources, and eliminate unpaid meal charges. According to

data from TDA, approximately 135 Texas schools are participating in Provision 2 in 21 school districts for school year 2018–19.

***BARRIERS TO PARTICIPATION
 IN THE COMMUNITY ELIGIBILITY PROVISION***

Eligible school districts may have chosen not to participate in CEP for various reasons. Despite potential cost savings from participating in CEP, it still may not be financially viable for all eligible school districts to implement. Eligible schools and districts with lower ISPs may not receive federal reimbursements sufficient to cover the food and labor costs for preparing and serving meals at no charge to all students.

If federal reimbursements are not sufficient, the school district must use nonfederal funding to cover any remaining costs incurred. Each school district implementing CEP must identify every eligible student so that its ISP is not artificially low. USDA and TDA have tools online to help school districts that are interested in CEP understand the financial ramifications of participation.

Community expectations also may prevent eligible school districts from participating in CEP. For instance, a school district may be reluctant to implement CEP at one campus if others are not able to participate. In addition, an eligible school district may choose not to participate if it believes it will have to discontinue the program in subsequent years due to a change in program eligibility or the financial viability of participation. CEP participation and the ISP must be reestablished at least every four years.

Schools that implement CEP typically are located in districts that have large student enrollments. This factor may indicate that smaller school districts with eligible schools do not have the capacity to participate in CEP. Administrative impediments to participation—such as conducting an analysis to determine whether CEP is financially feasible, deciding whether and how to group schools to maximize ISP, and submitting an application for the program—may be difficult for smaller school districts to overcome.

Eligible school districts that have chosen not to participate in CEP also may not have enough information or may have inaccurate perceptions about program requirements. In addition, misconceptions about the ramifications of the program may be a source of confusion or apprehension to some eligible school districts. In a survey of regional Education Service Centers (ESC) conducted in August 2018, some reported that eligible school districts lacked understanding of the program and how it operates. ESCs also reported that a major source of confusion is how program participation affects other state and federal school funding sources that rely on data from school meal applications. CEP eliminates the collection of school meal applications; therefore, school districts may be concerned that they will lose funding that traditionally is tied to data in the applications.

Federal agencies and TEA have published guidance outlining how state and federal funding to schools will be affected by participating in CEP. For school districts implementing CEP, their Free Claiming Percentage, which is the ISP multiplied by a factor of 1.6, is a factor in their State Compensatory

Education (SCE) allotment. SCE funding provides financial support for programs and services intended to increase the achievement of students at risk for dropping out of school. In addition, schools adopting CEP use their Free Claiming Percentage to determine discounts on services received through the federal E-rate program, which help schools and libraries obtain telecommunications and Internet access.

Although adopting CEP does not affect the amount of federal funding that a school district receives pursuant to the Elementary and Secondary Education Act, Title I, it may affect how funds are allocated to individual campuses. The U.S. Department of Education has specific guidelines that each school district must follow when making allocations to its schools. Title I funding provides financial assistance to schools and school districts with high numbers or percentages of children from low-income families.

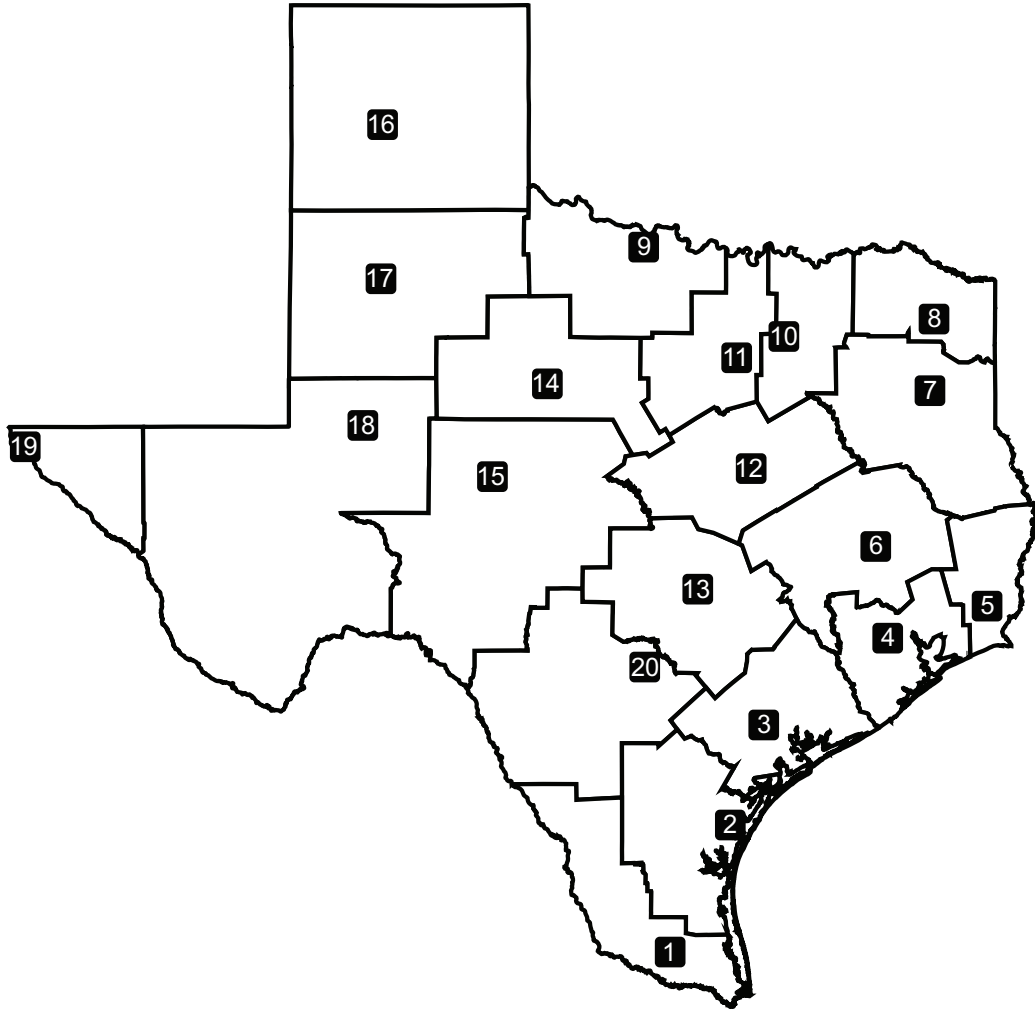
EDUCATION SERVICE CENTER OUTREACH

Texas has 20 regional ESCs that provide assistance to local school districts, including services intended to improve student performance, increase operational efficiency and economy, and implement certain initiatives. TDA contracts with the ESCs to provide services related to food and nutrition for school districts, including technical assistance to districts that want to implement CEP. **Figure 4** shows the location of each ESC region and headquarters in Texas.

Option 1 would add a rider to the 2020–21 General Appropriations Bill to direct the ESCs to conduct outreach to eligible school districts that are not participating in CEP. ESCs' outreach could utilize existing resources developed by TDA and USDA to inform school districts about the benefits and requirements of CEP. Outreach also could inform school districts that ESCs provide technical assistance related to CEP.

ESC outreach would decrease confusion and misperceptions about the requirements and ramifications of CEP among eligible school districts. Outreach also would increase knowledge among school districts of the resources available to assist them in applying for the program, which may be particularly helpful to smaller school districts facing administrative impediments. Although many ESCs report that they have conducted outreach to eligible school districts, several ESCs indicated that they had not or were unsure. Sustained outreach by each ESC to eligible school districts that are not participating could increase participation in CEP, providing more students and schools across the state with benefits from the program.

FIGURE 4
TEXAS REGIONAL EDUCATION SERVICE CENTERS
DECEMBER 2017



REGION	HEADQUARTERS	REGION	HEADQUARTERS
1	Edinburg	11	Fort Worth
2	Corpus Christi	12	Waco
3	Victoria	13	Austin
4	Houston	14	Abilene
5	Beaumont	15	San Angelo
6	Huntsville	16	Amarillo
7	Kilgore	17	Lubbock
8	Mount Pleasant	18	Midland
9	Wichita Falls	19	El Paso
10	Richardson	20	San Antonio

SOURCE: Texas Education Agency.

Outreach could be targeted to school districts with ISPs of 62.5 percent or higher. These school districts may receive the greatest increase in federal reimbursement, because they are able to implement CEP districtwide with all meals reimbursed at the federal free rate.

FISCAL IMPACT OF THE OPTION

Option 1 would direct the ESCs to conduct outreach to eligible school districts that are not participating in CEP. Increased participation in CEP would increase costs to the Foundation School Program (FSP). The average of the best six months of meal claims for the prior federal fiscal year determines a school district’s count of students generating FSP entitlement for the SCE allotment and related weighted-student entitlement. The extent of the cost increase to FSP would vary according to how many school districts choose to participate in CEP and the associated increase in student counts relative to estimated student counts projected in accordance with current law.

If all school districts that are not participating in CEP or the Provision 2 alternative program and have ISPs of 62.5 percent or greater for school year 2018–19 chose to implement CEP, an estimated cost of \$23.9 million to FSP would result for the 2020–21 biennium. This estimate assumes that these districts would implement CEP beginning in school year 2019–20. It also assumes that the school districts would remain eligible for CEP for school year 2019–20 and that their ISPs would continue to be 62.5 percent or greater.

Increased participation in CEP is expected to increase federal reimbursement for the school meal programs. Federal reimbursement funds are received by TEA and disbursed to public school districts and charter schools. The extent of the increase in federal reimbursement would vary according to each school’s or district’s ISP; whether the school qualifies for a higher reimbursement rate because of its percentage of meals served free or at reduced price or for meeting a performance benchmark; its level of student participation in the school meal programs; and anticipated participation increase due to adopting CEP. School districts with ISPs of at least 62.5 percent are likely to see the greatest increase in federal reimbursement, as all meals are reimbursed at the federal free rate.

The amount that the federal reimbursement would increase if all nonparticipating school districts with an ISP of 62.5 percent or greater for school year 2018–19 chose to implement CEP cannot be estimated.

**FIGURE 5
FIVE-YEAR FISCAL IMPACT OF OPTION 1
FISCAL YEARS 2020 TO 2024**

YEAR	PROBABLE SAVINGS/(COST) TO FOUNDATION SCHOOL FUND
2020	\$0
2021	(\$23,948,760)
2022	(\$23,895,381)
2023	(\$26,748,406)
2024	(\$24,382,082)

SOURCE: Legislative Budget Board

It is anticipated that Option 1 would not result in additional costs to TEA. ESCs could conduct outreach utilizing existing resources developed by TDA and USDA.

Figure 5 shows the five-year fiscal impact of Option 1.

The introduced 2020–21 General Appropriations Bill does not include any adjustments as a result of this option.

IMPROVE MAJOR CONSULTING CONTRACT REPORTING REQUIREMENTS AND PROCESSES

Statute and the General Appropriations Act require state agencies and institutions of higher education to publicly report information about awarded contracts to promote transparency and efficient operation of state government. These awarded contracts include contracts for consulting services. Statute defines a major consulting services contract as one that is expected to exceed \$15,000 for a state agency or \$25,000 for an institution of higher education, other than a public junior or community college. Agencies and institutions of higher education must follow additional approval and reporting requirement for all major consulting services contracts.

However, agencies and institutions do not follow the approval and reporting requirements for major consulting services contracts consistently, which decreases transparency and accountability.

FACTS AND FINDINGS

- ◆ Statute requires a finding of fact from the Governor's Office, Budget Division, for approval of major consulting services contracts for state agencies. The finding of fact approval verifies that the consulting services are necessary. Some agencies and institutions award major consulting services contracts without complying with this process.
- ◆ Most agencies are not posting statutorily required contract award notifications correctly to the *Texas Register* before and after contracts are awarded. For fiscal year 2018, 42 agencies awarded consulting services contracts; however, 15 agencies made notifications to the *Texas Register* before and after contracts were awarded. Of the 42 awarding agencies, 21 agencies were not found in the *Texas Register*, based on an agency name search.

CONCERNS

- ◆ Pursuant to Texas law, contracts that are in violation of the finding of fact process and *Texas Register* requirements are void. However, no state entity is authorized to determine the validity of consulting contracts to ensure that agencies complied with either process appropriately.

- ◆ Multiple reporting requirements make the posting of notifications correctly challenging for agencies and institutions. These requirements also make it difficult for potential vendors, state agencies, or public viewers to find the information. The *Texas Register* is published weekly and serves as the journal of agency rulemaking for the state. In contrast, agencies post opportunities for vendors to enter state contracts on the Electronic State Business Daily website, which is a useful tool to communicate consulting contract opportunities and awards.

OPTIONS

- ◆ **Option 1:** Amend statute to require state agencies and institutions of higher education to upload findings of fact to the Legislative Budget Board's state agencies contracts database as part of the required contract notification for major consulting services contracts.
- ◆ **Option 2:** Amend statute to simplify requirements for state agencies and institutions of higher education to report consulting services contracts. This amendment would eliminate the required publication of contract-related notifications in the *Texas Register* and would add a requirement for agencies to report consulting solicitations valued at greater than \$14,000 to the Electronic State Business Daily website. In addition, amend the statutory definition of major consulting services contract to establish the value of such a contract at greater than \$14,000 for state agencies, rather than at greater than \$15,000.

DISCUSSION

The Texas Government Code, Section 2254.021, defines a consulting service as "the service of studying or advising a state agency under a contract that does not involve the traditional relationship of employer and employee." The statute also defines a major consulting services contract as one that "is reasonably foreseeable ... to exceed \$15,000 for state agencies, or \$25,000 for an institution of higher education." Other sections of the Texas Government Code, Chapter 2254, contain notification requirements that apply to contracts at different dollar-value thresholds.

**FIGURE 1
LEGISLATIVE HISTORY OF TEXAS STATE AGENCIES' CONTRACT REPORTING REQUIREMENTS
FISCAL YEARS 1993 TO 1999**

LEGISLATURE	LEGISLATION
Seventy-third, 1993	Senate Bill 248, requiring published notice in the <i>Texas Register</i> before and after state agencies enter into major consulting services contracts.
Seventy-fifth, 1997	Senate Bill 1380, requiring agencies to post contract solicitations of \$25,000 or greater to the Electronic State Business Daily website.
Seventy-sixth, 1999	Senate Bill 176, requiring notification to the Legislative Budget Board about consulting services contracts greater than \$14,000.

SOURCE: Legislative Budget Board.

The Legislature has strengthened state contracting reporting requirements during the course of several legislative sessions, as shown in **Figure 1**. As a result, when state agencies and institution of higher education award consulting service contracts, they must notify the Legislative Budget Board (LBB), the Electronic State Business Daily (ESBD) website, and the *Texas Register*. The different notification vehicles and requirements for major consulting contracts can be confusing or unclear and are not followed consistently, which decreases transparency and accountability.

NOTIFICATION AND REPORTING REQUIREMENTS FOR CONSULTING SERVICES CONTRACTS

Statute requires agencies and institutions of higher education to follow additional approval and reporting requirements for all major consulting contracts.

STATE AGENCIES CONTRACTS DATABASE

The state agencies contracts database, maintained by the LBB, is the single repository for state agencies or institutions of higher education to report contract information and documents required by statute or the General Appropriations Act.

The Texas Government Code, Section 2254.0301, stipulates requirements for consulting services contract notifications by a state agency other than an institution of higher education or a university system. The agency must provide written notice to

LBB of a contract for consulting services if the amount of the contract, including an amendment, modification, renewal, or extension of the contract, is greater than \$14,000. An agency can identify a contract in the database as a consulting services contract in the following two ways:

- using one or more contract reporting codes, as required in the Texas Government Code, Section 2254.0301; and
- using the National Institute of Governmental Purchasing (NIGP) code, which is an option for categorizing the type of purchase but is not statutorily required.

After analyzing contract data in the database, LBB staff determined that fewer consulting contracts are reported in the statutorily required contract reporting category than in the optional category using an NIGP code for consulting. The difference between the two categories in the number and value of contracts is shown in **Figure 2**. This discrepancy, especially the fact that fewer contracts are reported using a statutorily required code, suggests that agencies may be reporting consulting contracts incorrectly.

Of the 1,084 contracts reported to the contracts database with a consulting NIGP code, but not reported pursuant to the Texas Government Code, Section 2254.0301, the largest reporting category is for purchases or sales valued at more

**FIGURE 2
TEXAS STATE AGENCIES' REPORTED CONSULTING CONTRACTS, SEPTEMBER 2015 TO JUNE 2018**

CATEGORY	CONTRACTS	VALUE (IN MILLIONS)
Consulting reporting requirement, pursuant to the Texas Government Code, Section 2254.0301	403	\$305.0
National Institute of Governmental Purchasing (NIGP) consulting code	1,303	\$2,700.0
Both consulting reporting requirement and NIGP consulting code	219	\$104.0
Total in state agencies contracts database	40,436	\$60,500.0

SOURCE: Legislative Budget Board Contracts Database.

than \$50,000, which contains 688 contracts. Of these 688 contracts, 43 have the word consulting in the contract subject title and have a combined value of \$368.2 million. Using an NIGP code of consulting and a similar subject in the title, many of these contracts appear to be incorrectly reported, resulting in less oversight and inaccurate totals for the state. Using the contract reporting code prompts additional requirements; therefore, inaccurate labeling in the contracts database impedes the proper process. It prevents the state from knowing how many consulting contracts are active, which limits appropriate oversight and transparency. Agencies could be selecting consulting NIGP codes or contract reporting code incorrectly.

ELECTRONIC STATE BUSINESS DAILY

The Comptroller of Public Accounts (CPA), Statewide Procurement Division, manages the ESBD. The website is the state's online directory for listing procurement opportunities. State and local agencies post solicitations to the ESBD to serve as the central listing for solicitations for potential vendors. Agencies are required to post procurements with an expected contract value of more than \$25,000 to the ESBD, regardless of the source of funds used for the contract. The Texas Government Code, Section 2155.083, details the requirements of ESBD notices.

Some major consulting services contracts are not posted to the ESBD because, although they are valued at greater than the \$15,000 threshold in the Texas Government Code, Section 2254.021, they are not valued at more than \$25,000. The same is true of contracts valued from \$14,000 to \$25,000 that agencies must report to the LBB's contracts database.

TEXAS REGISTER

The Secretary of State manages the *Texas Register*, which records agency rulemaking, gubernatorial appointments, Attorney General opinions, and solicitations, such as major consulting services contracts. The Texas Government Code, Section 2002.002, states that the purpose of the *Texas Register* is to provide adequate and proper notice of proposed state agency rules and state agency actions through publication of the state register. *Texas Register* posting requirements are in addition to ESBD posting requirements for consulting services contracts.

At least 30 days before a state agency enters into a major consulting services contract, it must publish the following information in the *Texas Register*: an invitation for consultants to provide offers of consulting services; the name of the state

agency contact; the closing date for offers; and the procedure by which the agency will award the contract. In addition, within 20 days of entering into a major consulting services contract, the contracting state agency must publish the following information in the *Texas Register*: a description of the activities the consultant will conduct; the consultant's name and business address; the total value; the beginning and ending dates of the contract; and dates on which required documents or reports from the consultant are due to the agency. Pursuant to the Texas Government Code, Section 2254.034, a contract that does not meet these requirements is void.

Despite some contracts that do not comply with posting requirements, CPA staff report that they have not stopped payment on any consulting contracts. Statute is not clear concerning which state agency would deem a contract void or the process required to cancel or cease payments on a void contract.

For fiscal year 2018, 42 agencies reported 136 consulting services contracts to the contracts database. Of these, LBB staff were able to verify 15 agencies that posted to the *Texas Register*, even though all were subject to this requirement. Of the 42 agencies reporting, 21 agencies were not found in the *Texas Register* database. The prenotification posting occurs before a contract is awarded; therefore, a contract cannot be associated with a posting in the *Texas Register* for verification purposes. Additionally, the *Texas Register* cannot be filtered based on a certain reporting requirement; searching a keyword or phrase must be performed manually.

FINDING OF FACT REQUIREMENT FOR MAJOR CONSULTING SERVICES CONTRACTS

Pursuant to the Texas Government Code, Section 2254.028, a state agency must obtain a finding of fact from the Governor's Office, Budget Division, before entering into a major consulting services contract. This approval verifies that the consulting services are necessary. If the agency does not comply with this requirement, the contract is void. This requirement does not apply to institutions of higher education, other than public junior colleges, if the institution publishes in the *Texas Register* before entering into the contract a finding and explanation by its chief executive officer that the consulting services are necessary.

No process is required for oversight, and no public way is available to determine which agencies complied with this requirement. For fiscal years 2017 and 2018, 29 contracts received a finding of fact from the Governor's Office, Budget

Division. As of June 2018, agencies awarded 67 contracts during the same period for major consulting services. In addition, findings of fact are not publicly available without requesting this information from the agency.

IMPROVE CONSULTING SERVICES CONTRACT NOTIFICATION AND REPORTING

Option 1 would amend statute to require state agencies to upload findings of fact to the LBB's state agencies contracts database, including the separate finding for institutions of higher education, as part of the required contract notification for major consulting services contracts. Many contracts reported to the contracts database include additional documentation; therefore, adding the findings of fact would maintain all required documents in one consistent database, increasing ease of use and access.

Option 2 would amend statute to simplify reporting requirements for consulting services contracts as follows:

- eliminate the requirement to publish notification before contracts are awarded in the *Texas Register*, and add a requirement for agencies to report consulting solicitations valued at more than \$14,000 to the ESBD, which is the central location for vendors seeking procurement opportunities;
- eliminate the requirement to publish notification of major consulting services contracts awarded in the *Texas Register*. Agencies already are required to post consulting services contracts, in addition to other contracts, to the contracts database;
- eliminate the requirement to publish notification in the *Texas Register* when a consulting services contract is renewed, amended, or extended. Agencies currently are required to document these updates in the contracts database; and
- amend the definition of major consulting services contract in the Texas Government Code, Section 2254.021, to establish the value of such a contract at greater than \$14,000, rather than at \$15,000. This amount would match the existing threshold in the Texas Government Code, Section 2254.0301, which requires state agency notification to the LBB of consulting services contracts that exceed \$14,000. The amendment also would match the new provision previously mentioned that would require agencies to report contracts that exceed \$14,000 to the ESBD.

Applicable consulting contracts are reported twice before an award, to the ESBD and the *Texas Register*, and twice after an award, to the contracts database and the *Texas Register*. The ESBD is the central location for vendors seeking procurement opportunities, and the contracts database is the central database for awarded contracts. Therefore, these tools would serve more efficiently for notifications before and after contracts are awarded.

FISCAL IMPACT OF THE OPTIONS

Option 1 would require agencies to upload the completed finding of fact to the contracts database, including the separate finding for institutions of higher education. Many contracts reported to the contracts database already contain additional uploaded documentation, and adding the finding of fact would maintain all required documents in one consistent database. No significant fiscal impact is anticipated as a result of Option 1.

Option 2 involves statutory amendments and would have no significant fiscal impact.

The introduced 2020–21 General Appropriations Bill does not include any adjustments as a result of these options.

IMPROVE THE USE OF VENDOR PERFORMANCE DATA IN STATE PROCUREMENT

Texas state agencies and institutions of higher education award billions of dollars in contracts every year. During fiscal year 2018, the state awarded more than 28,927 new contracts, worth \$173.2 billion. Ensuring that state agencies and institutions properly assess potential vendors' past performance is critical to making sound procurement decisions. Considering how a vendor performed on previous contracts has been part of the contracting best value statute since 1979, and it is a *State of Texas Procurement and Contract Management Guide* best practice.

The Eighty-third Legislature, Regular Session, 2013, established the Texas Vendor Performance Tracking System as a central resource for all state agencies and institutions of higher education to report and view vendor performance data. The Comptroller of Public Accounts maintains the system, and agencies and institutions are required to report vendor performance within 30 days after the termination or completion of a contract or purchase order of more than \$25,000. Senate Bill 20, Eighty-fourth Legislature, 2015, required agencies to consider this data when making award decisions. Despite these legislative requirements, agencies and institutions are not utilizing the Vendor Performance Tracking System consistently.

FACTS AND FINDINGS

- ◆ According to Legislative Budget Board staff analysis of data collected in July 2018, 18.4 percent of contracts reported to the state contracts database had a related vendor score in the Vendor Performance Tracking System.
- ◆ Most state agency staff who responded to a Legislative Budget Board survey indicated that their agencies do not consistently enter vendor performance in the system, nor do they utilize the system consistently when making purchasing decisions.
- ◆ Statute requires vendor performance to be reported after a contract concludes, without regard to the contract's length or renewals. As of May 2018, agencies had reported 9,034 contracts, worth more than \$138.2 billion, in the Legislative Budget Board's contract database that had been active for more than

a year. A vendor report is not required for any of these contracts until they conclude.

- ◆ Institutions of higher education are not required to submit vendor performance reports when making purchases pursuant to the Texas Education Code authority. Statute also does not require that institutions of higher education use the Vendor Performance Tracking System data when making contract award decisions.

CONCERNS

- ◆ Agencies and institutions of higher education do not consistently report vendor performance to the Vendor Performance Tracking System in a timely manner.
- ◆ Agencies and institutions of higher education do not consistently consider Vendor Performance Tracking System data when making procurement decisions.

OPTIONS

- ◆ **Option 1:** Amend the 2020–21 General Appropriations Bill, Article IX, Section 7.04, to direct Legislative Budget Board staff to submit an annual report to the Legislature and the Comptroller of Public Accounts comparing contracts in the state contracts database to performance reports in the Vendor Performance Tracking System.
- ◆ **Option 2:** Amend the 2020–21 General Appropriations Bill, Article IX, Section 7.12, to require that state agencies and institutions of higher education annually submit vendor performance reports to the Vendor Performance Tracking System for contracts that reach the Article IX, Section 7.12, thresholds and require that executive management certify that these reports will be completed in the attestation letter required by this provision.
- ◆ **Option 3:** Amend statute to require that state agencies and institutions of higher education submit a performance report to the Vendor Performance Tracking System before renewing or extending a contract.

- ◆ **Option 4:** Amend statute to require institutions of higher education to report to the Vendor Performance Tracking System and use the system data when making contract award decisions.

DISCUSSION

Past vendor performance has been an official factor in state procurement decisions since the Sixty-sixth Legislature, 1979, included it in the statute for contracting best value standards. Incorporating vendor performance into procurement decisions is a best practice stressed throughout past and current versions of the Comptroller of Public Accounts’ (CPA) State of Texas Procurement and Contract Management Guide and on CPA’s public website.

The Vendor Performance Tracking System (VPTS) is the state’s centralized tool for collecting institutional knowledge about vendor performance across agencies and institutions of higher education. VPTS has existed since at least 2005 when the Texas Building and Procurement Commission adopted administrative rules to document vendor performance among its contracts. After the state shifted toward a decentralized purchasing model, the Eighty-third Legislature, Regular Session, 2013, codified VPTS and instructed CPA to maintain the system. In response to state contracting issues, the Eighty-fourth Legislature, 2015, passed Senate Bill 20, which requires state agencies to populate VPTS directly and to use the data to inform contract award decisions. The legislation also requires CPA to assign letter scores to vendors.

Figure 1 shows how vendor performance data is intended to be collected and utilized.

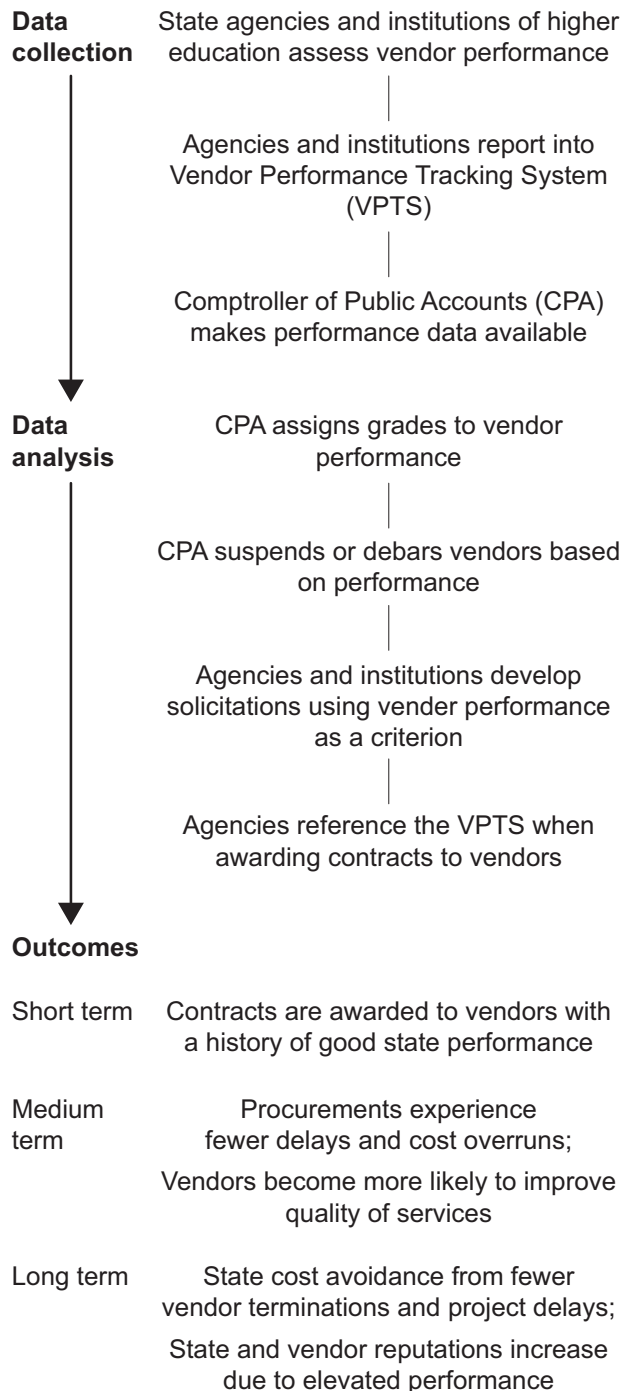
LIMITED AGENCY REPORTING OF VENDORS

Despite the requirement to review vendors for all completed state contracts valued at more than \$25,000, agencies and institutions vary in their reporting. Analysis comparing contracts reported by state entities to the Legislative Budget Board (LBB) contracts database and submissions to VPTS demonstrate the extent of this issue. At most, 22.0 percent of all eligible contracts reported to the LBB have a related vendor performance report submitted to VPTS. Figure 2 shows this analysis by General Appropriations Act article.

LBB staff analysis found that more than 80.0 percent of required performance data is not entered in VPTS, indicating widespread noncompliance with reporting requirements.

Option 1 would amend the 2020–21 General Appropriations Bill, Article IX, Section 7.04, to direct LBB staff to submit an

**FIGURE 1
VENDOR PERFORMANCE TRACKING SYSTEM’S ROLE IN
TEXAS AGENCY PROCUREMENTS, FISCAL YEAR 2018**



SOURCE: Legislative Budget Board.

annual report to the Legislature and CPA comparing contracts in the state contracts database to performance reports in the Vendor Performance Tracking System. The

FIGURE 2
VENDOR PERFORMANCE TRACKING SYSTEM (VPTS) SCORING RATES FOR VENDOR CONTRACTS REPORTED TO THE LEGISLATIVE BUDGET BOARD (LBB), FISCAL YEARS 2016 TO 2017

ARTICLE	ELIGIBLE CONTRACTS REPORTED TO LBB	PERCENTAGE OF REPORTED CONTRACTS WITH VPTS ENTRY	INITIAL VALUE OF REPORTED CONTRACTS WITHOUT VPTS ENTRY (IN MILLIONS)
I	712	58.7%	\$570.0
II	3,604	1.8%	\$1753.5
III	5,767	0.8%	\$4197.0
IV	19	0.0%	\$3.1
V	2,519	67.1%	\$354.9
VI	766	23.5%	\$548.4
VII	2,572	21.7%	\$5,143.8
VIII	212	5.6%	\$29.7
Total	16,170	18.4%	\$12,600.4

NOTE: Vendor Performance Tracking System (VPTS) entries with completion dates from September 1, 2015, to August 31, 2017, are included. Value is based on the original value of the contract and excludes any contract amendments. Because some contracts were amended and extended, these contract values are estimates. Data excludes interagency agreements and provider enrollment contracts. Vendor reports were matched based on whether an agency made a VPTS entry for a vendor with either a matching vendor identification or vendor name. Data includes contracts with blank completion dates if the contract was awarded before September 1, 2014.

SOURCES: Legislative Budget Board; Comptroller of Public Accounts.

Legislature could use this report to track VPTS compliance, and CPA could work with underreporting agencies to improve reporting.

AGENCY BARRIERS TO USING THE VENDOR PERFORMANCE TRACKING SYSTEM

To better understand potential barriers against VPTS utilization, LBB staff administered a survey to a random sample of registered VPTS users. The sample included representatives from across state government that have various procurement and contracting responsibilities. The results of this survey are consistent with LBB staff analysis indicating that state agencies and institutions of higher education are not submitting data to VPTS consistently.

A majority of the respondents, 56.3 percent, indicated that their agencies or institutions do not submit performance reports to VPTS consistently. Among those respondents, 15.6 percent never submit any vendor performance scores to VPTS. Respondents indicated that inadequate resources and insufficient vendor performance monitoring were key barriers to reporting data. Concerns about inadequate resources are supported by a 2016 CPA statewide purchasing study that states that approximately 1,700 state purchasing staff oversee more than 800,000 transactions per fiscal year. Among the 108 agencies included in this study, 44 have less

than 1.0 full-time-equivalent position performing purchasing and contracting duties.

Furthermore, agencies are not incorporating VPTS data into contract award decisions. A majority of respondents, 57.1 percent, indicated that their agencies or institutions do not incorporate VPTS data into contracting decisions consistently. The most cited reason was that VPTS lacked a performance report for vendors they were considering.

The results of this survey show that a lack of comprehensive vendor performance reporting was the main limitation to VPTS's usefulness.

Option 2 would amend the 2020–21 General Appropriations Bill (GAB), Article IX, Section 7.12, to require that agencies and institutions of higher education annually submit vendor performance reports to VPTS for contracts that reach the Article IX, Section 7.12, thresholds and require that executive management certify that these reports will be completed in the attestation letter required by this provision.

Multiple survey respondents indicated that inadequate resources were a reason for not reporting to VPTS. Therefore, this option is intended to ensure that management is aware of and supportive of fulfilling VPTS reporting requirements for the high-value contracts that reach Article IX, Section 7.12, thresholds. Additionally, these contracts often last for

years before they conclude and a vendor report is completed. Amending the GAB section would ensure that the performance of vendors with high-value contracts is reported periodically during the life of the contract.

TIMELY REPORTING OF CONTRACTS

Statute requires state agencies to report vendor performance after the contract is finished. However, if a contract is extended or renewed, the reporting deadline also is extended. CPA urges state entities to report regularly before contracts conclude, although it is not required. This extension of reporting requirements often results in vendor performance reports not being submitted until years after contracts begin.

As of May 2018, 9,034 contracts worth more than \$138.2 billion had been active for more than one year. The average length of these contracts is more than five years. Many of these contracts have been renewed one or more times. Yet vendor reports are not required for these contracts because they have not concluded.

Option 3 would amend statute to require that state agencies and institutions submit performance reports before renewing or extending a contract. Agencies should be assessing vendors' performance before extending contracts, which also is an appropriate time to submit a vendor performance report. A lack of relevant vendor performance reports was the primary reason agency staff cited for not utilizing VPTS when making contract award decisions. Adding more vendor performance reports will make the system more useful for other agencies during procurements.

AMBIGUOUS REPORTING REQUIREMENTS

Another reason that VPTS reporting numbers are low for institutions of higher education is a lack of a clear VPTS reporting requirement. The Texas Administrative Code requires state agencies to report to VPTS when a purchase is made pursuant to the authority in the Texas Government Code. However, institutions can make purchases using authority granted in the Texas Education Code. Because educational institutions have the discretion to make purchases pursuant to either statute, their reporting to VPTS is largely voluntary. Additionally, the statutory requirements to consider VPTS data when making a purchase applies to state agencies and not to institutions.

Option 4 would amend the Texas Government Code, Sections 2155.089 and 2262.055, and the Texas Education Code, Section 51.9335, Subchapter D, to require institutions of higher education to report to the Vendor Performance

Tracking System and use the system data when making contract award decisions.

FISCAL IMPACT OF THE OPTIONS

Options 1 to 4 would have no significant fiscal impact to the state. These options would improve information available to state agencies and institutions when selecting vendors for contract awards. Increasing public access to information about vendor performance also would encourage vendors and agencies to address performance deficiencies in a timelier manner.

LBB staff could implement Option 1 using existing resources.

Option 2 could increase the frequency of VPTS reporting for certain high-value contracts. It is assumed that the additional costs would be minimal and could be absorbed by state agencies and institutions of higher education within existing resources.

Option 3 could increase the frequency of VPTS reporting for certain contracts. It is assumed that the additional costs would be minimal and could be absorbed by agencies and institutions of higher education within existing resources.

Option 4 would expand requirements for institutions of higher education to use VPTS. It is assumed that any resulting costs could be absorbed within existing resources.

The introduced 2020–21 General Appropriations Bill includes modifications to a rider to implement Option 2.

IMPROVE ALIGNMENT OF SKILLS DEVELOPMENT FUND GRANTS WITH WORKFORCE TRAINING GOALS

The federal government is the primary source of funding for employment and training programs serving adults in Texas. A combination of state and federal funding sources support career and technical education programs for youth and adults. The Legislature supplemented federal workforce training with approximately \$28.6 million per year in General Revenue Funds for the 2018–19 biennium for skills development, of which approximately \$23.6 million per year was allocated to the Skills Development Fund grant program, administered by the Texas Workforce Commission. The program provides grants to public community and technical colleges to fund customized job training programs for businesses that want to train new workers or increase the skills of their existing workforce.

The goal of the Skills Development Fund grant program is to increase the skills and wages of the Texas workforce. However, the program could be better aligned with the state’s workforce training priorities, and its evaluation methodology is not rigorous enough to determine the impact of grant awards in spurring economic development. As a result, the state might be spending money on projects that otherwise would be paid for by employers or that have little effect on improving skills or increasing wages. Better monitoring practices and alignment with the state’s workforce training goals would improve the program.

FACTS AND FINDINGS

- ◆ The primary Skills Development Fund grant program provides grants to public community colleges, technical colleges, and the Texas A&M Engineering Extension Service, which partner with businesses or consortiums to provide customized employee training. For the 2018–19 biennium, the target average cost per trainee is \$1,800, and single business grants are limited to \$500,000 each.
- ◆ The Skills for Small Business program grants participating community and technical colleges at least \$20,000 each to train employees of small businesses. The program pays for tuition and fees up to \$1,800 for a new employee or \$900 for a current employee to complete an existing community or technical college course.

- ◆ The performance data contained in annual reports for the Skills Development Fund grant program are from grant contracts with colleges, which represent projected, not actual, numbers of workers participating in trainings. Actual data are collected through a different database and are used for final determination of grant payments based on completion, but are not published.
- ◆ The Skills Development Fund grants have been funded by General Revenue Funds to date. As a result of the fund consolidation process, a Skills Development Fund was established in 2017, but no revenue was directed into the fund, and it has a zero balance.

CONCERNS

- ◆ The Texas Workforce Commission requires, at minimum, that a grant project yield a 1.0 percent increase in participants’ wages, with a target average training cost of \$1,800 per person. Depending on the prevailing wage for the occupation, this grant may result in minimal economic impact for the individual and may not be a cost-effective use of funds.
- ◆ The Texas Workforce Commission allows awards grants for occupations that the agency does not categorize as growth occupations. These occupations are not target or high-demand occupations, according to local workforce boards, and may not be aligned with local or state strategic workforce priorities.
- ◆ State law directs the Texas Workforce Commission to consider giving priority to training incentives for small businesses. The agency encourages applicants to seek out small businesses and medium-sized businesses for Skills Development Fund projects. However, more than half of funding has been distributed to grants involving large businesses since 2011.
- ◆ About two-thirds of community and technical colleges do not use the full Skills for Small Business grants contracted amount. This lack of use decreases the utility of these funds, which cannot be used for other grants during this time. Restricting the use of these funds for existing courses at community and

technical colleges also may not meet the needs of small employers, which may explain why they are not taking full advantage of the program.

OPTIONS

- ◆ **Option 1:** Amend statute to require the Texas Workforce Commission to collaborate with the Texas Workforce Investment Council to develop a cost-benefit tool that compares the cost of training to the proposed increase in wages and restricts grant awards to those proposals that meet a threshold determined by the Texas Workforce Commission.
- ◆ **Option 2:** Amend statute to prohibit the Texas Workforce Commission from awarding training grants for occupations other than those that are included in the agency's most recent Growth Occupations report or on current regional targeted or high-demand occupation lists.
- ◆ **Option 3:** Include a rider in the 2020–21 General Appropriations Bill requiring the Texas Workforce Commission to survey small businesses and medium-sized businesses about their employee skills and training needs and how Skills Development Fund grants can best support their workforce development efforts. The agency would be required to report its findings to the Office of the Governor and the Legislative Budget Board by September 1, 2020.
- ◆ **Option 4:** Include a rider in the 2020–21 General Appropriations Bill requiring the Texas Workforce Commission, in collaboration with the Texas Workforce Investment Council, to consider methods to expand the use of Skills for Small Business funding to better meet the needs of small businesses, such as funding structured internships and apprenticeships through community and technical colleges. The Texas Workforce Commission would be required to report its findings to the Office of the Governor and the Legislative Budget Board by September 1, 2020.

DISCUSSION

The Texas Workforce Commission (TWC) administers the Skills Development Fund (SDF) grant program, which is intended to increase the skills and wages of the Texas workforce. The agency awards grants to community and technical colleges that partner with businesses to provide customized training for those businesses' employees. SDF

grants provide training programs and economic development incentives for businesses. Economic development incentives come in many forms and can be difficult to evaluate. TWC publishes data from grant contracts; however, the agency has not conducted an effectiveness evaluation using a comparison group that demonstrates what would have happened in the absence of the program. Consequently, the Legislature cannot know the extent to which these grants contributed to job development or retention. Nonetheless, program activities can be assessed to ensure alignment with goals and requirements found in statute.

SKILLS DEVELOPMENT FUND WITHIN THE WORKFORCE SYSTEM

Texas' workforce development system consists of education, training, guidance, and career development programs that are administered by eight state agencies, 28 local workforce boards, public institutions of higher education, independent school districts (ISD), and other community providers. These entities are coordinated by the Texas Workforce Investment Council (TWIC). The council has voting representatives from each of these groups from around the state, and TWIC staff are attached administratively to the Office of the Governor.

The federal government is the primary source of funding for employment and training programs serving adults in Texas. A combination of state and federal funding sources support career and technical education programs for youth and adults. TWC administers 10 programs that support the workforce system. **Figure 1** shows these programs and their appropriations for the 2018–19 biennium.

The Temporary Assistance for Needy Families (TANF) Self-sufficiency and Skills Development programs provide grants to community and technical colleges to fund customized training programs. The TANF Self-sufficiency Program, for current or potential TANF recipients, helps trainees obtain industry-recognized certificates and credentials that can lead to permanent, full-time employment. The Skills Development programs include the Jobs and Education for Texans (JET) grants and SDF grants. JET grants are available to defray start-up costs associated with developing career and technical education programs at community and technical colleges and ISDs. The SDF grant program includes several initiatives, shown in **Figure 2**.

**FIGURE 1
TEXAS WORKFORCE COMMISSION WORKFORCE SERVICES PROGRAMS, 2018–19 BIENNIUM**

PROGRAM	ALL FUNDS APPROPRIATIONS (IN MILLIONS)	PERCENTAGE OF APPROPRIATION FEDERALLY FUNDED
Workforce Innovation and Opportunity Act	\$331.8	100.0%
Temporary Assistance for Needy Families (TANF) Choices	\$175.6	90.0%
Supplemental Nutrition Assistance Program Employment and Training	\$36.8	76.0%
Employment Services	\$108.3	91.0%
Trade Adjustment Assistance	\$40.8	100.0%
Adult Education and Literacy	\$150.5	84.0%
Skills Development (1)	\$57.4	0.0%
TANF Self-sufficiency	\$5.1	100.0%
Apprenticeship	\$8.9	29.0%
Senior Community Service Employment	\$9.6	100.0%
Total	\$924.8	87.0%

NOTE: The Skills Development Program includes Jobs and Education for Texas Program funding of \$10.0 million for the 2018–19 biennium.
SOURCE: Legislative Budget Board.

**FIGURE 2
SKILLS DEVELOPMENT FUND GRANT INITIATIVES
FISCAL YEAR 2018**

PROGRAM	DESCRIPTION
Skills Development Fund Grants	This program provides local customized job training for Texas businesses and workers to increase skill levels and workforce wages.
Skills for Small Business	This program provides up to \$2.0 million for training specifically for small businesses that have 99 employees or fewer. Businesses can apply directly to the Texas Workforce Commission (TWC) for training offered by local community or technical colleges. The agency processes the applications and works with colleges to fund the specific courses selected by businesses for their employees.
Skills for Veterans	This initiative dedicates up to \$1.0 million to address the training needs of U.S. military veterans who are entering the Texas workforce. Employers submit applications to TWC, which reviews the applications and works with local community and technical colleges to fund specific courses selected by businesses for their employees.
Skills for Transition Program	This program provides up to \$4.0 million to train transitioning service members who plan to remain in Texas. Trainees include military service members from 180 days before separating from service to within 180 days after their discharge. Training for jobs that are identified in local workforce boards' targeted and high-demand occupations list is provided at no cost to the service members or the military.

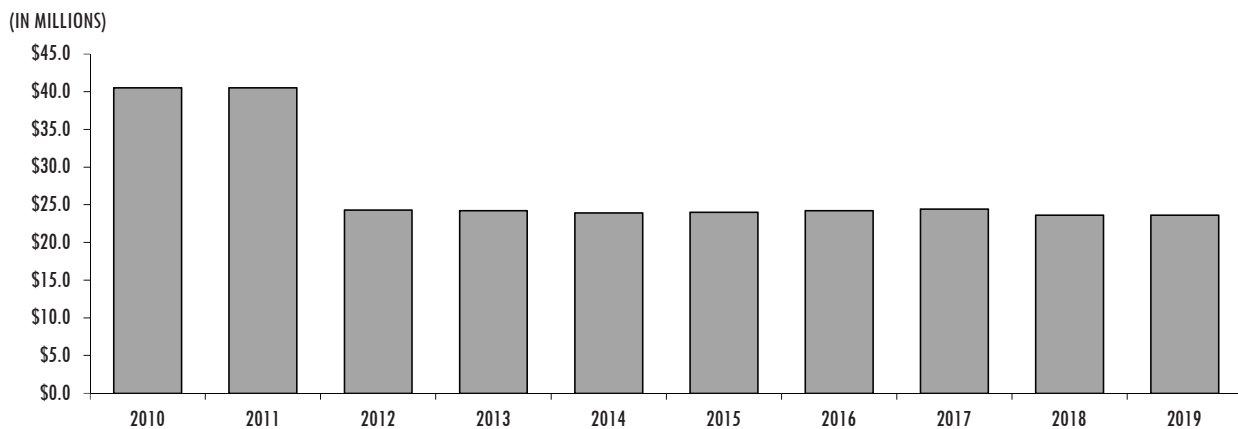
NOTE: Amounts above are from appropriations to the Skills Development Fund grant program, not in addition to the program.
SOURCE: Texas Workforce Commission.

FUNDING FOR SKILLS DEVELOPMENT FUND GRANTS

Although the name Skills Development Fund implies that the program has a dedicated funding source, the grants have been funded from General Revenue Funds. House Bill 1863, Seventy Fourth Legislature, 1995, established SDF as a General Revenue–Dedicated Account. However, it was not exempted from the funds consolidation process and was abolished and consolidated into the General Revenue Fund

during that session. The Legislature appropriated approximately \$28.6 million per fiscal year in General Revenue Funds for the 2018–19 biennium for skills development, of which approximately \$23.6 million per fiscal year was allocated to the Skills Development Fund program. **Figure 3** shows appropriations for the Skills Development Fund program and average grant award from fiscal years 2011 to 2019.

**FIGURE 3
GENERAL REVENUE FUNDS APPROPRIATIONS FOR THE SKILLS DEVELOPMENT FUND PROGRAM
FISCAL YEARS 2010 TO 2019**



NOTE: Amounts include appropriations in the General Appropriation Act, Article VIII, Texas Workforce Commission (TWC), Strategy A.3.1 Skills Development. Amounts for fiscal years 2016 to 2019 exclude \$5.0 million per year in appropriations for the Jobs and Education for Texans program that also appear in TWC, Strategy A.3.1.
SOURCE: Legislative Budget Board.

The Seventy-ninth Legislature, Regular Session, 2005, established the General Revenue–Dedicated Account No. 5128, Employment and Training Investment Holding (Account No. 5128). This legislation established an assessment of 0.1 percent on wages paid by employers, which was offset by an equal reduction in the Replenishment Tax rate. TWC is required to transfer revenue from Account No. 5128 into the Unemployment Compensation Trust Fund if additional funds are needed to meet the trust fund’s minimum amount. Pursuant to the Texas Labor Code, Chapter 204, Subchapter G, if any funds that remain in Account No. 5128, amounts would be transferred to the Skills Development Fund up to the appropriations for the program and would be available for appropriation by the Legislature. However, because the Skills Development Fund did not exist, transfers from Account No. 5128 were made into the General Revenue Fund and were available for general government purposes.

The Eighty-fifth Legislature, Regular Session, 2017, established a Skills Development Fund, but it did not designate a revenue source to deposit or transfer into that fund. The balance of this fund is zero.

SKILLS DEVELOPMENT FUND GRANT REQUIREMENTS AND STRUCTURE

SDF grant requirements have been established through statute, administrative rule, and agency internal policy. The primary SDF grants provide funds to public community

colleges, technical colleges, or the Texas A&M Engineering Extension Service (TEEX), as required by statute. These schools must partner with businesses or consortiums (groups of businesses, often in the same industry) to provide customized training to the businesses’ employees. Except for private, nonprofit hospitals, only private, for-profit businesses may be business partners. A grantee may not contract directly with the business partner to train its own employees. Community or technical colleges may subcontract with the following other entities to provide the training for the business:

- a nonprofit, community-based organization, only in partnership with the public community college or technical college or TEEX; or
- a person, sole proprietorship, partnership, corporation, association, consortium, governmental subdivision, or public or private organization.

Local workforce boards may not receive SDF grants, but applicants must coordinate with these boards regarding the scope of the project. Boards also must review and comment on proposals before submission.

TWC accepts applications throughout the year and awards grants on a rolling basis. Businesses are not required to provide any financial commitment to participate in the program, although TWC indicates that resource contributions are considered to evaluate proposals. Agency

**FIGURE 4
TRAINING CATEGORIES FOR SKILLS DEVELOPMENT FUND GRANTS
FISCAL YEAR 2018**

CATEGORY	PARAMETERS
Business Technical	At least 55.0 percent of the total training hours must be in business technical courses, which are occupation-specific. Examples include metrology, pneumatics, and mechanical maintenance; finance; and nurse certification.
General Technical	Up to 45.0 percent of the total training hours may be in general technical courses, which may be essential to the occupation but are more foundational. Examples include Lean Six Sigma courses, Occupational Safety and Health Administration courses, and computer courses.
Nontechnical	No more than 10.0 percent of the total training hours may be in nontechnical courses such as leadership, communication, and team building.

SOURCE: Texas Workforce Commission.

rule stipulates that 60.0 percent of the grant amount may support training to improve skills of incumbent workers, and 40.0 percent of the amount may be used to develop jobs. A position held by an individual who will receive the training and was hired up to a year before proposal submission or during the contract period may count as a new job.

Most of the training funded by SDF projects must be in the business technical or general technical categories, as shown in **Figure 4**.

TWC typically does not authorize a business to participate in a new SDF grant-funded project within six months of the end date of a previous SDF grant-funded project. TWC may grant an exception for an expanding business that applies for funding to train new employees.

Some businesses choose to use proprietary training for their employees. Proprietary training is owned and controlled by the business or a third-party training vendor. TWC stipulates that a business seeking to use proprietary training for an SDF project must explain why its infrastructure cannot support its training needs without the assistance of an SDF grant. A similar explanation is not required for training that is nonproprietary unless the costs exceed targeted amounts.

To be eligible, business partners must be paying at least the prevailing wage for an occupation in a Workforce Development Area (WDA). The prevailing wage is the wage at the twenty-fifth percentile for that occupation in the employee’s WDA. Business partners must agree to increase wages for those who complete the training by at least 1.0 percent.

Single-business grants may be limited to \$500,000 and typically last 12 months. Based on performance measures in the Eighty-fifth Legislature, General Appropriations Act,

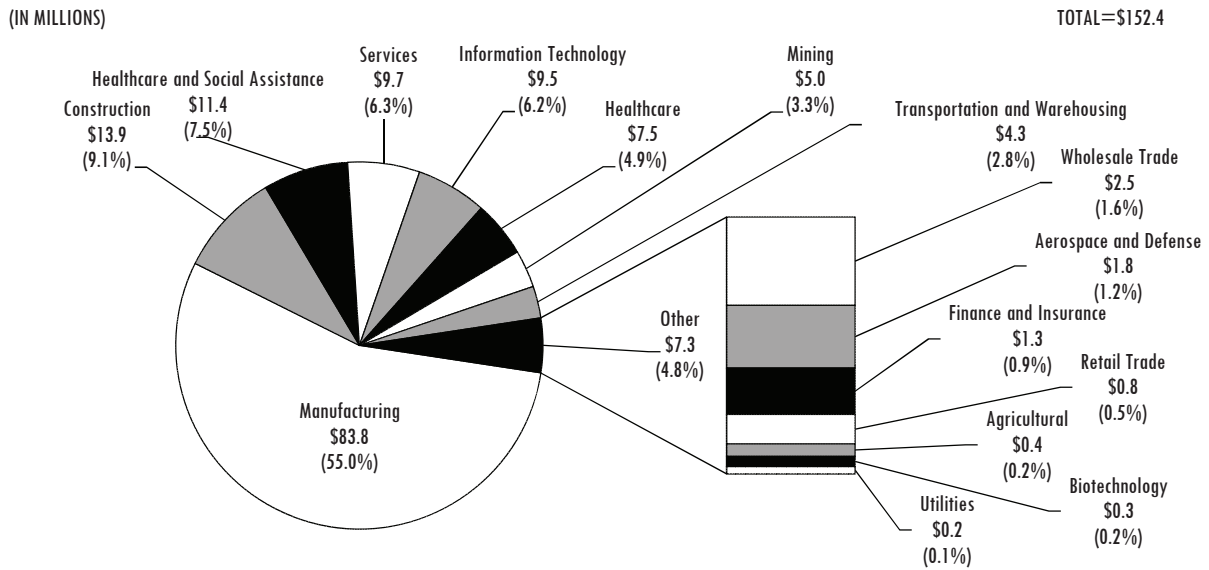
2018–19 Biennium, the target average cost per trainee is \$1,800. Grant funds can apply to tuition, curriculum development, instructor fees, and training materials. Grant funds may not be used to pay for trainee wages, drug testing, travel costs, or certain equipment purchases. Employers may not use grant funds to relocate a worksite within Texas.

Depending on the prevailing wage for the occupation, the wage increase and level of training may have minimal economic impact and leave less state funding available for grant proposals received later in the fiscal year that may offer more benefit. For example, if the prevailing wage for a particular occupation in a WDA were \$15.00 per hour, a 1.0 percent increase would yield an additional \$0.15 per hour, which translates to a gross annual wage increase of about \$312.00 for a full-time employee. For fiscal year 2017, the starting average hourly wage for all jobs attributed to SDF grants was \$23.54, but these wages at some jobs were \$12.68. Six grants during fiscal year 2017, with a combined value of more than \$1.0 million, were awarded to projects with average starting hourly wages of less than \$15.00. The use of SDF grant money to fund such projects leaves less state funding available for grant proposals received later during the fiscal year that may offer more benefit.

Option 1 would amend the Texas Labor Code to require TWC to collaborate with TWIC to develop a cost-benefit tool that compares the cost of training to the proposed increase in wages and restricts the award of grants to those proposals that meet a threshold determined by TWC. TWIC is well-positioned to assist TWC in this effort because its statutorily required duties already include the following activities:

- evaluate the effectiveness of the workforce development system;

FIGURE 5
SKILLS DEVELOPMENT FUND GRANT AMOUNTS AWARDED PER BUSINESS BY INDUSTRY
FISCAL YEARS 2011 TO 2017



SOURCES: Legislative Budget Board; Texas Workforce Commission.

- encourage, support, or develop research and demonstration projects to develop new programs and approaches to service delivery; and
- recommend measures to ensure that occupational skills training is provided for jobs that are locally in demand and directed toward high-skill and high-wage jobs.

GRANT AWARDS BY INDUSTRY AND REGION

As shown in **Figure 5**, manufacturing received the most grant funding from fiscal years 2011 to 2017. During each of those years, manufacturing projects accounted for more than 50.0 percent of the SDF funding that TWC awarded.

The Comptroller of Public Accounts (CPA) establishes regions of the state, and the Texas Labor Code, Section 303.006, requires SDF to use these regions, rather than workforce board regions, for reporting purposes. **Figure 6** shows grant amounts awarded by CPA Region. The Coastal Bend Region was eliminated during fiscal year 2016. Counties in that region are now part of the South Texas and Alamo Regions. Statute requires TWC to make an effort to award SDF grants in all areas of the state.

Data for the number of trainees in new and upgraded jobs published in annual reports for regular SDF grants include the amounts projected at the initiation of the grant, not

actual amounts reconciled after the grant’s completion. Actual data for the number of participants are collected through a different database and are used for final determination of grant payments based on completion, but are not published. Wages reported in the annual reports also include only those before the training. According to TWC, the agency collects data during the application process regarding the level of wages that employers intend to pay employees who complete training. The agency does not publish in its annual report the numbers of those who actually completed the training nor the actual increase in wages received, which limits transparency and public accountability.

APPLICATION SELECTION AND STRATEGIC GOALS

TWC reports that it considers the following factors when evaluating eligible applications:

- the type of training provided;
- the reusability of equipment and its residual value to the college or technical school;
- the economic impact of the grant award on the local region;
- the fiscal stability of the business partner;

FIGURE 6
SKILLS DEVELOPMENT FUND AMOUNT AWARDED PER BUSINESS BY COMPTROLLER REGION
FISCAL YEARS 2011 TO 2017

(IN MILLIONS)

REGION	2011	2012	2013	2014	2015	2016	2017	TOTAL
Alamo	\$0.2	\$2.6	\$0.7	\$1.9	\$1.0	\$0.7	\$0.5	\$7.7
Capital	\$0.7	\$1.2	\$0.1	\$2.6	\$3.7	\$1.4	\$0.4	\$10.2
Central Texas	\$1.1	\$2.9	\$1.2	\$2.2	\$2.7	\$1.5	\$3.2	\$14.7
Coastal Bend	\$0.05	\$0.8	\$2.4	\$2.1	\$0.4	N/A	N/A	\$5.7
Gulf Coast	\$1.6	\$3.5	\$6.6	\$1.5	\$3.7	\$2.2	\$3.4	\$22.7
High Plains	\$0.3	\$0.2	\$0.1	\$0.4	\$0.6	\$0.6	\$0.1	\$2.4
Metroplex	\$6.0	\$6.8	\$7.1	\$11.7	\$5.4	\$10.1	\$11.7	\$58.9
Northwest Texas	\$0.1	\$0.4	\$0.4	\$1.0	\$1.7	\$0.2	\$1.3	\$5.1
South Texas	\$1.7	\$2.3	\$0.6	\$0.2	\$0.6	\$3.7	\$0.6	\$9.7
Southeast Texas	\$1.5	\$0.3	\$0.1	\$1.6	\$0.2	\$0.7	\$0.2	\$4.6
Upper East Texas	\$1.3	\$1.1	\$0.2	\$1.0	\$0.9	\$0.8	\$1.0	\$6.3
Upper Rio Grande	\$0.0	\$0.04	\$0.0	\$0.4	\$0.4	\$1.1	\$0.0	\$1.9
West Texas	\$0.1	\$0.2	\$1.9	\$0.2	\$0.0	\$0.3	\$0.0	\$2.6
Total	\$14.6	\$22.4	\$21.5	\$26.7	\$21.2	\$23.5	\$22.5	\$152.4

SOURCES: Legislative Budget Board; Texas Workforce Commission.

- the applicant’s current and past performance on SDF grants;
- the inclusion of small businesses and medium-sized businesses;
- the cost per trainee; and
- whether a business provides health insurance to trainees.

According to TWC, agency staff and management evaluate applications holistically as they receive them, in accordance with internal policy. If the cost of training is relatively high, the agency may ask the employer to share costs, or it may approve parts of the application or split the grant across two fiscal years to manage resources.

As part of its holistic evaluation, TWC considers proposed wage increases and uses an estimate of regional economic impact resulting from SDF grants. However, several attributes of the methodology may overestimate the impact. First, the evaluation assumes that the employer would not have pursued similar training and wage increases for employees in the absence of the grant, which is difficult to verify. In addition, the evaluation considers annual income, but participants are required to remain employed for 90 days.

Therefore, using annual income in calculations may overestimate the impact of the grants.

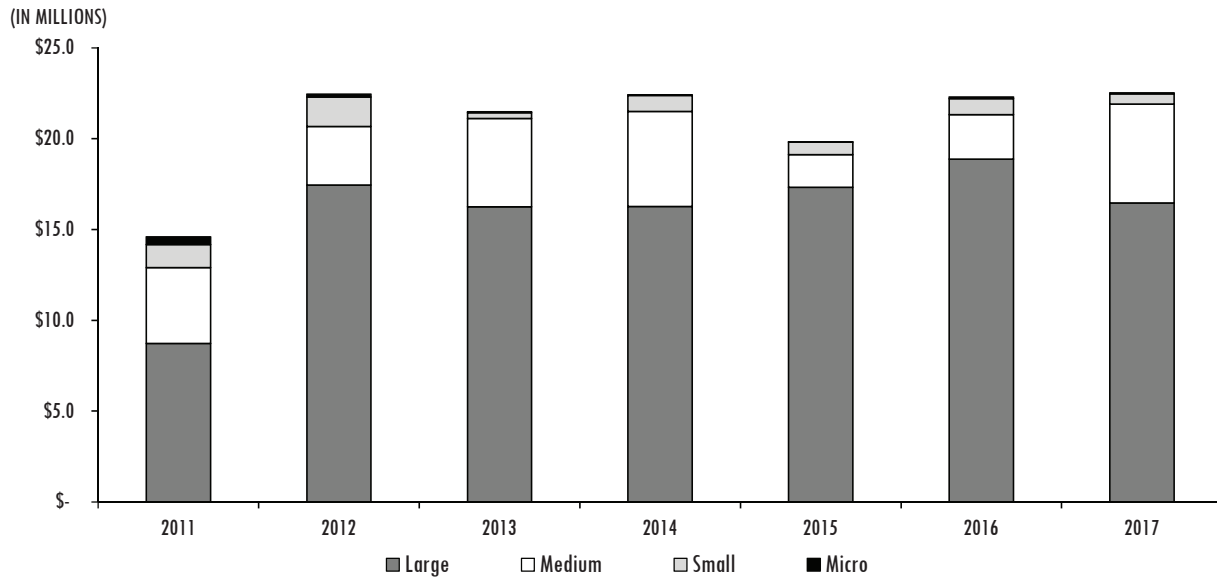
Additionally, the evaluation conflates new hires with new jobs and also counts existing jobs as new jobs. For example, employers may count employees hired within a year before applying for the grant as new jobs for grant purposes, and the agency counts these salaries in measuring the impact of the grant. However, employees may have been filling existing vacancies or working for a different company in the same region. If those recently hired employees came from similar jobs at other companies in the same region, counting the full value of the new salary in the region would overestimate the impact of the grants. Similarly, if those employees replaced departing employees who had similar wages, the evaluation also would overestimate the impact.

As part of the development of the cost-benefit tool in Option 1, TWC should evaluate and consider revising the components of the economic impact model.

ALIGNMENT WITH STATE WORKFORCE PRIORITIES

Although local workforce boards are required to provide feedback to TWC on SDF applications, SDF grants are not required to fund training for state growth occupations or local high-demand or target occupations. TWC is required

FIGURE 7
SKILLS DEVELOPMENT FUND GRANT AMOUNTS AWARDED PER BUSINESS BY BUSINESS SIZE
FISCAL YEARS 2011 TO 2017



NOTE: Large=500 or more employees; medium=100 to 499 employees; small=21 to 99 employees; and micro=1 to 20 employees.
 SOURCES: Legislative Budget Board; Texas Workforce Commission.

by statute to gather and study information annually regarding existing and projected shortages in high-wage, high-demand occupations in Texas. TWC releases periodic reports regarding growth occupations, which include growing occupations that pay more than the Texas median wage. Local workforce development boards also are required to publish lists of target and high-demand occupations for their regions. Workforce boards develop these lists using their own criteria; therefore, definitions vary across the state. Local workforce boards also may contribute written statements to grant applications stating that certain grant projects are for targeted occupations, which may help justify approval of higher-cost training.

The practice of awarding training grants for jobs that are not designated as growth occupations by TWC, nor designated as target or high-demand occupations according to local workforce boards, may not align with local or state strategic workforce priorities. Legislative Budget Board (LBB) staff collected information from 28 local workforce development boards about their experiences with SDF grants, and 12 boards responded. Regarding the degree to which training supported by SDF grants is aligned with the state’s strategic workforce goals, four boards reported that the grants were optimally aligned, and eight reported that they were aligned partially. Considering SDF’s limited grant resources, the

grants use state resources most efficiently by supporting occupations that the state and local workforce boards have identified as being in high demand and offering high wages. Option 2 would amend the Texas Labor Code to prohibit TWC from awarding training grants for occupations other than those that are included in the agency’s most recent Growth Occupations report or on current regional targeted or high-demand occupation lists.

APPLICATIONS FOR SMALL BUSINESSES

TWC is required to consider prioritizing training incentives for small businesses, which are those with from 21 to 99 employees. TWC encourages applicants to seek out small businesses and medium-sized businesses for regular SDF projects. However, since 2011, more than half of regular funding has been for grants involving large businesses. **Figure 7** shows the breakdown of grant amounts awarded by business size.

Compared to large businesses, small businesses and medium-sized businesses may have fewer resources available to spend on pursuing partnerships with local community and technical colleges and participating in the application and data collection processes. Option 3 would include a rider in the 2020–21 General Appropriations Bill requiring TWC to survey small businesses and medium-sized businesses about

their employee skills and training needs and how SDF grants can best to support their workforce development efforts. TWC would be required to report its findings to the Office of the Governor and the LBB by September 1, 2020, and to use the information to improve the program.

TWC also has a separately structured initiative, the Skills for Small Business program, which grants community and technical colleges at least \$20,000 to pay for trainings for employees of small businesses. The program reimburses qualifying businesses up to \$1,800 for a new employee or \$900 for a current employee to complete an existing course at the community or technical college. According to the agency, approximately two-thirds of these receiving colleges do not use the full contracted amounts. Unused Skills for Small Business funds are reallocated to other grants after the 12-month grant period expires. This practice may not maximize the utility of these funds because they cannot be used for other grants during this period. Restricting the use of these funds for existing courses at community colleges also may not meet the needs of small businesses, which could explain why the grants are not being used in full.

Option 4 would include a rider in the 2020–21 General Appropriations Bill requiring TWC, in collaboration with TWIC, to consider methods to expand the use of Skills for Small Business funding to better meet the needs of small businesses. These additional methods could include funding structured internships and apprenticeships through community and technical colleges. TWC would be required to report its findings to the Office of the Governor and the LBB by September 1, 2020.

FISCAL IMPACT OF THE OPTIONS

Options 1 and 4 would require the collaboration of TWC and TWIC to modify program administration. It is assumed that both agencies could absorb these duties within existing resources.

Option 2 would change which applications were approved, but it would not change the amount of grant funding available and, therefore, would have no fiscal impact. Any administrative changes necessary to add these criteria to application evaluation are assumed to be insignificant.

Option 3 would require TWC to survey small businesses and medium-sized businesses. Based on a comparable survey of businesses that TWIC conducted during fiscal year 2015, which cost less than \$25,000, it is assumed that any fiscal impact would be insignificant.

The introduced 2020–21 General Appropriations Bill does not include any adjustments as a result of these options.

MODIFY THE GRADUATED DRIVER LICENSE PROGRAM TO DECREASE TRAFFIC FATALITIES

In 2016, a car crash occurred every 57 seconds in Texas. Every two hours and 20 minutes, an individual died, resulting in 3,776 deaths. Texas ranks twelfth in the U.S. for the greatest number of deaths per mile driven, and fatalities in the state have increased. This environment poses disproportionate risks to younger drivers. Nationally, teenage drivers are three times more likely to crash per mile driven than adult drivers. Texas had 479 traffic fatalities in crashes involving young drivers, accounting for nearly 13.0 percent of all traffic-related fatalities in 2016.

To introduce young drivers into developing their driving skills and minimize exposure to high-risk situations, all 50 U.S. states have adopted a three-stage graduated driver licensing system. Teenage drivers begin the program in a fully supervised learning period, enter an intermediate stage with restrictions on high-risk conditions, and finally receive full driving privileges. Restrictions include limiting nighttime driving, restricting the number of teenaged passengers, and requiring drivers to have supervised practice. These restrictions are implemented differently across the U.S. Evidence shows that establishing the optimal graduated driver license program can be challenging. However, graduated driver license programs have been an effective method for decreasing the crash risk of the youngest beginning drivers.

FACTS AND FINDINGS

- ◆ Texas restricts provisional drivers from driving from 12:00 AM to 5:00 AM.
- ◆ As required by the Texas Transportation Code, the Department of Public Safety develops a Collision Rate Statistics Publication each year for young drivers. Data is collected on the number and severity of teenage driver collisions and driver education providers to produce a collision rate of students per driver education entity. According to the Department of Public Safety, from July 2017 to June 2018, the collision reports have been viewed four times, and the Department of Public Safety has no record of calls or questions regarding the data.

CONCERNS

- ◆ One of the most deadly periods for teenage motor vehicle-related fatalities is from 9:00 PM to 12:00

AM, and the second is from 6:00 PM to 9:00 PM. In addition, nearly all trips for drivers ages 16 and 17 end before 12:00 AM. Therefore, restrictions that begin at 12:00 AM are not addressing this risk.

- ◆ Linking driver education providers in the Department of Public Safety collision report to a crash is problematic due to the number of complex causes that lead to crashes, such as social and environmental factors. Data in the Department of Public Safety collision report do not account for factors that influence crashes accidents that are outside of the driver education provider's control, such as location, time of day, or the number of passengers present. The data cannot distinguish fault and encompass all crashes involving new teen drivers.

OPTIONS

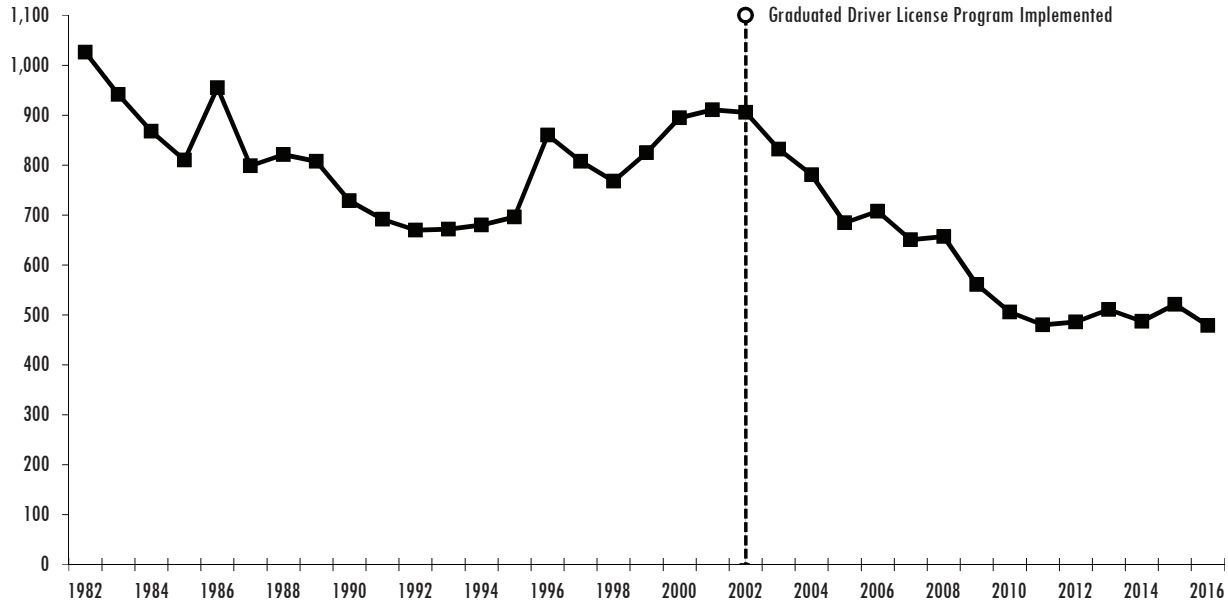
- ◆ **Option 1:** Amend statute to restrict teenage driving after 9:00 PM.
- ◆ **Option 2:** Amend statute to eliminate the data collection and publication requirement for the Department of Public Safety's Collision Rate Statistics Publication.

DISCUSSION

Teenage crash rates have decreased significantly, most notably since the adoption of graduated driver license programs. However, according to the Centers for Disease Control, motor vehicle crashes remain the leading cause of death for adolescents from ages 15 to 20. In 2015, motor vehicle traffic fatalities represented more than 60.0 percent of deaths caused by unintentional injury and almost 25.0 percent of deaths overall for the age group. **Figure 1** shows the number of Texas fatalities involving young drivers from ages 15 to 20. This number includes passengers, occupants of other vehicles, and nonoccupants, such as pedestrians or cyclists. Teenagers also are overrepresented in fatal crashes. Nationally, young drivers from ages 15 to 20 accounted for 5.4 percent of the total number of licensed drivers in 2016, but young drivers were involved in 9.0 percent of all fatal crashes.

Texas has the second-highest amount of vehicle miles driven in the U.S., and in 2016 the state had the twelfth-highest number of deaths per mile driven. The Texas Strategic

FIGURE 1
TEXAS FATALITIES IN CRASHES INVOLVING DRIVERS AGES 15 TO 20
CALENDAR YEARS 1982 TO 2016



SOURCE: National Highway Traffic Safety Administration.

Highway Safety Plan has a long-term goal of zero traffic-related fatalities. However, the Texas Department of Transportation expects the number of young drivers involved in fatal crashes to continue to increase during the next two years, as shown in **Figure 2**. To accomplish the long-term goal of zero traffic-related fatalities, the state would need to adopt multiple engineering improvements and behavioral modification strategies.

To determine which policy changes would have the greatest effects on traffic-related fatalities, decision makers can use a public health framework. The framework can help to develop a comprehensive plan that identifies risk factors and potential crash-reduction strategies. The Legislative Budget Board staff report *Align State Transportation Policy to Reduce Traffic Fatalities*, January 2017, reported that one model to evaluate solutions is the hierarchy of control. The model is intended to remove or decrease risk in complex systems, and it is used by the National Institute for Occupational Safety and Health. Interventions at the top of the hierarchy typically are more effective, but they cost more to implement. Interventions at the bottom of the hierarchy, such as personal protective equipment, rely on user compliance and are, thus, less effective. The following examples of policy changes

FIGURE 2
TEXAS DEPARTMENT OF TRANSPORTATION
PERFORMANCE MEASURE: NUMBER OF YOUNG DRIVERS
AGE 20 OR YOUNGER INVOLVED IN FATAL CRASHES ,
FISCAL YEARS 2014 TO 2019

YEAR	TARGET	ACTUAL
2014	415	444
2015	457	438
2016	438	457
2017	436	451
2018	477	N/A
2019	482	N/A

NOTE: Actual data for fiscal years 2018 and 2019 is not available.
 SOURCE: Texas Department of Transportation.

intended to decrease traffic fatalities, in order of effectiveness, use this framework:

- elimination – eliminate hazardous conditions or remove risk, such as providing solutions that decrease automobile travel;
- substitution – provide safer alternatives to driving, such as public transportation;

**FIGURE 3
TEXAS GRADUATED DRIVER LICENSE PROGRAM, AS OF FISCAL YEAR 2019**

PHASE	AGE	RESTRICTIONS
Phase One: Learner License	At least 15	<ul style="list-style-type: none"> complete a driver education course and pass a knowledge exam; complete 30.0 hours of supervised driving, 10.0 hours at night; drive only when accompanied by a qualified driver 21 or over; nighttime restriction – 12:00 AM to 5:00 AM; and hold learner license for 6 months
Phase Two: Provisional License	At least 16	<ul style="list-style-type: none"> pass a driving skills test and complete the Impact Texas Teen Drivers course; nighttime restriction – 12:00 AM to 5:00 AM; passenger limit – no more than 1 passenger age 20 or younger, with exceptions for immediate family members; and no use of a wireless communication device
Phase Three: Full License	18	No restrictions

SOURCE: Department of Public Safety.

- engineering controls – construct or add physical safety features to roads that decrease risk;
- administrative controls – changing policies, which is most effective when used in conjunction with the changes previously mentioned; and
- personal protective equipment – seatbelts, airbags, helmets.

One of the most significant factors in crashes involving this age group is inexperience, combined with a tendency toward risky behaviors. The graduated driver license program is an administrative control that is used to gradually expose young drivers to the tools needed to be safe while driving and to decrease exposure to hazardous conditions.

Research on the components of graduated driver license programs dates to the 1970s. However, many states did not begin adopting modern graduated driver license (GDL) systems until the late 1990s. Since that time, multiple studies have confirmed the effectiveness of a graduated driver license system in decreasing the number of fatal crashes. The programs vary widely among states, including differences in requirements and enforcement.

As the state of Texas works toward its goal of zero traffic fatalities and serious injuries, adjusting the graduated driver license program could decrease the number of deaths caused by motor vehicle injuries.

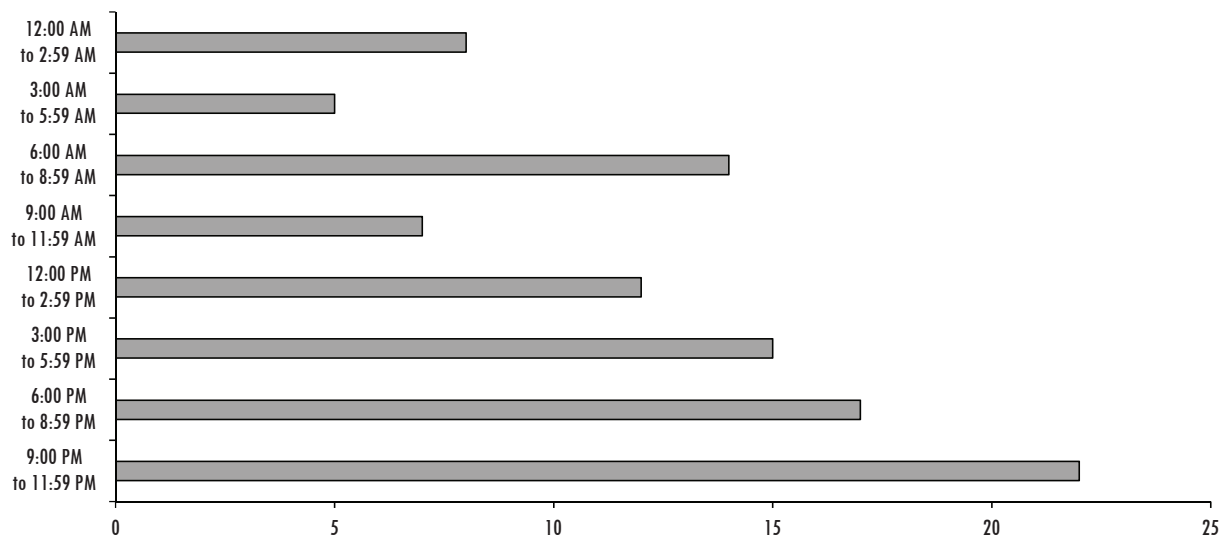
**PHASES OF THE TEXAS
GRADUATED DRIVER LICENSE PROGRAM**

The Seventy-seventh Legislature, 2001, first adopted a GDL program, effective January 2002. The program is a set of requirements and restrictions that young drivers must meet to receive a license provided by the Texas Department of Public Safety (DPS). The program has three phases, shown in **Figure 3**.

In Phase One of the program, young drivers ages 15 to 17 can obtain a learner license. This license enables new drivers to practice in a supervised environment before entering the second phase. Before obtaining the learner license, student drivers must complete a driver education course through an approved driver training school, parent-taught program, or public high school. The course must consist of at least 32.0 hours of classroom instruction, 7.0 hours of in-vehicle training, and 7.0 hours of in-car observation. After passing a knowledge test and vision exam, the student driver can receive a learner license.

While holding this learner license, a licensed driver 21 or over must accompany the student driver at all times. Furthermore, the young driver must complete 30.0 hours of supervised driving, 10.0 hours of which are at night. In addition to practicing their driving skills, teenage drivers must complete the Impact Texas Teen Drivers program. The two-hour program is offered free of charge by DPS, and it contains videos and educational materials intended to decrease distracted driving. In comparison, new drivers from

FIGURE 4
TEXAS DRIVERS AGES 16 AND 17 INVOLVED IN FATAL CRASHES BY TIME OF DAY, CALENDAR YEAR 2016



SOURCE: National Highway Traffic Safety Administration, *Person Level Fatal Crashes*, calendar year 2016.

ages 18 to 24 must complete at least 6.0 hours of driver education and complete a one-hour Impact Texas Young Drivers video program. After holding the learner license for six months, drivers age 16 and older are able to perform a driving skills test.

After teenage drivers have completed Phase One requirements and passed the driving skills test, they can receive provisional licenses. Phase Two of the program restricts the driving privileges of young drivers that have provisional licenses until they are age 18. Teenagers may not drive a vehicle with more than one nonfamily passenger age 20 or younger. These drivers are restricted from driving from 12:00 AM to 5:00 AM, unless the operation of a vehicle is necessary to attend or participate in employment or a school-related activity or is necessary for a medical emergency. Furthermore, individuals age 17 and younger are restricted from using wireless communication devices, including hands-free devices, except for emergencies. The Eighty-fifth Legislature, Regular Session, 2017, passed legislation prohibiting texting while driving for all adults; however, the law does not limit the use of all hands-free devices, which is included in the restriction for drivers in Phase Two. When a licensed driver turns age 18, these provisional license restrictions expire.

RISKS AND MITIGATION OPTIONS

The Legislature has amended the GDL program since it was adopted in 2001. Although the rate of fatalities involving

teenage drivers has decreased, the risk factors leading to crashes primarily are the same: inexperience and driving in high-risk situations, such as at night. Adjusting the GDL program to further decrease these risks could lead to greater decreases in the number of fatalities.

DRIVING AT NIGHT

Driving at night is a risk for all drivers, but it is particularly dangerous for inexperienced drivers. In calendar year 2016, teenage motor vehicle-related fatalities occurred most often from 9:00 PM to 12:00 AM, and the second most dangerous period was from 6:00 PM to 9:00 PM. Overall, 58.0 percent of crashes involving teenage drivers occur from 6:00 PM to 6:00 AM. For drivers ages 16 and 17, almost all driving trips end before 12:00 AM. Therefore, restrictions that apply only after 12:00 AM have minimal effects on drivers age 17 or younger. **Figure 4** shows the number of Texas teenage drivers ages 16 and 17 that were involved in fatal crashes by the hour of the day.

According to the National Highway Traffic Safety Administration (NHTSA), nighttime restrictions are one of the most effective ways to decrease crashes. NHTSA recommends a night restriction of 10:00 PM, with an exception for emergencies, to cover the most risk effectively. This restriction does not take into account exceptions for teenagers that have work or school responsibilities. However, NHTSA recommends that the benefits are greater the earlier

the restriction begins. Option 1 would amend the Texas Transportation Code, Section 545.424, to change the nighttime restriction to 9:00 PM with the same work, school, and emergency-related exceptions, to maximize the benefit of this restriction.

OTHER STATE GDL PROGRAMS

All 50 U.S. states have adopted graduated driver license systems. However, restrictions vary, and the number of supplemental programs used to address fatalities involving teenage drivers also varies. Other states have expanded the requirements and restrictions of their graduated driver license programs in an attempt to maximize the lifesaving benefits. **Figure 5** shows examples of other states’ GDL programs, based on their overall driving environment or the implementation of more innovative GDL restrictions. In calendar year 2016, California recorded the greatest number of overall vehicle miles traveled in the U.S., 100.0 million miles more than Texas, but California’s fatality rate was less than the rate in Texas. Florida has the third greatest number of overall vehicle miles traveled and has a similar fatality rate to Texas. New York has the fourth greatest number of vehicle miles traveled, 127.0 million less than Texas, and has the fourth lowest fatality rate nationwide. Maryland and New Jersey are also in the top 10 for lowest fatality rates. When examining each component within a GDL program, it is difficult to determine the exact effectiveness. However, NHTSA commissioned a meta-analysis that found that none of the programs were counterproductive for young drivers who are ages 16 and 17.

States have taken various approaches to implement their GDL programs. In addition to the restrictions shown in **Figure 5**, Maryland’s Rookie Driver graduated licensing system applies to all applicants who have never held a license, regardless of age. As a result, one study found that, after the program began, nonfatal crashes involving drivers age 18 decreased 6.9 percent. The program delays licensure to a later age for the youngest drivers and extends the driver education and supervised practice portion of the GDL to all new drivers. The time to license varies, depending on age, and the most stringent restrictions are applied to the youngest age groups. Young drivers are eligible to receive learner permits at age 15 and nine months, compared to age 15 in Texas. All applicants complete a version of the three-stage process, beginning with 30.0 hours of classroom instruction and 6.0 hours of in-vehicle instruction. Novice drivers age 24 and younger must have the permit for nine months and complete a minimum of 60.0 hours of supervised practice, 10.0 hours of which are at night. Drivers age 25 and older are eligible to take the driving skills test after 45 days, if they have taken the standardized education program and completed at least 14.0 hours of supervised practice, including 3.0 hours at night.

After the requirements are met to receive the provisional license and the driving skills test is passed, new drivers age 17 and younger must be supervised if driving from 12:00 AM to 5:00 AM. These drivers may not have passengers age 17 or younger during the first five months of having this provisional license, with exceptions for direct family members.

**FIGURE 5
VARIATION IN STATE GRADUATED DRIVER LICENSE PROGRAMS, CALENDAR YEAR 2016**

STATE	MINIMUM LEARNER AGE	SUPERVISED DRIVING PRACTICE	NIGHTTIME RESTRICTION	PASSENGER RESTRICTION
California	15 and 6 months	50.0 hours, 10.0 hours at night	11:00 PM to 5:00 AM	No passengers age 19 or younger
Florida	15	50.0 hours, 10.0 hours at night	age 16 – 11:00 PM to 6:00 AM; age 17 – 1:00 AM to 5:00 AM	None
Maryland	15 and 9 months	60.0 hours, 10.0 hours at night	12:00 AM to 5:00 AM	No passengers age 17 or younger
New Jersey	16	None	11:00 PM to 5:00 AM	No more than one passenger
New York	16	50.0 hours, 15.0 hours at night	9:00 PM to 5:00 AM	No more than one passenger age 20 or younger
Texas	15	30.0 hours, 10.0 hours at night	12:00 AM to 5:00 AM	No more than one passenger age 20 or younger

NOTE: Passenger restrictions may include exemptions for immediate family members.
SOURCE: Insurance Institute for Highway Safety

The state of New Jersey also has adopted several approaches to decrease the number of crashes involving new drivers. New Jersey has one of the lowest crash rates overall and for teenagers. The state also has one of the most comprehensive GDL programs. It is the only state where the graduated driver license provisions apply to all new drivers for 12 months or until age 21. Furthermore, new drivers age 22 and older must follow a modified version of the GDL program.

New Jersey is one of eight states where drivers are eligible for a permit starting at age 16, instead of age 15. Young drivers are more likely to commit a driving error, an effect that decreases with age. Evidence suggests that brain development affects a young driver's ability to make judgments. Drivers age 16 must complete a supervised driving course for a minimum of 6.0 hours before earning an examination permit; however, drivers starting at age 17 do not need to complete the course. After practicing for six months with an examination permit, a driver can receive the probationary license, which is held for at least 12 months. With this license, drivers are not permitted to drive from 11:01 PM to 5:00 AM or to have more than one passenger in the car, unless accompanied by a parent or guardian. At age 18, drivers are eligible to receive a full, unrestricted driver license, after holding the probationary license for at least one year.

New drivers in New Jersey age 22 and older must complete a modified version of the GDL program. The examination permit has to be held for three months, rather than six months. The new driver must be accompanied by a qualified driver during this time. After the three months of supervised driving, the new adult driver must hold the probationary license for 12 months. The night and passenger restrictions do not apply.

Ultimately, graduated driver license programs use administrative controls in an effort to decrease exposure to hazardous conditions. Although outside the scope of this review, more effective solutions available to the Legislature would eliminate the risk to young drivers by further decreasing vehicle miles traveled. These strategies might include increasing use of public transportation and evidence-based engineering controls.

ADDITIONAL PROGRAMS FOR DECREASING CRASHES AND FATALITIES INVOLVING YOUNG DRIVERS

Texas has several campaigns intended to decrease young driver-involved crashes in addition to the GDL program. For example, the Texas Department of Transportation (TxDOT) develops teenager-focused safety campaigns,

such as Teen Click It or Ticket, and uses crash data to determine which areas have the greatest need. The Texas A&M Transportation Institute (TTI) has two programs targeting young drivers at school: Teens in the Driver Seat (TDS) for high school students, and U in the Driver Seat for young drivers in college. Teens in the Driver Seat was started in 2002. This peer-to-peer program focuses on traffic safety risks for teenagers. Since starting, TDS has expanded to other states and has been implemented in more than 1,300 schools, including more than 850 schools in Texas, reaching more than 1.0 million teens. Teenagers lead the program, including planning activities and outreach, with the help of research that TTI provides to increase awareness of risky driving behaviors.

Both TTI programs have been developed and maintained by competing for NHTSA federal funding that TxDOT administers. Federal funding provides 90.0 percent of the support for Teens in the Driver Seat in Texas; 10.0 percent is provided by private sector support, primarily from State Farm Insurance. From fiscal years 2014 to 2019, \$6.4 million in federal traffic safety funding has been awarded to programs that work to decrease teenage driver crashes. This amount includes \$4.1 million for Teens in the Driver Seat. According to TxDOT, funding is allocated based on several factors, including the availability of funds and data showing which populations and areas have an overrepresentation in traffic fatalities and serious injuries.

DRIVER EDUCATION PROGRAM DATA REQUIREMENTS

DPS collects data regarding the collision rates of students who completed a driver education through a licensed provider, their school, or were taught by their parents. The collision data includes the number of student drivers who had collisions during their first 12 months of driving. The data also includes the percentage of collisions by students who completed a course with each driving education entity. The severity of the collisions also is included. DPS gathers the collision data from TxDOT and retains completion information from driver education providers and documents. Reports typically are two years behind because of the time needed to compile the data.

In 2015, DPS reviewed and coded 152,000 driver records to verify school names and students involved in collisions. According to DPS, the Driver License Division receives the crash data each year by August and must complete the report by October 1. From 2.0 to 3.0 full-time-equivalent positions are assigned to complete the Collision Rate Statistics

Publication, which requires up to three weeks to produce. DPS has posted the collision reports for fiscal years 2011 to 2015 on its website in the Teen Driver information. From July 2017 to June 2018, the collision reports have been viewed four times, and DPS has no record of calls or questions regarding the data.

According to supporters, the data collection was intended to help legislators evaluate the different ways students receive driver education and enable parents to identify programs with lower collision rates. However, the data do not provide context for each crash, which can be influenced by environmental factors, such as the time of day or location, or situational factors, including the number of passengers present. The data cannot distinguish fault and encompass all crashes involving new teen drivers.

Evaluations of driver education programs are critical. However, the Texas Department of Licensing and Regulation, the agency that regulates private driver education providers, indicated that it does not evaluate outcomes for students that complete driver education courses. Furthermore, basing the reports solely on collisions limits understanding of education programs' effectiveness. Evaluations of these programs should ensure that the curriculum is relevant, focused on behaviors and motivations for risk, limits exposure to hazardous situations, and builds skills. Due to the time needed to collect this data and the limited use of the reports, Option 2 would eliminate this requirement in the Texas Transportation Code, Section 521.206.

TxDOT would continue to collect motor vehicle crash data submitted by law enforcement, as part of overall traffic safety measures. TxDOT uses this data to develop traffic safety campaigns and reports and makes it available to other agencies upon request.

FISCAL IMPACT OF THE OPTIONS

No significant fiscal impact is anticipated as a result of these options. Option 1 would decrease the risk of teenage driver accidents. Implementing Option 2 would provide DPS staff time that could be used for other critical functions.

The introduced 2020–21 General Appropriations Bill does not include any adjustments as a result of these options.

OPTIMIZE ADMINISTRATION OF THE COMMERCIAL DRIVER LICENSE TESTING PROGRAM

To improve public safety, the Federal Motor Carrier Safety Administration made changes to the requirements for issuing commercial driver licenses that required state compliance by 2015. The changes applied to commercial driver license skills testing, administrative review requirements, and upgrades to information technology networks. Texas received a waiver to postpone full implementation of the requirements until December 2016.

According to the Department of Public Safety, which administers Texas' commercial driver license program, these mandates have altered the way the agency interacts with its customers significantly, affected administration of the program, and required a greater investment of resources. In response to the federal requirements, the agency consolidated commercial driver license testing at new sites, shifted employees from regular driver licensing activities to the commercial driver license program, and made required technology upgrades. The agency also initiated a third-party skills testing program to provide additional capacity for commercial driver license skills testing by authorizing organizations to test their students or employees. Despite efforts to increase commercial driver license testing capacity, constraints remain. Long wait times for applicants at Department of Public Safety locations negatively affect commercial driver license applicants and employers. About half of scheduled test components are not completed due to cancellations and failures, which negatively affects the agency's efforts to deploy its resources efficiently.

FACTS AND FINDINGS

- ◆ The Department of Public Safety initiated the Third Party Skills Testing program in April 2017 to authorize companies, school districts, education service centers, community colleges, and driver training programs to conduct tests of their employees or students. The agency also implemented an auditing program of third-party providers and agency examiners to ensure that all testing programs comply with federal and state requirements.
- ◆ Of the 38 other states that offer commercial driver license skills tests directly, 23 require applicants to pay fees for taking skills examinations in addition to the license fee. This test fee ranges from \$5 to

\$250. In those states, the cost to obtain a five-year commercial driver license, including all permit, testing, and licensing fees, ranges from \$30 to \$420 and averages \$115. Texas has no skills test fee, and the total cost for the license is \$84.

CONCERNS

- ◆ From September 1, 2017, to June 18, 2018, Department of Public Safety testing sites averaged a 27-day wait to test for a commercial driver license. At 13 of 30 sites, the average wait was more than 30 days. Industry participants report that this waiting period has a negative effect on applicants who cannot begin paid employment and employers who have vacant positions.
- ◆ About half of scheduled test components are not completed due to applicants not attending test appointments, cancellations, and failures on earlier parts of the test. On average, each commercial driver license examiner administers less than one two-hour skills examination per day.
- ◆ The Department of Public Safety reports that federal changes to commercial driver license requirements required a significant investment of the agency's resources. To address these requirements, the agency reallocated resources from other driver license services.
- ◆ Although the Third Party Skills Testing program has increased from 18 providers in October 2017 to 50 providers in June 2018, this program could expand further. Texas has approximately 28,000 companies, 79 community colleges, 20 education service centers, and many larger independent school districts that could be eligible to operate as commercial driver license third-party testers.

OPTIONS

- ◆ **Option 1:** Amend statute to authorize the Department of Public Safety to collect and retain a fee from applicants to schedule a commercial driver license skills test. Include a contingency rider in the 2020–21 General Appropriations Bill

that appropriates the fee revenue and requires the Department of Public Safety to develop a plan to decrease commercial driver license applicants' wait times using the additional fee revenue. The plan should achieve the following goals: (1) increase the number of tests completed at existing testing sites, and (2) optimize use of the third-party skills testing program.

DISCUSSION

To drive a commercial motor vehicle (CMV) such as a large truck, bus, or vehicle carrying hazardous materials, a driver is required to obtain a commercial driver license (CDL). Operators of heavy trucks, vehicles that carry more than 15 passengers or heavy materials, and other CMVs must demonstrate the appropriate knowledge and skills to drive safely to receive a CDL. The CDL program is intended to reduce traffic collisions involving CMVs.

Recent updates to federal CDL standards were intended to improve safety by ensuring that unsafe drivers are unable to obtain or keep CDLs. Texas has a higher rate of truck crashes, with 17.37 crashes per million people in 2016, than the national average of 11.96 crashes per million people. In addition, the rate of truck crashes in Texas has increased by 25.0 percent since 2010. Of vehicles involved in fatal crashes in the state in 2016, 10.2 percent were large trucks.

Across the U.S., individuals have obtained CDLs illegally without passing all required tests or meeting all necessary standards. In some cases, unlicensed drivers caused or contributed to multivehicle crashes and fatalities. In 2017, the U.S. Department of Transportation (USDOT) named removing high-risk motor carriers and unqualified drivers from roads as one of its top challenges. USDOT noted that its investigations in 2016 resulted in the prosecution of individuals involved in five separate CDL schemes that enabled 3,500 individuals to obtain CDLs fraudulently.

Although preventing fraud and ensuring high safety standards are essential to the CDL program, those goals must be balanced with the ability to efficiently issue CDLs to meet employers' and workers' needs. As of May 2017, 182,370 people worked as heavy truck drivers in Texas, representing 15.34 of every 1,000 jobs in Texas. Furthermore, Texas has more truck drivers than any state in the U.S.; 10.4 percent of truck drivers in the U.S. reside in Texas. Of the 28 Workforce Development Boards in Texas, 25 name heavy truck driving as a target occupation,

indicating that the trucking industry is seen as a high-growth and high-demand field across the state.

FEDERAL CHANGES

TO COMMERCIAL DRIVER LICENSE TESTING

The Commercial Motor Vehicle Safety Act of 1986 initiated the first federal standards for CDLs. Texas enacted these requirements in 1989, and the Texas Department of Public Safety (DPS) began issuing new CDLs in 1990. On May 9, 2011, the Federal Motor Carrier Safety Administration (FMCSA) updated standards for CDL skills testing and the commercial learner permit (CLP). FMCSA required states to modify their CDL programs to meet the new standards. The rule was implemented to increase safety for drivers operating CMVs and to improve fraud prevention in CDL testing. States were required to comply with the new rule by July 8, 2015; however, Texas requested and received an extension from FMCSA until December 2016.

These changes significantly altered the administration of the CDL program in Texas. Previously, the state had no requirement that commercial learner permit holders wait a specified period before their skills tests. The revised rules require permit holders to wait at least 14.0 days before the skills test. A pretrip inspection component was added to the skills test that requires applicants to identify parts of the vehicle that must be checked before starting a trip. Additional maneuvers were added to the basic control skills and road test components of the skills test, which lengthened the time to complete the examination. The revised rules also required the three components of the skills test to be passed in a specific order (pretrip inspection, basic control skills, then road test). These changes to the test affected the locations where testing could take place and doubled the time required to complete a skills test from approximately one hour to two hours.

Additionally, the revised rule required administrative changes intended to improve the accuracy of CDL issuances. CDL transactions must have a secondary, independent review by a different state employee from the original issuer to prevent fraud. In addition, states must record all CDL tests in the Commercial Skills Testing Information Management System, which provides a mechanism for scheduling CDL tests and enables states to share information to detect and prevent fraud in CDL programs. States also were required to upgrade the Commercial Driver License Information System, which enables states to report and access offenses, convictions, and disqualifications on CDL and CLP holders across state lines.

TEXAS' RESPONSE TO FEDERAL CHANGES

The federal rule changes affected Texas' CDL program in ways that required both legislative and programmatic changes. Texas was required to update its policies to meet the CDL testing and issuance requirements or risk decertification by FMCSA. Decertification could result in the withholding of up to 8.0 percent of selected federal highway funding and a prohibition on issuing interstate CDLs to Texas residents. To ensure compliance with the federal rules, the Eighty-fourth Legislature, 2015, amended the Texas Transportation Code to meet the federal requirements for testing and issuing CDLs, and DPS developed a plan to align CDL testing in Texas with federal requirements.

One of the major changes DPS implemented following the FMCSA rule changes was a consolidation of CDL testing sites within the state. Due to the maneuver requirements for basic control skills testing, only one of the 190 driver license offices that previously offered CDL skills testing had the facilities to offer the new test safely. DPS originally identified 25 sites to serve as consolidated CDL testing locations beginning in July 2016. The agency has expanded the number of sites to offer CDL testing at 31 sites as of July 2018. Based on the agency's data on CDL holders, DPS estimated that at least 94.0 percent of CDL customers live within 50.0 miles of one of the testing sites. **Figure 1** shows the location of DPS' CDL testing sites.

In addition to consolidating sites, DPS developed nine CDL testing mobile teams to carry out CDL testing in locations outside the 50-mile radius of any of the state's CDL testing locations. These teams most often conduct tests at community colleges, school districts, education centers, fire departments, and other government entities. Entities may request DPS teams to conduct onsite tests.

Following consolidation, DPS decreased the number of full-time-equivalent (FTE) positions conducting CDL skills exams and assigned them to staff the new sites and mobile teams. Before the implementation of the new testing requirements, 320.0 positions were available to perform CDL skills testing. Of those staff, 64.0 positions conducted CDL skills testing as a primary function; 256.0 positions had multifunctional roles. As of July 2018, DPS had authorized 155.0 CDL examiner positions and had 143 active examiners. These examiners now must commit at least 50.0 percent of work hours to CDL testing, but they often are required to complete other duties in the driver license offices.

DPS also implemented a third-party skills testing (TPST) program, beginning in April 2017. The program enables organizations including employers, community colleges, education service centers, and school districts to perform skills testing of their students or staff while following state and federal guidelines. The TPST program was established with stakeholder input to help address the decrease in testing capacity. **Figure 1** also shows the locations of TPST sites as of July 2018.

To participate in the TPST program, third parties must meet specific criteria intended to ensure the consistency of CDL testing across locations and to decrease the chance for fraud. TPST providers must have operated continuously in Texas for at least one year, maintain at least one permanently occupied structure in Texas, and enter into a memorandum of understanding (MOU) with DPS. The MOU stipulates whom TPST providers are authorized to examine, requirements for examiners, and insurance and bond requirements.

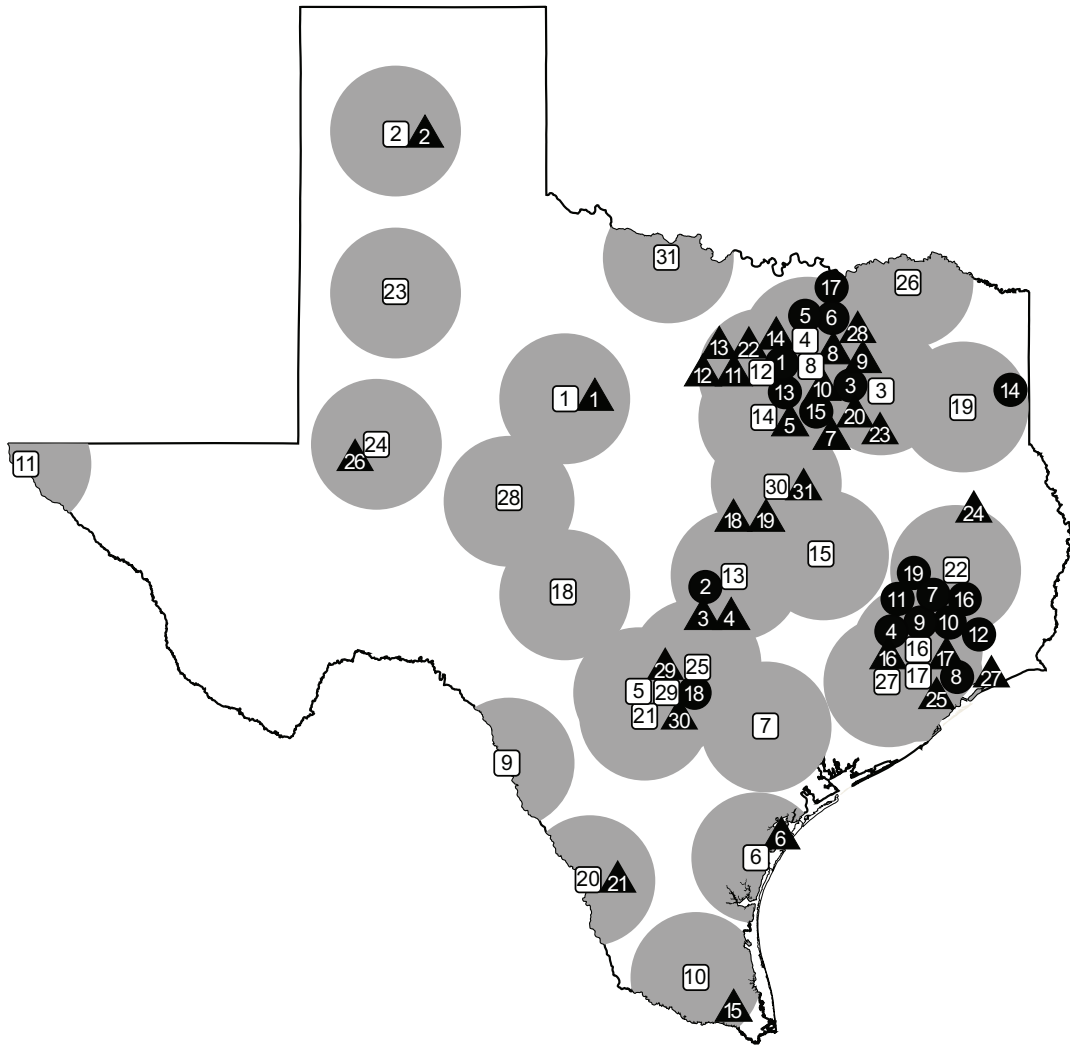
Pursuant to federal regulations, DPS developed a CDL Skills Test Auditing Program to monitor DPS and third-party testers and to ensure compliance with federal and state requirements. The auditing program is made up of a Compliance Supervisor located in Austin and eight inspectors located throughout the state. The auditing program began operating in January 2018. Federal regulations require inspectors to perform inspections of all TPST sites at least every two years.

CDL TESTING DEMAND

Unlike demand for noncommercial driver licenses, demand for CDLs is driven by industry changes instead of overall population growth. **Figure 2** shows the demand for CDLs, measured by the number of CDL applicants and CDL issuances, from fiscal years 2010 to 2017 and projected numbers for fiscal years 2018 to 2021. Issuances peaked in 2015 due to oil industry activity and regulatory changes that resulted in downgrading current CDL holders who did not meet medical certificate requirements. Those operators with downgraded CDLs were required to retest to obtain new CDLs. DPS anticipates receiving from 55,000 to 65,000 CDL applications annually from fiscal years 2018 to 2021 and issuing 35,000 to 38,000 CDLs each year during that period.

Demand for skills testing is dependent on the number of applicants and on the failure rate for the skills test. When any component of the skills test is failed, that component can be

FIGURE 1
TEXAS COMMERCIAL DRIVER LICENSE TESTING SITES
JULY 2, 2018





□ DEPARTMENT OF PUBLIC SAFETY TESTING SITES

■ (50-MILE RADIUS SERVICE AREA)

1	Abilene	12	Fort Worth	22	Livingston
2	Amarillo	13	Georgetown	23	Lubbock
3	Canton	14	Grand Prairie	24	Midland Mega Center
4	Carrollton Mega Center	15	Hearne	25	New Braunfels
5	Castroville	16	Houston North Mega Center	26	Paris
6	Corpus Christi Mega Center	17	Houston Southeast Mega Center	27	Rosenberg Mega Center
7	Cuero	18	Junction	28	San Angelo
8	Dallas South Mega Center	19	Kilgore	29	San Antonio Southeast
9	Eagle Pass	20	Laredo	30	Waco CDL
10	Edinburg	21	Leon Valley Mega Center	31	Wichita Falls
11	El Paso Northwest				

FIGURE 1 (CONTINUED)
TEXAS COMMERCIAL DRIVER LICENSE TESTING SITES
JULY 2, 2018

 INDEPENDENT SCHOOL DISTRICTS (ISD)					
1	Hurst/Euless/Bedford ISD	8	Galena Park ISD	14	Marshall ISD
2	Leander ISD	9	Aldine ISD	15	Midlothian ISD
3	Crandall ISD	10	Humble ISD	16	New Caney ISD
4	Cypress Fairbanks ISD	11	Klein ISD	17	Prosper ISD
5	Denton ISD	12	Liberty ISD	18	North East ISD
6	Frisco ISD	13	Mansfield ISD	19	Willis ISD
7	Spring ISD				

 TRANSPORTATION COMPANY DRIVING SCHOOLS AND COLLEGES					
1	Action Career Training	12	C1 Truck Driver Training	22	First Student, Inc. (1)
2	Amarillo College Truck Driving Academy	13	Ben E Keith Company	23	Halliburton
3	MV Transportation	14	MT Training Center	24	Lufkin Truck Driving Academy
4	Travis Transit Management	15	Texas State Technical College	25	First Student Houston (1)
5	CR England Premier Truck Driving School	16	Houston Community College	26	Center for Transportation Safety LLC
6	Del Mar College Transportation Training Services	17	First Transit (1)	27	Silver Eagle Distributors LP
7	SWIFT Driving Academy	18	Career Education, Inc.	28	Dallas Area Rapid Transit
8	Stevens Transport	19	CDL School of TX	29	Roadmaster Drivers School
9	Vision Truck Driving School	20	KLLM Driving Academy	30	HEB Grocery Company
10	Continental Truck Driver Training and Education School	21	Great Lakes Testing	31	Ace Driving Academy
11	Road Course Inc./Fort Worth CDL School				

NOTE: These sites provide only school bus driver tests for independent school districts.
SOURCE: Department of Public Safety.

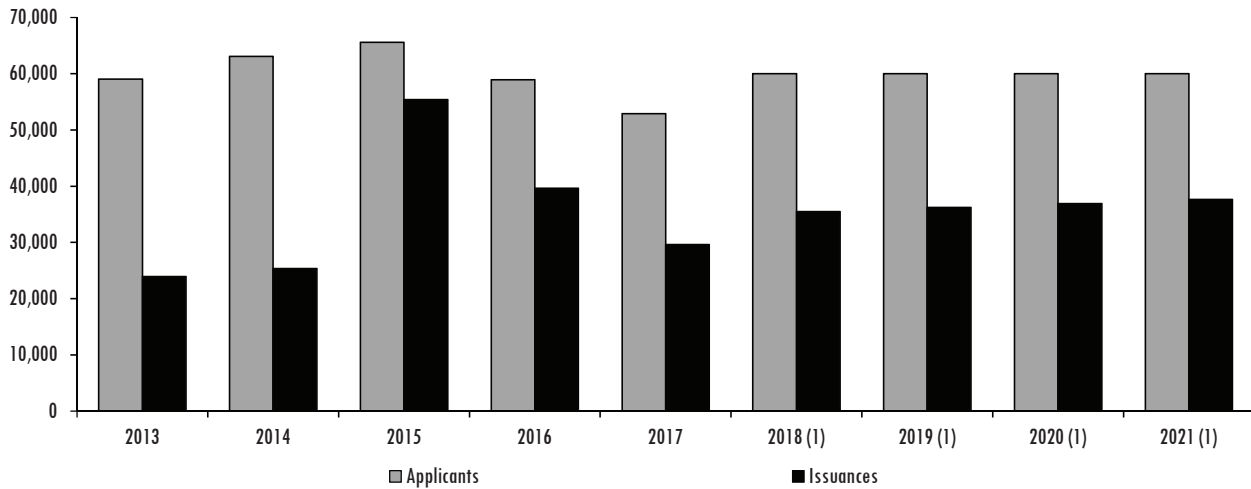
retested up to three times before the applicant is required to reapply for a CDL. A higher failure rate increases the demand for skills tests because some applicants will retake the test to pass. During fiscal years 2015 and 2016, within the previous standards, 16.6 percent and 18.7 percent of applicants, respectively, failed the skills test. In fiscal year 2018, within the current standards, applicants failed 33.3 percent of test components that they completed at DPS testing sites.

Figure 3 shows failure rates by component and test provider. DPS-administered vehicle inspections showed the highest rate of failure. The failure rate for pretrip vehicle inspections administered by TPST providers was less than the rate for inspections administered by DPS. This discrepancy may be a result of better preparation among applicants taking CDL

tests from TPST participants or of potentially inconsistent testing standards, which suggests the importance of continual monitoring of testing providers to ensure that they are administering all components of the test properly.

Of the scheduled skills tests in fiscal year 2018, 22.0 percent of testing components at DPS locations consisted of retests. This percentage indicates that applicants retaking portions of the test account for a significant part of the demand for CDL testing. In an effort to address the higher failure rate, DPS has communicated with stakeholders about the issue, provided study guides for applicants, and developed and posted videos on its website highlighting the knowledge and skills needed to pass the CDL skills test.

FIGURE 2
TEXAS COMMERCIAL DRIVER LICENSE DEMAND
FISCAL YEARS 2013 TO 2021



NOTE: Data for fiscal years 2018 to 2021 is projected.
SOURCE: Department of Public Safety.

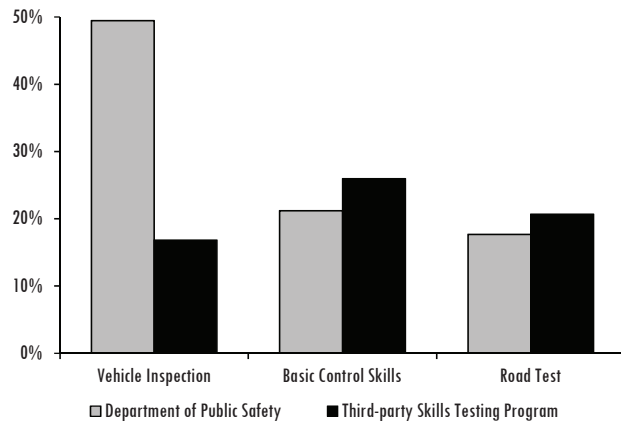
COMMERCIAL DRIVER LICENSE TESTING CAPACITY

DPS has 35 permanent CDL testing lanes at 25 sites and seven temporary lanes at six sites. However, one permanent site had not been assigned CDL examiners to conduct exams as of July 2018. A testing lane is a specific location designated for CDL testing and marked off with cones for the required driving maneuvers. Such a facility space requires thicker concrete to prevent damage from the constant driving of heavy vehicles; therefore, testing cannot take place in a typical parking lot. DPS had 143 CDL examiners conducting examinations at these sites as of July 2018.

A number of factors prevent DPS from utilizing these lanes to their full capacity. First, CDL examiners are often required to perform other duties. CDLs account for about 5.0 percent of business at driver license offices, and CDL examiners often are required to support other driver license services. In addition, although a complete CDL skills examination is estimated to last for two hours, the entire testing process often lasts about three hours because documents must be checked before testing, applicants vary in their examination pace, and examiners must document and close out testing after all components are completed. On average, examiners are scheduled for five testing components per day, which is equivalent to one and two-thirds complete skills tests.

DPS also is limited from fully utilizing capacity at testing lanes by a great number of failures, cancellations, and failures

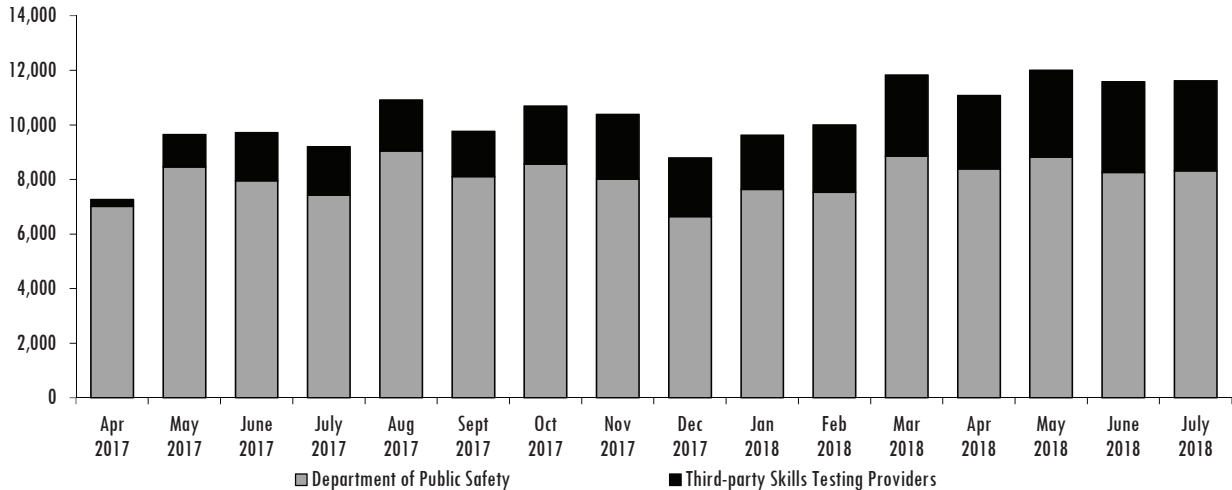
FIGURE 3
TEXAS COMMERCIAL DRIVER LICENSE SKILLS TEST
FAILURE RATES BY TEST COMPONENT
FISCAL YEAR 2018



SOURCE: Department of Public Safety.

to appear for CDL testing. From September 1, 2017, to June 30, 2018, approximately half of scheduled CDL skills test components were not completed. During that period, 160,574 test components were scheduled, but 80,863 were completed due to failures on earlier components of the exam, failures to appear, and cancellations. Therefore, examiners completed 2.5 testing components per day on average, which is equivalent to less than one complete skills test. DPS charges no fee to schedule a skills test, and applicants face no

FIGURE 4
TEXAS COMMERCIAL DRIVER LICENSE SKILLS TEST COMPONENTS ADMINISTERED BY THE DEPARTMENT OF PUBLIC SAFETY AND THIRD-PARTY PROVIDERS
APRIL 2017 TO JULY 2018



SOURCE: Department of Public Safety.

penalty for cancellations or failures to appear. Although some driver license offices maintain standby lists to fill appointment times that are cancelled in advance, other DPS offices are limited in their ability to perform this function.

THIRD-PARTY TESTING PROGRAM

One area in which capacity for CDL testing has grown is through the TPST program. In April 2017, DPS reported six organizations participating in the TPST program. As of June 2018, that number had increased to 50 organizations located in 27 counties. This number includes 24 motor carriers or commercial driving schools, four community colleges, 19 independent school districts, and three school bus providers. From April 2017 to July 2018, TPST providers conducted 21.3 percent of all test components in the state. **Figure 4** shows the growth in TPST-administered examinations. Although the TPST program has grown, tests administered by DPS have not decreased at a corresponding rate. Thus, the TPST program has added testing capacity to the state but has not decreased the demand for state-administered tests.

The growth in the TPST program has been beneficial to companies who participate in the program. Participants in the TPST program have reported its importance in enabling them to continue CDL training programs and meet business needs in a timely manner by authorizing them to test their students or employees. Texas has approximately 28,000 companies, 79 community colleges, 20 education service

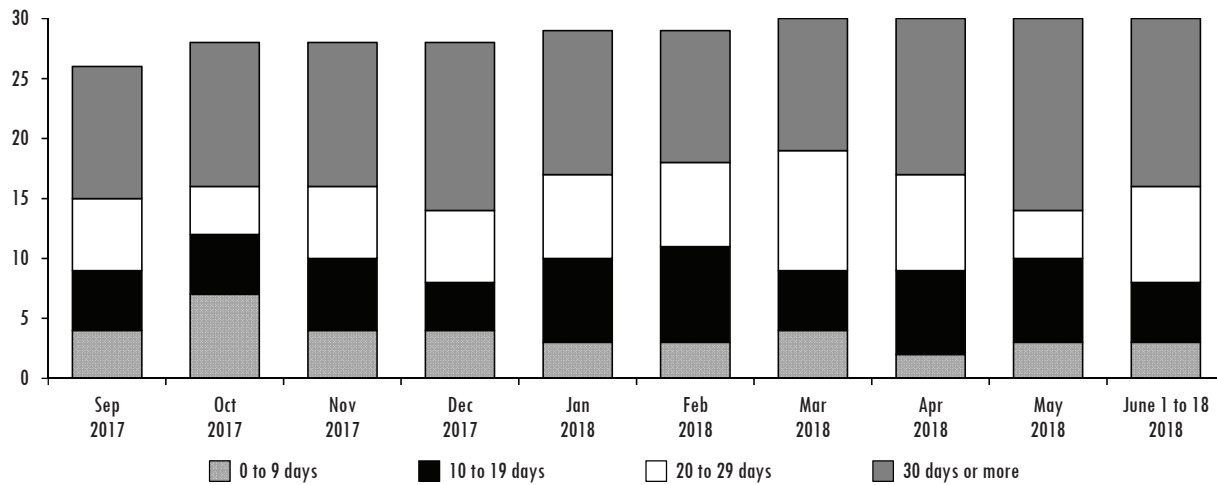
centers, and many larger independent school districts that could become eligible to operate as commercial driver license third-party testers to further expand CDL testing capacity in the state. DPS oversees the TPST program by auditing sites to make sure they are conducting testing properly. DPS estimates that auditors conduct three audits a week on average, indicating that DPS has the capacity to oversee further increases in the TPST program.

COMMERCIAL DRIVER LICENSE TESTING LEAD TIMES

After applicants have obtained commercial learner permits (CLP), they can schedule their skills tests, but they must choose a date at least 14 days after issuance of the CLP. However, skills test appointments may not be available for a longer period, requiring the applicant to wait. DPS measures lead times using the number of days from when an applicant signs up for a skills test to a day when at least two open tests are available. The next available appointment may be available sooner than the lead time measured by DPS.

When DPS first implemented the revised skills testing requirements, lead times increased at 14 CDL testing sites, and the number of sites with lead times of 30 days or more increased from eight to 14 of the 25 sites. However, the average lead time at sites decreased from 30 days on September 20, 2016, to 29 days on October 31, 2016, following implementation of the requirements.

FIGURE 5
DEPARTMENT OF PUBLIC SAFETY COMMERCIAL DRIVER LICENSE TESTING SITES BY LEAD TIME
FISCAL YEAR 2018 (SEPTEMBER 1, 2017, TO JUNE 18, 2018)



SOURCE: Department of Public Safety.

Since October 2016, lead times have decreased. During fiscal year 2018 through June 18, the average lead time at 30 DPS CDL testing sites was 27 days. This lead time means an applicant who scheduled a skills test immediately upon receiving the CLP would have to wait 13 days beyond the required waiting period before a day with multiple testing slots was available. Applicants scheduling tests after the required CLP waiting period or scheduling for retests would have to wait 27 days before multiple testing slots were available. Lead times ranged significantly across testing locations. The Leon Valley Mega Center, which offers testing only for Class B CDLs and school buses, averaged a 3.0-day lead time; meanwhile, the Rosenberg Mega Center averaged a 56-day lead time for fiscal year 2018 through June 2018. Of the 30 sites that performed CDL testing by June 2018, 13 averaged a lead time of 30.0 days or more, and 19 recorded at least one month with an average lead time of 30 days or more. **Figure 5** shows the lead times at CDL testing sites operated by DPS for fiscal year 2018, as of June 18, 2018. None of the active mobile teams had lead times of 30 days or more for any month during fiscal year 2018, and lead times are not tracked by DPS for third-party testing sites.

These lead times can have negative effects on applicants. When applicants' ability to obtain a CDL is delayed, some applicants may choose to pursue other career paths. Many training programs to obtain a CDL are unpaid, so delays in obtaining a CDL result in longer periods of unpaid time and may require retraining to ensure that applicants maintain

their skills. This delay is increased for applicants who fail an exam and must wait several weeks for the opportunity to retake the exam and begin paid employment. Representatives of Texas' trucking industry have reported that this delay can hinder an organization's ability to meet its staffing needs.

COMMERCIAL DRIVER LICENSE TESTING IN OTHER STATES

Every state maintains its own CDL program, and administration and processes for CDL testing vary significantly. Drivers are required to obtain their CDLs in the state in which they reside, although they may perform the skills test in another state where they receive training. In 2015, the U.S. Government Accountability Office (GAO) surveyed the 50 state governments and the District of Columbia regarding their CDL skills testing programs as part of a review of federal oversight of state CDL programs. At that time, 29 states relied on a combination of state personnel and third-party providers to conduct CDL skills testing. Ten states relied exclusively on third-party providers to administer skills test. Eleven states, including Texas, offered tests only through the state. Since 2015, the number of states offering tests only through the state has decreased as some states, including Texas, have introduced third-party programs.

States that rely exclusively on third-party testing providers include Florida, Louisiana, and New Mexico. These three states do not offer testing, and third-party testers are authorized to test public applicants. Texas' program differs

because, except for certain school districts, TPST providers must examine their students or employees. States use third-party testing providers for a variety of reasons, including to increase test availability, augment state resources, decrease wait times, or cut costs.

In Florida, third-party testing providers can charge a fee to applicants for the skills test. The fee is set by each provider and ranges from \$95 to \$600, based on the location and the class of CDL. Fraud has occurred in Florida's third-party testing program. A 2017 investigation by the Florida Department of Highway Safety and Motor Vehicles and FMCSA, found that a third-party tester had conducted fraudulent skills exams. The provider closed, and retesting was required for 1,500 CDL holders. A state auditor's report in 2017 found that the agency lacked appropriate controls to ensure that third-party monitoring was completed on time with proper documentation.

Other states operate a model similar to Texas' combination of third-party testing providers and state test examiners. California, which has the only commercial driver license program larger than Texas', offers state-administered CDL skills tests and a third-party testing program. However, unlike Texas where public and private driver training schools can participate in CDL testing, California authorizes only employers to participate in the third-party program. This limitation is intended to limit fraud because employers have an interest in ensuring that their drivers are well-qualified. However, fraud has occurred at state-run testing sites; in 2017, two California Department of Motor Vehicles employees pled guilty to charges related to their roles in a conspiracy providing applicants who either had not taken or had failed CDL knowledge and skills exams with fraudulently obtained 216 CDLs. Applicants in California must pay a \$35 retest fee if they fail any portion of the skills exam and choose to retest. The California Department of Motor Vehicles has had difficulty meeting demand for commercial driver licenses, resulting in wait times for skills testing. The state considered legislation to address the issue in 2017 that would have required the California Department of Motor Vehicles to meet performance goals for CDL skills test wait times to not exceed 14 days by July 1, 2019, and to not exceed 7.0 days by July 1, 2021. The measure also would require the agency to convene a stakeholder group to develop recommendations on how to meet those goals. This legislation is similar to a federal bill introduced in 2017 that would define a skills test delay as a wait time of more than 7.0 days for applicants who had completed training or needed a retest

and would require states to report quarterly regarding wait times.

New York continues to rely exclusively on state examiners to administer CDL skills tests, similar to the model Texas had until 2017. New York's CDL skills testing is consolidated and, therefore, is not available at every site that offers noncommercial drivers skills testing. Texas implemented a similar consolidation of skills testing sites following the change in federal regulations. Applicants in New York must pay a fee of \$40 to schedule the skills test and must repay the fee for every retest. This fee is in addition to the \$10 application fee to obtain a CLP and the license fee, which varies based on the class and the valid period of the applicant's noncommercial driver license. In Texas, applicants do not have to pay a fee for each retake of the skills exam.

IMPLEMENT A COMMERCIAL DRIVER LICENSE SKILLS TESTING FEE

The changes to DPS' CDL program resulted in the agency shifting resources to sites that met federal regulations. DPS requested \$33.9 million and 101.9 full-time-equivalent positions to expand CDL testing capacity for the 2018–19 biennium, but this funding was not appropriated. DPS reports that it, therefore, was required to decrease other driver license services to meet the federal CDL requirements. Wait times for all customers in driver license offices increased by 6.8 percent from fiscal years 2015 to 2016 and by 12.0 percent from fiscal years 2016 to 2017. Other factors, including population growth and the fiscal year 2017 state agency hiring freeze, also contributed to the longer wait times.

Option 1 would amend Sections 522.023 and 522.029 of the Transportation Code to authorize the Department of Public Safety to collect and retain a fee from applicants to schedule a commercial driver license skills test. The skills test fee would be in addition to the existing CLP fee of \$24 and CDL fee of \$60. Current statute authorizes an applicant to attempt each component of the skills tests three times within 90 days after paying the CDL fee.

Of the 38 other states who administer CDL skills tests directly, 23 require all CDL applicants to pay a test fee before scheduling and completing the CDL skills test that is separate from the CDL fee. These fees range from \$5 in North Dakota to \$250 in Washington. Texas requires only CDL applicants from out of state to pay a \$60 test fee for the CDL skills exam without purchasing a Texas CDL.

A CDL skills test fee would improve test administration by increasing efficiency and decreasing cancellations. When individuals are charged for the services they use, economic efficiency can be improved by matching capacity to demand as the main beneficiaries of the service incur the costs. A fee for CDL skills test also could discourage failures to appear because applicants would be more motivated to attend an appointment they paid for in advance. Optimal efficiency is achieved when user fees are set to the marginal cost, which is the cost of providing one additional unit of the service. For a CDL skills test, the optimal fee would therefore cover the cost to DPS of administering one additional skills test. For tests administered by DPS, a \$46 fee would approximately cover the cost of two hours of an examiner’s time, which is being used for CDL testing instead of other driver license services. To ensure that the fee continues to cover costs associated with commercial driver license skills testing, DPS can be authorized to set and update the CDL skills test fee amount based on cost calculations or inflation. One potential consequence is that a fee may decrease the number of individuals who complete CDL skills exams by increasing the entry cost. The fee would not apply to applicants who are tested through the TPST program; the state does not regulate fees charged by TPST providers for tests they administer.

The skills test fee would increase the total cost for an applicant to obtain a CDL with DPS testing from \$84 to \$130. In the other 38 states that offer CDL testing through the state, the cost to obtain a five-year commercial driver license, including all permit, testing, and licensing fees, ranges from \$30 to \$420 with an average of \$115 as of 2018. Among these states, 24 states have greater total costs than Texas. If a fee of \$46 is implemented in Texas, 13 states would have greater costs to obtain a CDL.

Option 1 also would include a contingency rider in the 2020–21 General Appropriations Bill to appropriate the CDL skills test fee revenue to DPS for use in driver license services. Revenue that DPS collects through driver license fees is deposited in the Texas Mobility Fund and is not used to support DPS driver license services. Appropriation of a CDL skills test fee would augment DPS’ resources and would enable DPS to address capacity constraints for CDL skills testing without diverting resources from other driver license services. The rider would require DPS to develop a plan for expanding CDL skills test capacity at existing CDL testing sites and through the TPST program utilizing the fee revenue. Potential uses of the additional resources include promoting and administering the TPST program or

dedicating more staff to CDL skills testing without removing staff from other driver license functions.

Some states use other incentives to encourage applicants to attend scheduled skills test such as charging applicants only for tests beyond the first or charging a fee if the applicant does not attend the scheduled appointment. Such alternatives could address the increased number of failures or the rate of failures to appear without raising the initial cost of taking an exam. However, these alternatives do not reflect the cost of each examination given by DPS.

FISCAL IMPACT OF THE OPTION

Option 1 would increase revenue and appropriations in an equivalent amount and, therefore, would be cost neutral. The actual amount of increased revenue and appropriations to DPS would depend on the amount of the test fee and the number of skills test that DPS conducts during the year, which can vary depending on industry needs, failure rates, and the number of tests conducted by third parties. **Figure 6** shows estimated revenues and appropriations if DPS conducted 40,000 tests per year and the CDL skills test fee was set at \$46.

**FIGURE 6
FIVE-YEAR FISCAL IMPACT OF \$46 COMMERCIAL DRIVER LICENSE SKILLS TEST FEE, FISCAL YEARS 2020 TO 2024**

YEAR	PROBABLE REVENUE GAIN/(LOSS) IN GENERAL REVENUE FUNDS	PROBABLE SAVINGS/(COST) IN GENERAL REVENUE FUNDS
2020	\$1,840,000	(\$1,840,000)
2021	\$1,840,000	(\$1,840,000)
2022	\$1,840,000	(\$1,840,000)
2023	\$1,840,000	(\$1,840,000)
2024	\$1,840,000	(\$1,840,000)

SOURCE: Legislative Budget Board.

The introduced 2020–21 General Appropriations Bill does not include any adjustments as a result of this option.

OVERVIEW OF STATE FERRY SYSTEM OPERATIONS

Texas operates two ferry routes that provide a shorter route than existing roads for travel from Port Aransas to Harbor Island and from Galveston to Port Bolivar. Ferries enable local residents and tourists to avoid traveling solely on state highways to reach their destination, which reduces travel time and fuel consumption. These routes also serve as primary means of evacuation during hurricane threats. The two routes operate 24 hours a day, 365 days a year, weather permitting, and more than 9.1 million passenger trips and 3.9 million vehicle trips were taken on the ferries during fiscal year 2017.

This report provides an overview of ferry system operations, including funding sources, traffic and congestion, vessel maintenance and replacement, and opportunities for diesel emission reductions.

FACTS AND FINDINGS

- ◆ During fiscal year 2017, 3.9 million vehicle trips were taken on the Port Aransas and Galveston–Port Bolivar ferries. According to the Texas Department of Transportation, wait times to board a ferry are minimal during most of the year, and projected traffic growth for both ferry operations can be managed with existing vessel assets.
- ◆ The Texas Department of Transportation was appropriated approximately \$96.2 million in Other Funds from the State Highway Fund for the 2018–19 biennium to support the operation of the

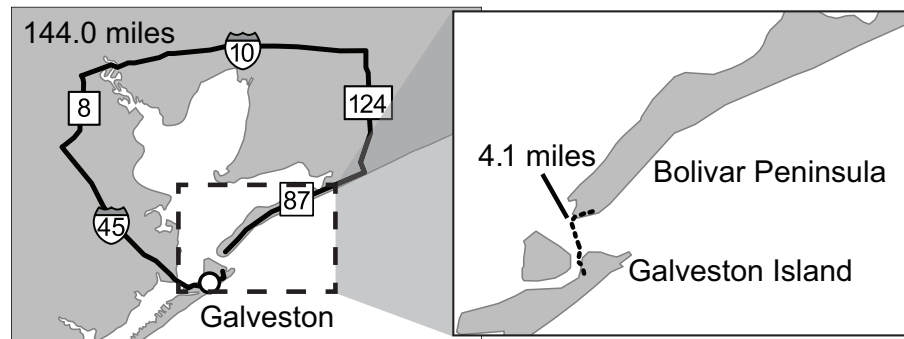
ferry systems. In addition, the Port Aransas operation has received federal competitive grants for various infrastructure projects and vessel construction.

- ◆ Effective December 14, 2016, the U.S. Environmental Protection Agency determined that the Houston–Galveston–Brazoria ozone nonattainment area failed to attain the 2008 8-hour ozone National Ambient Air Quality Standard by the applicable deadline. Diesel emission grant funding may be available to replace or upgrade ferry engines and help reduce ozone emissions.

DISCUSSION

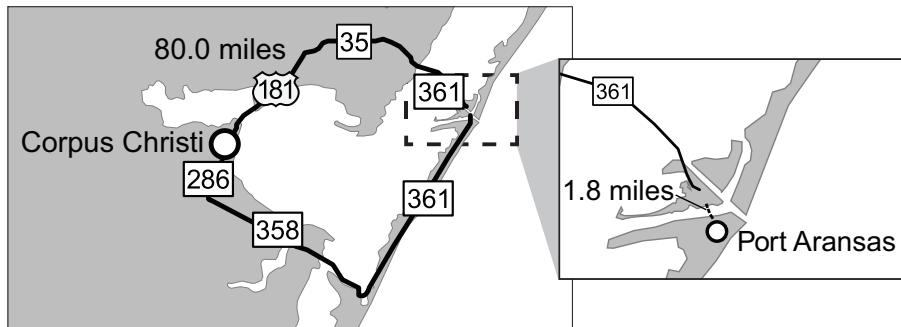
The first ferry operated by the State of Texas left Port Bolivar on July 1, 1934. Texas operated the ferry service toll-free for approximately six months, but the service was so popular that Galveston County officials asked the state to impose a charge of \$0.25 to reduce traffic congestion. The \$0.25 toll continued, except for a brief experimental period in 1934, until 1949. Since then, the ferry operation has been operated as a toll-free service. As of February 2018, the Galveston–Port Bolivar ferry fleet consists of six 60-car vessels that connect Galveston to Port Bolivar via a route across the Houston Ship Channel. According to the Texas Department of Transportation (TxDOT), travel time is 18 minutes to cross on the ferry compared to approximately 2 hours and 20 minutes to drive the 144.0 miles around Galveston Bay. **Figure 1** shows the ferry route from Port Bolivar to Galveston and the alternative highway route.

FIGURE 1
PORT BOLIVAR TO GALVESTON HIGHWAY ROUTE COMPARED TO FERRY ROUTE
APRIL 2018



SOURCE: Legislative Budget Board.

FIGURE 2
ARANSAS PASS TO PORT ARANSAS HIGHWAY ROUTE COMPARED TO FERRY ROUTE
APRIL 2018



SOURCE: Legislative Budget Board.

Ferry operations to Port Aransas date to 1911, first privately owned and later transferred to Nueces County. In 1968, TxDOT assumed ownership and operation of the ferries and removed the existing tolls. As of February 2018, the Port Aransas ferry fleet consists of five 20-car vessels and three 28-car vessels that connect Aransas Pass (Harbor Island) to Port Aransas (Mustang Island) via a route across the Corpus Christi Ship Channel. According to TxDOT, travel time is 15 minutes to cross on the ferry compared to approximately 1 hour and 15 minutes to drive the 80.0 miles around Corpus Christi Bay. **Figure 2** shows the ferry route from Aransas Pass to Port Aransas and the alternative highway route.

TRAFFIC AND CONGESTION

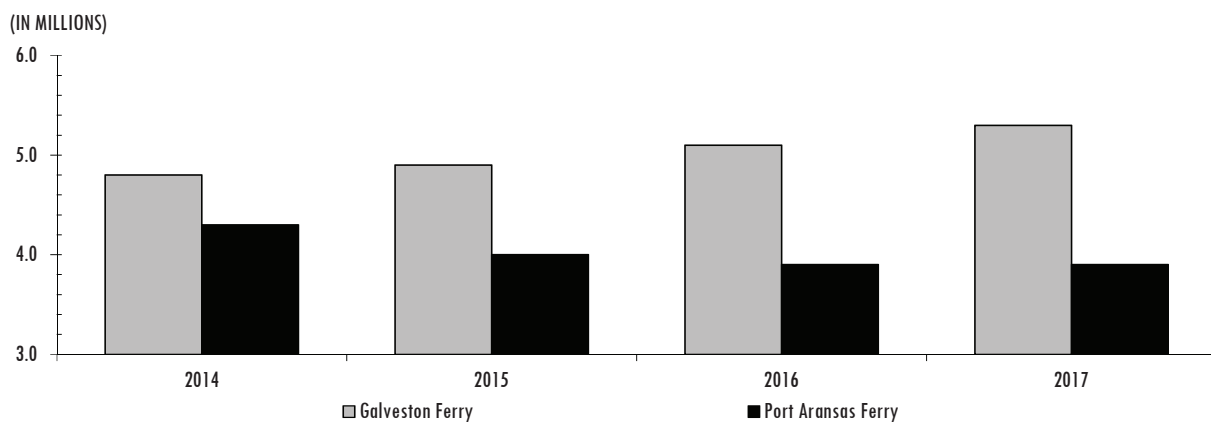
During fiscal year 2017, more than 9.1 million passenger trips and 3.9 million vehicle trips were taken on the Port Aransas and Galveston-Port Bolivar ferries. **Figure 3** shows the number of ferry passenger trips on the Galveston and Port Aransas operations from fiscal years 2014 to 2017.

TxDOT ferry management staff studies traffic patterns and adjusts vessel schedules based on wait times at both ferry operations locations.

TRAFFIC PATTERNS AND WAIT TIMES

At the Galveston–Port Bolivar ferry, traffic patterns consist of six months of the busy season (from March to August) due to

FIGURE 3
FERRY PASSENGER TRIPS, FISCAL YEARS 2014 TO 2017



NOTE: For Galveston–Port Bolivar Ferry Operations, passenger trip numbers are estimated as three people per vehicle plus any walk-on passengers. For Port Aransas Ferry Operations, actual vehicle, passenger, and pedestrian counts are logged, pursuant to requirements from the U.S. Coast Guard Marine Safety Office – Corpus Christi Sector.
 SOURCE: Texas Department of Transportation.

increased tourist traffic and six months of the nonbusy season (from September to February). The Port Aransas ferry traffic patterns are consistent throughout the year, because tourists and local residents use the ferry.

TxDOT considers wait times to board a ferry to be minimal during most of the year. However, long lines occur during the busy season at peak times, such as summer weekends and holidays. During peak traffic times, the wait time to board a ferry can exceed two hours. TxDOT utilizes Bluetooth technology and cameras installed on roadways to provide motorists with wait time and travel time estimates at key decision-making points leading up to ferry landings. This information enables drivers to decide whether they would rather travel on an alternate route. TxDOT’s lowest traffic times are from 11:00 PM to 5:30 AM.

PRIORITY BOARDING SYSTEM

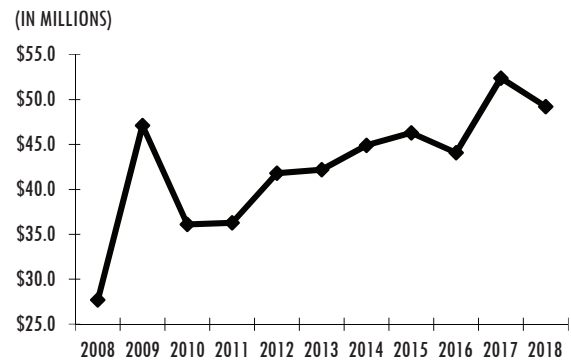
TxDOT has statutory authority to adopt rules to establish a priority boarding system for vehicles that show an annual, fee-based, priority boarding sticker. Pursuant to the Texas Transportation Code, Section 342.004, TxDOT may grant access to a new lane that would authorize priority boarding. TxDOT rule states that it will not issue priority boarding stickers for a ferry location until it has received approximately 500 applications for that location.

Although the Galveston operation has not received enough applications, the Port Aransas operation has received the 500 applications required to proceed. The operation is planning a new lane for priority boarding vehicles on both sides of the landings. Work is expected to begin in early 2019. TxDOT rules establish that no more than 50.0 percent of the ferry capacity will be allocated to priority boarding by annual permit during high-demand periods. The rules also establish the following fees for an annual permit:

- \$250 for a two-axle vehicle, including a motorcycle, car, pickup, or van;
- \$500 for a bus, motor home, or a single-unit truck with up to three axles; and
- \$1,000 for a multiunit truck or other vehicle with more than three axles.

TxDOT must deposit each fee collected pursuant to the Texas Transportation Code, Section 342.004, to the credit of the State Highway Fund.

**FIGURE 4
TEXAS DEPARTMENT OF TRANSPORTATION
EXPENDITURES FROM STRATEGY B.1.3, FERRY
OPERATIONS
FISCAL YEARS 2008 TO 2018**



NOTE: Totals include funding from the State Highway Fund, federal reimbursements, and the federal American Recovery and Reinvestment Act.

SOURCE: Legislative Budget Board.

STATE FUNDING

A priority boarding system enables passengers to avoid waiting in the ferry boarding line. However, passengers do not have to pay to ride the ferry. The Texas Transportation Code, Section 342.001, requires TxDOT to use money from the State Highway Fund for ferry operations. Texas is the only state with a ferry operation that does not charge a toll for vehicles and passengers. For the 2018–19 biennium, TxDOT was appropriated approximately \$96.2 million to support the operation of the ferry systems. **Figure 4** shows the amount of TxDOT expenditures from Strategy B.1.3, Ferry Operations for the ferry system from fiscal years 2008 to 2018. In addition to State Highway Funds, expenditures from fiscal years 2008 to 2010 include about \$17.8 million in federal reimbursements and funds received through the federal American Recovery and Reinvestment Act of 2009.

The major revenue sources deposited directly to the State Highway Fund include motor vehicle registration fees, Federal Funds (primarily federal-aid highway reimbursements), and sales tax on motor lubricants. Additional allocations to the fund include a significant portion of motor fuel tax revenue, and, beginning in fiscal years 2018 and 2020, respectively, revenue from the first \$2.5 billion of state sales tax collected in excess of \$28.0 billion during a fiscal year and 35.0 percent of motor vehicle sales and rental taxes collected in excess of \$5.0 billion during a fiscal year.

AVAILABLE FEDERAL GRANT FUNDING

In addition to State Highway Fund appropriations, TxDOT has received approximately \$29 million in federal grant money for certain projects at the Port Aransas operation as shown in **Figure 5**. One federal grant program, the federal Ferry Boat Discretionary (FBD) program provided funding for certain vehicular or passenger ferry facilities. The program funded facilities that are on a non-Interstate public road and are publicly owned, publicly operated, or majority publicly owned, providing substantial public benefits. Projects selected for funding from this program were funded at an 80 percent federal share. The FBD program was discontinued by the federal Moving Ahead for Progress in the 21st Century Act (MAP-21) in 2012, and the last FBD project solicitation was for federal fiscal year 2011. MAP-21 established the Construction of Ferry Boats and Ferry Terminal Facilities Formula Program (FBP). In accordance with this program, federal-aid highway funds are available, through state transportation agencies, for designing and constructing ferry boats and for designing, acquiring right-of-way, and constructing ferry terminal facilities. Ferry boats and terminal facilities that serve vehicular travel as links on public highways (other than Interstate highways), and ferry boats and terminals only serving passengers as fixed-route transit facilities may be eligible for certain types of federal-aid highway funding. Both Galveston and Port Aransas operations have applied for these federal grants, but only Port Aransas has been awarded funding. **Figure 5** shows the grant awards that TxDOT has received in accordance with the FBD and FBP programs for the Port Aransas operation.

VESSEL MAINTENANCE

Each vessel is subject to all United States Coast Guard (USCG) regulations and is inspected four times per year by the USCG. Regular vessel maintenance is performed daily by vessel crew members and TxDOT ferry maintenance crews ashore year-round. Each year, some vessels also are sent to a shipyard for scheduled maintenance and repairs. In addition to scheduled maintenance and repairs in the shipyard, the American Bureau of Shipping inspects the hull and machinery of each vessel during the shipyard cycle. The operations coordinate repairs and endeavor to maintain ferry service. The combination of USCG oversight and regular maintenance and repairs are intended to ensure a safe ferry fleet.

According to TxDOT, a competitive market exists for vessel maintenance, and all ferry maintenance contracts are bid

**FIGURE 5
FEDERAL FERRY BOAT DISCRETIONARY PROGRAM AND
CONSTRUCTION OF FERRY BOATS AND FERRY TERMINAL
FACILITIES FORMULA PROGRAM AWARDS FOR THE PORT
ARANSAS OPERATION
FISCAL YEARS 2006 TO 2016**

YEAR	PROJECT	AWARD
2006	Design and construction of new ferry boat	\$393,879
2007	Removal and replacement of wooden ramp fender systems with composite-material fender system	\$2,404,664
2008	Design and construction of new ferry boat	\$750,000
2009	2009 Recovery Act: Construction and Inspection	\$7,200,000
2009	Ferry boat expansion – Clusters	\$475,000
2010	Replacement of fender system on Port Aransas landings	\$2,745,802
2010	Replacement of fender system on Harbor Island landings	\$738,039
2011	Bulkhead repairs to Harbor Island	\$790,000
2011	Installation of lead pilings for new 28-car ferry boat on Port Aransas side	\$730,000
2012	Installation of lead pilings	\$1,772,237
2015	Design and construction of new 28-car ferry boat	\$5,080,745
2016	Design and construction of new 28-car ferry boat	\$5,913,261

SOURCE: Texas Department of Transportation.

competitively. The Port Aransas operation has noted limited shipyard capabilities in its area due to the size of the vessels. A shipyard in Palacios is used for the 20-car ferryboats, and a shipyard in Houston is used for the 28-car ferryboats.

In addition to ferry vessels, other marine operations also affect the market for vessel maintenance. When the price of oil is relatively high, offshore companies operate more vessels, thereby increasing the cost of repairs and limiting available dry-dock space. During recent years when the price of oil has been relatively lower, competition for access to shipyards decreased. However, as the price of oil rises, the ferry operations expect that competition for marine services and crew members will increase, which will increase maintenance costs.

VESSEL REPLACEMENT

The ferry fleets range in age from newly operational to 40 years old. As vessels near the end of their service life, TxDOT

**FIGURE 6
COST OF OPTIONS TO REDUCE FERRY VESSEL EMISSIONS OF NITROGEN OXIDES (NO_x)
APRIL 2018**

VESSELS	ANNUAL NO _x EMISSIONS (IN METRIC TONS)	ANNUAL NO _x EMISSIONS WITH ENGINE REPLACEMENT (IN METRIC TONS)	COST PER VESSEL	COST PER TON OF NO _x REDUCED
Galveston ferries (pre-tier diesel engines)	103.3	9.6 to 19.2	\$3.2 million to \$12.0 million	\$34,151 to \$142,687
Port Aransas 20-car ferries (pre-tier diesel engines)	8.0	3.7	\$450,000	\$104,651
Port Aransas 28-car ferries (Tier 2 diesel engines)	9.2	7.2	\$1.4 million	\$700,000

SOURCES: Legislative Budget Board; Texas Department of Transportation.

considers the following factors to determine when replacement is necessary or cost-effective:

- the frequency of repairs resulting in time the vessels are unavailable for use;
- fuel economy of the vessels;
- the availability of new technology and engine efficiency;
- the age of the vessels;
- availability of replacement parts;
- traffic volumes;
- cost to modify equipment;
- market pricing for materials; and
- newer regulations, which may increase cost.

The service life of a vessel ranges from 30 years to 40 years. A recent cost estimate for the replacement of a Galveston–Port Bolivar 60-car vessel is about \$26.3 million; replacement of the smaller Port Aransas 28-car vessels are estimated at about \$9.0 million. TxDOT has explored the market for used ferry vessels, but multiple factors make it impractical to pursue this option. The majority of vessels on the used market are older vessels and would not be an improvement from a current vessel. A vessel also must be designed to fit the existing infrastructure at the ferry landings. These factors make it more effective to design and build a new vessel when adding to the fleet. Each vessel requires about 18 months to build. Before a vessel is placed into service, maintenance crew and vessel crew members also must complete training.

REDUCTION OF DIESEL EMISSIONS

All Texas ferry vessels are powered by diesel engines, which emit certain exhaust pollutants that affect air quality. As of December 2016, the U.S. Environmental Protection Agency (EPA) determined that the Houston-Galveston-Brazoria area failed to attain the National Ambient Air Quality Standard for ozone. The EPA regulates certain exhaust pollutants, but the agency’s established limits apply only to newly constructed engines. The EPA regulates the following marine diesel-exhaust pollutants: oxides of nitrogen (NO_x), particulate matter (PM), total hydrocarbons (THC), and carbon monoxide (CO). The EPA has phased in increasingly stringent regulatory limits on these pollutants since the late 1990s and has divided the phased regulatory limits into tiers. Tiers are numbered 1 through 4 with higher numbers corresponding to more stringent limits on these pollutants. The timeline of which tier is in effect depends on engine characteristics such as cylinder displacement and overall engine power.

The majority of ferry vessels in the Texas operations are powered by diesel engines that predate the EPA’s tiered regulations. The state has several options to reduce diesel exhaust emissions produced by these vessels. These options include an engine rebuild, a full engine replacement, and retrofitting the existing diesel engines with after-treatment devices. All vessels’ engines are overhauled or rebuilt every five years to 10 years, depending on running hours and preventive-maintenance needs. **Figure 6** shows the annual NO_x emissions for ferry vessels and the estimated annual NO_x emissions if the engines were replaced with Tier 3 engines.

GRANT FUNDING AVAILABLE TO REDUCE DIESEL ENGINE EMISSIONS

Instead of using State Highway Fund appropriations to update engines to reduce emissions, TxDOT could apply for two grant programs that fund diesel-emission-reduction efforts. Although ferry operations would be eligible, it is unclear whether the operations would be competitive against other grantees.

CLEAN DIESEL PROGRAM

The EPA's Clean Diesel Program provides support for projects that protect human health and improve air quality by reducing harmful emissions from diesel engines. This program includes grants and rebates funded in accordance with the federal Diesel Emissions Reduction Act. The following diesel vehicles, engines, and equipment are included as eligible uses for Clean Diesel Program funding:

- school buses;
- Class 5 to Class 8 heavy-duty highway vehicles;
- locomotive engines;
- marine engines; and
- nonroad engines, equipment, or vehicles used in construction, handling of cargo (including at ports or airports), agriculture, mining, or energy production (including stationary generators and pumps).

A number of entities in Texas have received grant money from the Clean Diesel Program. Though TxDOT's ferry operations are eligible for grant funding through Clean Diesel Program, TxDOT has not applied for any Clean Diesel Program grants to date.

TEXAS EMISSIONS REDUCTION PROGRAM

The Texas Emissions Reduction Program (TERP), administered by the Texas Commission on Environmental Quality (TCEQ), was established by the Seventy-seventh Legislature, 2001. The statutory objectives of TERP include the following:

- achieving maximum reductions in nitrogen oxides to demonstrate compliance with the Texas State Implementation Plan;
- preventing areas of the state from being in violation of National Ambient Air Quality Standards established by EPA as authorized by the federal Clean Air Act;

- achieving cost-saving and other benefits by reducing emissions of other pollutants;
- achieving reductions of emissions of diesel exhaust from school buses; and
- advancing technologies that reduce NO_x and other emissions from facilities and other stationary sources.

TERP is funded from fees and surcharges on obtaining a certificate of vehicle title for all vehicles, purchase or lease of heavy-duty vehicles and equipment, and registration and inspection of commercial vehicles. Revenue into the TERP Fund for the 2016–17 biennium is projected to be \$427.0 million. Biennial appropriations and statutorily required transfers and deductions from the TERP Fund are expected to be \$241.1 million. This amount includes \$236.3 million appropriated to TCEQ to fund TERP grant programs and to administer those programs. The balance at the end of the 2016–17 biennium is projected to be \$1.2 billion.

TERP includes incentive funding for a variety of programs. The primary TERP grant program provides grants to reduce NO_x emissions from mobile sources in the state's nonattainment areas and areas of concern. Areas that do not meet the National Ambient Air Quality Standards are designated nonattainment areas, one of which is the Houston–Galveston–Brazoria area. TxDOT previously has not applied for any TERP grants. If TxDOT explored the replacement of diesel ferry engines or retrofitting diesel ferry engines with after-treatment devices, TxDOT would be eligible for funding from TERP's Diesel Emissions Reduction Incentive (DERI) program. Since 2001, the DERI program has awarded more than \$1.0 billion in grant funding to more than 10,000 projects. The average cost per ton of NO_x reduced for a DERI grant project is about \$6,000 per ton of NO_x reduced. As shown in **Figure 6**, the cost per ton of NO_x reduced by replacing a diesel ferry engine would range from about \$34,000 to \$700,000. Although costs per ton of NO_x reduced from ferry engines may not be competitive compared to other grantees, they may become competitive. The Legislature also could directly appropriate TERP funds to purchase new engines.

FUNDING OPTIONS FOR THE TEXAS COASTAL RESILIENCY MASTER PLAN

The General Land Office is responsible for managing the Texas coastline, from the beach to nearshore waters and out to 10.3 miles into the Gulf of Mexico, and millions of acres of submerged land in coastal bays. In 2017, the General Land Office completed the Texas Coastal Resiliency Master Plan with the stated goal of guiding and enhancing the coastal programs it manages. These programs are intended to protect, restore, and enhance the Texas coast through an efficient and cost-effective approach to achieving coastal resiliency. The master plan highlights the value of the coast and the hazards that endanger the environment and the economy of coastal communities. It also provides a list of projects and strategies to address those hazards. Recent storms, such as Hurricane Harvey, have resulted in environmental and economic devastation along the Texas coast, highlighting the potential benefits of coastal protection and resiliency.

FACTS AND FINDINGS

- ◆ The General Land Office manages multiple state and federal coastal programs that contribute to coastal protection and restoration, including the Texas Coastal Management Program and the Coastal Erosion Planning and Response Act.
- ◆ For the development of the Texas Coastal Resiliency Master Plan, the General Land Office formed a Technical Advisory Committee. The committee included statewide and regional coastal experts from state and federal agencies, universities, local governments, nonprofit organizations, engineering firms, port representatives, regional trusts, foundations, and partnerships. Committee members served as subject matter experts and provided input and technical guidance throughout the planning process.
- ◆ The 2017 Texas Coastal Resiliency Master Plan includes 59 recommended coastal resiliency projects with a total cost estimate from \$736.0 million to \$1.6 billion. As of August 2018, approximately \$76.6 million in federal and state funds have been allocated for 15 of those projects. In addition, the master plan recommends the funding of four coastwide programs that do not receive dedicated annual funding. These programs have a total annual estimated cost of \$29.0 million.

CONCERN

- ◆ Recent storms and natural shoreline erosion have resulted in significant economic, environmental, and physical damage to coastal areas of the state, making those areas vulnerable to increased damage from additional storms. To address this issue, the Legislature may choose to augment the existing funding options for the Texas Coastal Resiliency Master Plan's approximately \$1.0 billion worth of projects intended to mitigate the damage from future storms.

OPTIONS

- ◆ **Option 1:** Appropriate an amount determined by the Legislature in General Revenue Funds or Other Funds from the Economic Stabilization Fund to the General Land Office to fund projects included in the Texas Coastal Resiliency Master Plan.
- ◆ **Option 2:** Adopt one or more of the following suboptions to make certain related General Revenue–Dedicated funds available for appropriation to the General Land Office to fund projects included in the Texas Coastal Resiliency Master Plan:
 - **Option 2–A:** Amend statute to expand the allowable uses of the General Revenue–Dedicated Account No. 9, Game, Fish, and Water Safety, to include funding of projects included in the Texas Coastal Resiliency Master Plan;
 - **Option 2–B:** Amend statute to expand the allowable uses of the General Revenue–Dedicated Account No. 27, Coastal Protection, to include funding of projects included in the Texas Coastal Resiliency Master Plan;
 - **Option 2–C:** Amend statute to expand the allowable uses of the General Revenue–Dedicated Account No. 5003, Hotel Occupancy Tax for Economic Development, to include funding of projects included in the Texas Coastal Resiliency Master Plan.
- ◆ **Option 3:** Amend statute to allocate a portion of state hotel occupancy tax revenue collected in the 18 coastal counties located within the Texas Coastal Zone

Boundary to the General Land Office and include a contingency rider to appropriate those funds to the General Land Office to fund projects included in the Texas Coastal Resiliency Master Plan.

DISCUSSION

The Texas coast is vulnerable to multiple coastal hazards that put its environmental and economic health at risk, including coastal erosion, sea-level rise, coastal storm surge, habitat loss and degradation, water quality degradation, and high-powered storms. Recent storms, such as Hurricane Harvey, exacerbate these hazards, result in further environmental and economic devastation along the Texas coast, and highlight the urgency for coastal protection.

The Texas coast is vital to the state and the nation. The Texas coastal region is home to many critical state and national economic generators including the oil and natural gas industry, waterborne commerce, military transportation, chemical manufacturing, commercial fishing, recreation, and tourism. Natural resources of the coast, including beaches, dunes, and wetlands, provide recreational opportunities for coastal residents and tourists. They also play a critical role as natural barriers that protect coastal communities and industries from storm surge and flooding and provide a habitat for coastal wildlife.

TEXAS GENERAL LAND OFFICE

The Texas General Land Office (GLO) is responsible for managing the Texas coastline, from the beach to nearshore waters and out to 10.3 miles into the Gulf of Mexico, and millions of acres of submerged land in coastal bays. The GLO manages the following federal and state coastal programs that contribute to coastal protection and restoration:

- Texas Coastal Management Program;
- Coastal Erosion Planning and Response Act;
- Community Development and Revitalization;
- Oil Spill Prevention and Response;
- Beach Monitoring and Maintenance Program;
- Beach Access and Dune Protection Program;
- Gulf of Mexico Energy Security Act Program;
- Coastal Non-point Source Pollution Program;
- Texas Coastal Ocean Observation Network Program;

- Beach Maintenance Reimbursement Fund Program; and
- Adopt-a-Beach Program.

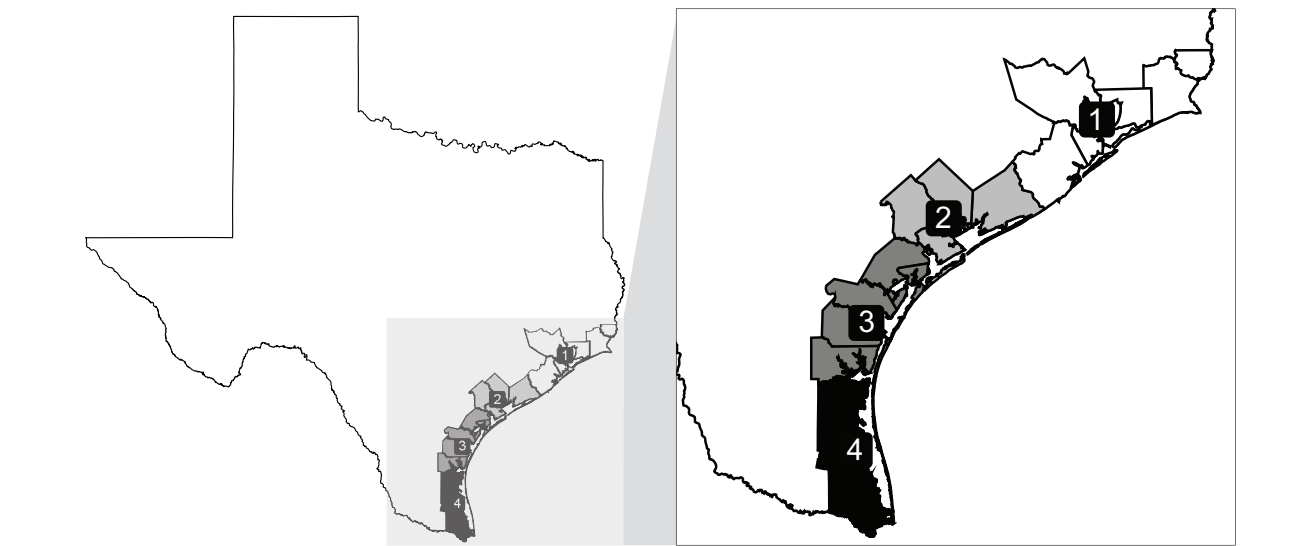
To protect and restore the coast, these GLO programs rebuild and fortify eroding beaches, rebuild dunes, protect and stabilize shorelines, restore marsh habitat, mitigate damage to natural resources, enhance public access to beaches, assist with beach maintenance costs for statutorily approved counties, provide the public with access to updated beach water quality information, enhance coastal infrastructure, and ensure that Texas coastal waters are not polluted with oil. In addition to these programs, GLO has been involved in coastal planning efforts to research specific coastal regions or particular coastal issues in partnership with federal and local entities. Due to the expansive and diverse nature of the Texas coast, the GLO Commissioner determined that a piecemeal approach to coastal protection and restoration is not sufficient, and directed the agency to develop an overall plan that coordinates the efforts of multiple parties, evaluates and selects projects, and provides efficient and cost-effective methods to achieve a resilient coast.

TEXAS COASTAL RESILIENCY MASTER PLAN

In 2012, GLO collaborated with the Harte Research Institute at Texas A&M University – Corpus Christi to study and identify priority issues for the Texas coast. The 2012 study yielded insights into coastal restoration and protection needs; however, it did not result in a formal plan document. With the 2012 planning effort as a foundation, development of a coastal plan began in March 2016. In March 2017, GLO published the Texas Coastal Resiliency Master Plan to guide the restoration, enhancement, and protection of the state’s natural resources. The master plan provides a framework to protect communities, infrastructure, and ecological assets from coastal hazards including flooding and storm surge in the short term and erosion and wildlife habitat loss in the long term. This framework includes identifying issues of concern and proposing projects to decrease the effects of hazards. GLO intends for the master plan to be a tool for selecting and implementing projects that produce measurable economic and ecological benefits to advance coastal resiliency.

GLO defines coastal resiliency as the ability of coastal resources and infrastructure to withstand natural or human-induced disturbances and quickly rebound from hazards. According to the National Oceanic and Atmospheric Administration, this resilience may prevent a short-term hazard from turning into a long-term communitywide

**FIGURE 1
TEXAS' COASTAL REGIONS, MARCH 2017**



REGION	DESCRIPTION	COUNTIES
1. Sabine Pass to Galveston Bay	Mouth of Sabine River at the Texas–Louisiana border to west side of Galveston Bay	Brazoria, Chambers, Galveston, Harris, Jefferson, and Orange
2. Matagorda Bay	Entire Matagorda Bay system from the Brazoria County–Matagorda County line to eastern edge of San Antonio Bay	Calhoun, Jackson, Matagorda, and Victoria
3. Corpus Christi Bay	San Antonio Bay to Baffin Bay	Aransas, Kleberg, Nueces, Refugio, and San Patricio
4. Padre Island	Southern edge of Baffin Bay to the Texas–Mexico border	Cameron, Kenedy, and Willacy

SOURCE: General Land Office.

disaster. The Texas coastline is dynamic and constantly shifts due to waves, tides, winds and other forces. Therefore, GLO intends to update the master plan biennially to enable the state to assess changing coastal conditions and needs, and to determine the most suitable way to implement the appropriate coastal protection solutions. In addition to the Texas Coastal Resiliency Master Plan, GLO continues to work with the U.S. Army Corps of Engineers and members of the U.S. Congress to move forward with the Coastal Texas Protection and Restoration Feasibility Study. The feasibility study and report are expected to be complete in 2021 and will make recommendations for large-scale projects, including the coastal barrier system, to protect the densely populated Houston area.

**TEXAS COASTAL RESILIENCY MASTER PLAN
DEVELOPMENT**

Multiple partners representing a diverse range of disciplines collaborated to develop the master plan. GLO managed the

planning team, which included engineering and environmental firms and the Harte Research Institute.

To gather information regarding the specific issues affecting the Texas coast and to evaluate solutions to these issues, GLO formed a Technical Advisory Committee (TAC), which also served as a member of the master plan planning team. The TAC included statewide and regional coastal decision makers and technical experts from 74 organizations in state and federal agencies, universities, local governments, nonprofit organizations, engineering firms, ports and regional trusts, foundations, and partnerships. TAC members informed the development of the master plan, served as subject matter experts on a regional and statewide level, and provided input and technical guidance throughout the planning process.

To facilitate the presentation of issues of concerns and solutions, the Texas coast was viewed as four regions based on major bay systems and habitats that align with other coastal planning studies conducted by GLO and the U.S. Army Corps of Engineers. **Figure 1** shows the four coastal regions

and includes a geographic description and the counties within the region. The planning team further divided the four coastal regions into 68 subregions to provide for local-level analysis that could be combined to make larger units for landscape-level analysis.

The planning team identified coastal issues of concern, provided a framework for documenting input from TAC members and stakeholders, and provided a basis for selecting candidate projects responsive to that input. The team identified the following eight coastal issues of concern:

- altered, degraded, or lost habitat;
- gulf beach erosion and dune degradation;
- bay shoreline erosion;
- existing and future coastal storm-surge damage;
- coastal flood damage;
- impacts on water quality and quantity;
- impacts on coastal resources; and
- abandoned or derelict vessels, structures, and debris.

TAC evaluated the severity of each issue of concern by region and subregion. TAC was asked to consider resiliency concepts and scale them from zero to four, with zero being not at all concerned, and four being extremely concerned, for each issue in subregions with which they were familiar. The planning team compared average TAC responses and scores for each issue, with high levels of concern suggesting high needs for project solutions.

PROJECT IDENTIFICATION AND EVALUATION

The project identification process began with a literature review of federal, state, and local reports, documents, databases, studies, and other materials of potential relevance to coastal resiliency, restoration, and development. This effort resulted in a preliminary project list that included more than 1,200 projects along the Texas coast. After eliminating completed and duplicate projects, the remaining projects underwent a two-step screening process to further refine the types of projects considered. The first screening was at a conceptual level, using general project descriptions and goals to determine whether a project enhanced coastal resiliency. This criteria included the project’s contribution to coastal resiliency, extent of information provided, and goals. Projects focused exclusively on public infrastructure improvements, such as those identified in the completed

GLO Texas Coastal Infrastructure Study, or storm suppression systems, such as those being studied in other state and federal efforts, did not advance to the second screening phase.

Projects that passed the initial screening were categorized based on the U.S. Army Corps of Engineers’ three primary categories of coastal risk reduction: nonstructural measures, structural measures, and natural and nature-based features. Nonstructural measures typically involve changing public policy, management practices, and regulatory policies. Structural measures include shoreline stabilization and flooding protection. They are intended to mitigate shoreline erosion and other coastal risks associated with wave damage and flooding. Nature-based features are human-made but “may mimic characteristics of natural features,” according to the planning team’s technical report. **Figure 2** shows these conceptual project types and their included project types and subtypes.

After a project was assigned a type, to further narrow the list of candidate projects, the second screening entailed a programmatic model to qualitatively and quantitatively establish relationships between the benefits provided by projects and issues of concern in each subregion. The second screening identified 177 projects that addressed the concerns most effectively, based upon their project types and locations.

Following the two-step screening process, TAC evaluated each of the 177 projects on its overall scope and merit. The group considered factors such as a project’s proposed location, expected effects on the natural and built environments, size or scale, proposed methodology or restoration technique, feasibility of construction or completion, and overall consistency with the master plan’s resiliency goals. TAC also was asked to consider coastal issues in light of the identified projects and propose any additional gap projects that would address unmet coastal needs. As a result, TAC identified 61 gap projects and evaluated them using the same methods as previously identified projects.

After the screening process and TAC evaluation, the planning team conducted technical analyses of project cost, economic benefits, physical risk, feasibility, constructability, environmental impact, and sediment management.

The project identification process produced 238 recommended projects for the Texas coast. The planning team grouped these projects into the following eight resiliency strategies:

- restoration of beaches and dunes;

**FIGURE 2
TEXAS COASTAL RESILIENCY MASTER PLAN PROJECT TYPES, MARCH 2017**

CONCEPT TYPES	PROJECT TYPES	SUBTYPES
Nonstructural	Land acquisitions	Acquisitions, conservation easements, fee simple
	Public access and improvements	Federal Americans with Disabilities Act-compliant accessibility, walkovers, piers, boat ramps
	Studies, policies, and programs	Erosion response plans, structure raising, setbacks, studies, sediment management
Structural	Shoreline stabilization	Seawall, bulkhead, revetment, breakwater, miscellaneous wave break, jetty, groin
	Flood risk reduction	Levees, flood wall, storm-surge barrier, road elevation
	Structure or debris removal	Structures on public's easement; abandoned gas and oil wells; abandoned boats; dock pilings; post-storm cleanup; plastics, glass, rubber, and metal; obstacles
Nature-based	Habitat creation and restoration	Marsh, oyster reef, wetlands and forested wetlands, barrier islands, coastal prairies, rookery islands
	Wildlife	Fisheries, birds, oysters, sea turtles, invasive species
	Environmental	Freshwater inflow, hydrologic restoration
	Beach nourishment	Bay, gulf
	Dune restoration	Dune

SOURCE: General Land Office

- bay shoreline stabilization and estuarine wetland restoration (living shorelines);
- stabilization of the Texas Gulf Intracoastal Waterway;
- freshwater wetlands and coastal uplands conservation;
- delta and lagoon restoration;
- oyster reef creation and restoration;
- rookery island creation and restoration; and
- plans, policies, and programs.

The planning team prioritized the projects by assigning them to one of three tiers. The additional technical analyses, in conjunction with TAC input, resulted in the designation of 63 Tier 1 projects, which are the only projects listed in the master plan. Tier 1 projects had high TAC approval ratings, a high feasibility assessment, and were anticipated to mitigate the issues of concern in the project's subregion. These projects represent the most beneficial and actionable project solutions recommended for the state, as identified by the master plan's planning process. Tier 2 projects had more moderate approval ratings and feasibility assessments, while Tier 3 projects required further research and development or already were captured within another, larger project. Tier 2 projects still

may contribute effectively to coastal resiliency and will be evaluated further in future iterations of this planning effort.

CURRENT FUNDING SOURCES FOR MASTER PLAN PROJECTS

The projects identified in the plan can receive funding from multiple sources, in coordination with GLO or independently. Furthermore, the master plan can be used by coastal communities to highlight the issues of concern in their regions and to solicit actions to make their communities more resilient and less vulnerable to storms.

According to GLO, funding is the main barrier to implementing coastal resiliency projects. The following available funding sources are identified for master plan projects:

- settlement funds from the federal Natural Resource Damage Assessment and Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast States Act;
- federal funding through the Coastal Management Program;
- federal funding from legal and regulatory actions through the National Fish and Wildlife Foundation;

- state funds through Coastal Erosion Protection and Response Act (CEPRA), subject to legislative appropriation;
- Outer Continental Shelf oil and gas revenue sharing through the federal Gulf of Mexico Energy Security Act; and
- private donations and grants from local industries and nonprofit organizations.

As of August 2018, 15 shovel ready master plan projects had been allocated funding. Approximately \$76.6 million was allocated from a combination of federal and state resources, including, but not limited to, CEPRA; the Gulf of Mexico Energy Security Act of 2006; the Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast States Act (RESTORE Act); and the National Oceanic and Atmospheric Administration.

According to the Texas Water Development Board, a majority of master plan projects may qualify for financial assistance through either the Texas Water Development Fund program or the federal–state-partnered Clean Water State Revolving Fund program, or both.

FUNDING OPTIONS FOR THE TEXAS COASTAL RESILIENCY MASTER PLAN

Recent storms and natural shoreline erosion have resulted in significant economic, environmental, and physical damage to the state’s coastal areas, making those areas vulnerable to increased damage from additional storms. The Texas Coastal Resiliency Master Plan identifies from \$736.0 million to \$1.6 billion worth of projects primarily intended to mitigate damage from storms. If the Legislature chooses to increase state support for the completion of these projects, Legislative Budget Board (LBB) staff have identified additional sources of funding that could be used or established. These options include making a direct appropriation, allocating existing revenue streams, or amending statute to make dedicated accounts available for coastal resiliency projects, after which the Legislature could choose how much to appropriate.

APPROPRIATE GENERAL REVENUE FUNDS OR OTHER FUNDS

The Legislature could make a onetime investment in Coastal Resiliency Master Plan projects. Option 1 would increase appropriations in the 2020–21 General Appropriations Act, Article VI, GLO, Strategy B.1.1, Coastal Management, from General Revenue Funds or Other Funds from the Economic

Stabilization Fund (ESF). The Texas Constitution authorizes appropriation from the ESF for a budget deficit during a biennium or a projected revenue shortfall during an ensuing biennium. The Texas Constitution also authorizes the Legislature, by a two-thirds vote of the members present in each house, to appropriate amounts from the ESF at any time and for any purpose. The Comptroller of Public Accounts (CPA) estimates the ESF balance to be \$11.9 billion at the end of the 2018–19 biennium. The master plan identifies 63 Tier 1 projects with a total estimated cost range from \$736.0 million to \$1.6 billion. Option 1 would appropriate General Revenue Funds or Other Funds from the ESF, in an amount determined by the Legislature, to GLO to fund projects included in Texas Coastal Resiliency Master Plan. The number of projects that could receive funding would depend on the amount the Legislature chooses to appropriate.

EXPAND ALLOWABLE USES OF CERTAIN GENERAL REVENUE–DEDICATED ACCOUNTS

General Revenue–Dedicated accounts are subaccounts within the General Revenue Fund that are for the deposit and accounting of revenues dedicated for a particular purpose. Since 1991, unappropriated General Revenue–Dedicated account balances have been counted as available to certify General Revenue Fund appropriations. Certification of appropriations is required by the Texas Constitution, Article III, Section 49a. In CPA’s *Report on Use of General Revenue–Dedicated Accounts*, 2017, approximately \$5.3 billion was available to certify appropriations of General Revenue Funds for the 2018–19 biennium. LBB staff has identified three General Revenue–Dedicated accounts that have growing account balances totaling approximately \$153.9 million and that have revenue sources and allowable uses related to the coast or coastal resiliency. Option 2 includes three suboptions to amend statute to expand the allowable uses of specified accounts to explicitly include funding of projects included in the General Land Office’s Texas Coastal Resiliency Master Plan. **Figure 3** shows the identified accounts’ beginning cash balances, net revenues and other sources, net expenditures and other uses, and ending cash balances for fiscal year 2018.

GENERAL REVENUE–DEDICATED ACCOUNT NO. 9, GAME, FISH, AND WATER SAFETY

The General Revenue–Dedicated Account No. 9, Game, Fish, and Water Safety (Account No. 0009), is used for

**FIGURE 3
CASH BALANCE, NET REVENUE AND OTHER SOURCES, AND NET EXPENDITURES AND OTHER USES FOR CERTAIN GENERAL REVENUE–DEDICATED ACCOUNTS, FISCAL YEAR 2018**

(IN MILLIONS)

GENERAL REVENUE–DEDICATED ACCOUNT	BEGINNING CASH BALANCE	NET REVENUE AND OTHER SOURCES	NET EXPENDITURES AND OTHER USES	ENDING CASH BALANCE
Account No. 0009, Game, Fish, and Water Safety	\$81.6	\$269.6	\$265.8	\$85.5
Account No. 0027, Coastal Protection	\$17.5	\$19.2	\$14.4	\$22.3
Account No. 5003, Hotel Occupancy Tax for Economic Development	\$16.9	\$67.5	\$38.2	\$46.1

SOURCE: Comptroller of Public Accounts.

multiple game, fish, and water safety purposes, including the following purposes related to coastal resiliency:

- establishment and maintenance of fish hatcheries, fish sanctuaries, tidal-water fish passes, wildlife management areas, and public hunting grounds;
- protection of wild birds, fish, and game;
- research, management, and protection of the fish and wildlife resources of the state; and
- resource protection activities.

The Texas Parks and Wildlife Code, Chapter 11, requires the Texas Parks and Wildlife Department to use money from license fees paid by hunters and fishermen for functions required to manage the state’s fish and wildlife resources. For fiscal year 2018, revenue deposited to Account No. 9 was approximately \$269.6 million, including the following sources:

- licenses, stamps, fees, permits, and fines involving the laws and duties regarding game and fish;
- oyster bed rentals and permits;
- fines and penalties collected for violations of a law pertaining to the protection and conservation of the state’s wildlife resources;
- vessel manufacturer or dealer licensing fees; and
- vessel registration and vessel and outboard motor titling fees.

After expenditures and other uses, the account’s ending cash balance increased from approximately \$81.6 million for fiscal year 2017 to approximately \$85.5 million for fiscal year 2018. Some of the account’s allowable uses are related to or

incorporate aspects of coastal resiliency projects. Option 2–A would amend the Texas Parks and Wildlife Code, Chapter 11, to expand the allowable uses of Account No. 9 to explicitly include funding of projects included in the General Land Office’s Texas Coastal Resiliency Master Plan. The statutory amendment would make the funds available for the Legislature to appropriate an amount of its choosing.

GENERAL REVENUE–DEDICATED ACCOUNT NO. 0027, COASTAL PROTECTION

The General Revenue–Dedicated Account No. 27, Coastal Protection (Account No. 27), is used primarily to implement and enforce the Oil Spill Prevention and Response Act of 1991 and in response to unauthorized oil discharges. However, money in the account may be used for GLO erosion response projects, in an amount not to exceed the interest accruing to the fund annually. Approximately \$0.3 million in interest revenue was deposited into Account No. 27 for fiscal year 2018. For fiscal year 2018, revenue deposited to the account was approximately \$19.2 million, the majority of it coming from the state’s coastal protection fee. The coastal protection fee is imposed on every individual owning crude oil in a vessel at the time the oil is transferred to or from a marine terminal. The fee is set at \$0.013 per barrel, and the rate can vary or the fee can be suspended based on the balance of Account No. 27. After expenditures and other uses, the account’s ending cash balance increased from approximately \$17.5 million for fiscal year 2017 to approximately \$22.3 million for fiscal year 2018. Option 2–B would amend the Texas Natural Resources Code, Chapter 40, to expand the allowable uses of Account No. 27 to explicitly include funding of projects included in the General Land Office’s Texas Coastal Resiliency Master Plan. The statutory amendment would make the funds available for the Legislature to appropriate an amount of its choosing.

**GENERAL REVENUE–DEDICATED ACCOUNT
NO. 5003, HOTEL OCCUPANCY TAX
FOR ECONOMIC DEVELOPMENT**

The General Revenue–Dedicated Account No. 5003, Hotel Occupancy Tax for Economic Development (Account No. 5003), is used for advertising and other marketing activities of the Trusteed Programs within the Office of the Governor, Economic Development and Tourism Division. For fiscal year 2018, revenue deposited to the account was approximately \$67.5 million, including \$50.9 million from an allocation of the state’s portion of the hotel occupancy tax. After expenditures and other uses, the account’s ending cash balance increased from approximately \$16.9 million for fiscal year 2017 to approximately \$46.1 million for fiscal year 2018. Option 2–C would amend the Texas Tax Code, Chapter 156, to expand the allowable uses of Account No. 5003 to explicitly include funding of projects included in the General Land Office’s Texas Coastal Resiliency Master Plan. The statutory amendment would make the funds available for the Legislature to appropriate an amount of its choosing.

ALLOCATING STATE HOTEL OCCUPANCY TAX REVENUE

The state’s hotel occupancy tax rate is 6.0 percent of the price paid for a room in a hotel. For purposes of imposing a hotel occupancy tax, the Texas Tax Code defines a hotel as a building in which members of the public obtain sleeping accommodations for consideration, including a hotel, motel, tourist house, bed and breakfast, and a short-term rental. During fiscal year 2017, the state collected approximately \$530.7 million in state hotel occupancy taxes.

The Texas Tax Code allocates approximately 33.3 percent of state hotel occupancy tax revenue collected in six coastal municipalities to those municipalities to clean and maintain public beaches within the municipality. CPA transfers this money to the municipalities without an appropriation. Some of those municipalities also may use the money for erosion response projects and to clean and maintain bay shorelines. Option 3 would expand on the policy of using state hotel occupancy tax revenue for coastal resiliency by amending the Texas Tax Code, Chapter 156, to allocate a portion of available state hotel occupancy tax revenue collected in the 18 coastal counties located within the Texas Coastal Zone Boundary to GLO, subject to appropriation. The option would include a contingency rider to appropriate those funds to GLO for funding projects included in the Texas Coastal Resiliency Master Plan. The state hotel occupancy tax revenue collected in these counties for fiscal year 2018 was approximately \$147.3 million. Based on projected hotel

occupancy tax collections in CPA’s House Bill 32 Report, 2016, the state hotel occupancy tax revenue collected in these counties is estimated to be \$335.2 million for the 2020–21 biennium. As part of the statutory amendment, the Legislature could allocate an amount of its choosing. The statutory allocation could be established to provide an ongoing source of funds for coastal resiliency or could be designated for a specific period, after which the existing allocation of that revenue would resume.

FISCAL IMPACT OF THE OPTIONS

Option 1 would make a onetime appropriation to GLO from General Revenue Funds or Other Funds from the ESF. This option would result in a cost in an amount equal to the appropriation.

Option 2 includes strategies to amend statute to expand the allowable uses of certain General Revenue–Dedicated accounts. If the Legislature chooses to appropriate funds from any of these General Revenue–Dedicated accounts, it would result in a cost to that account in an amount equal to the appropriation. Although it would not result in a cost to the state’s General Revenue Funds, it would decrease the amount of General Revenue–Dedicated Funds amounts available for certification of appropriations of General Revenue Funds.

Option 3 would amend statute to allocate state hotel occupancy tax revenue collected in the 18 coastal counties to GLO, subject to appropriation. State hotel occupancy tax revenue is deposited in the state Treasury to the credit of the General Revenue Fund; therefore, this option would result in a cost to the state in an amount equal to any appropriation of the funds. Based on projected hotel occupancy tax collections in CPA’s House Bill 32 Report, 2016, the state hotel occupancy tax revenue collected in these counties is estimated to be \$335.2 million for the 2020–21 biennium.

The introduced 2020–21 General Appropriations Bill does not include any adjustments as a result of these options.

OVERVIEW OF STATE RESPONSE TO CHRONIC WASTING DISEASE

The task of managing disease in cervids (Cervidae, members of the deer family) is shared by the Texas Animal Health Commission and the Texas Parks and Wildlife Department. The agencies' performance of this task has been scrutinized following the discovery of chronic wasting disease, a neurological disease affecting cervids, in a Texas deer-breeding facility in June 2015. The discovery prompted new regulation, which representatives of the \$349.4 million deer-breeding industry say has been more harmful to the industry than the disease has been. The state agencies maintain that the rules are necessary to decrease the probability of chronic wasting disease being spread from facilities where it might exist and to increase the probability of detecting and containing chronic wasting disease in facilities where it does exist. This overview, which was prepared at the request of members of the Legislature, shows the state's response to chronic wasting disease, including agency authority, activities, and expenditures.

FACTS AND FINDINGS

- ◆ The Parks and Wildlife Department has primary responsibility to protect the state's fish and wildlife resources, which includes disease management efforts for the state's native cervid species, white-tailed and mule deer.
- ◆ The Animal Health Commission has primary responsibility for managing and responding to diseases and pests of consequence that affect nonnative cervid species, which includes elk, moose, and others. The Animal Health Commission also coordinates disease-control efforts for native cervids and works collaboratively with the Parks and Wildlife Department in that area.
- ◆ Although both state agencies monitor and respond to a number of diseases affecting cervids, chronic wasting disease has been a significant focal point in recent years for the agencies and for stakeholders. Chronic wasting disease is unique relative to other diseases affecting cervids because it invariably is fatal, has a long incubation period, and virtually is impossible to eradicate.

- ◆ The current chronic wasting disease regulatory structure for white-tailed and mule deer was initiated in June 2016. This structure mandates certain testing requirements and restrictions on the artificial movement of deer. It was devised using a facilitated negotiation process with stakeholders, including representatives of the deer-breeding industry.
- ◆ The artificial movement of cervids increases risks for disease management, but it is a key component of the deer breeding industry and overall deer management.
- ◆ From fiscal years 2011 to 2017, the Parks and Wildlife Department reports expending approximately 3.1 percent (\$4.5 million) of its appropriations under Strategy A.1.1, Wildlife Conservation, for purposes related to chronic wasting disease. From fiscal years 2005 to 2017, the Animal Health Commission reports expending approximately 1.2 percent (\$2.1 million) of its agencywide appropriations for purposes related to chronic wasting disease.
- ◆ Legislative Budget Board staff found no indications that the collaboration between the Animal Health Commission and the Parks and Wildlife Department results in duplication of effort, nor that either agency exceeds its scope of authority or fails to engage stakeholders adequately in response to the disease.

DISCUSSION

According to the Texas Parks and Wildlife Department (TPWD), Texas is home to from 3.5 million to 4.5 million white-tailed and mule deer, which are the only cervids native to the state. Approximately 100,000 to 110,000 deer also are held in captivity as part of the state's deer-breeding industry.

Populations of other free-ranging and captive cervids in the state, such as elk, red deer, and sika, are not native to Texas and are much smaller in number compared to white-tailed and mule deer. State law deems cervids and all other wild animals inside the borders of the state the property of the people of the state, regardless of whether the movement of those animals is restricted by the existence of a fence constructed or maintained by a landowner. The law grants TPWD primary responsibility for protecting the state's wildlife resources and requires the Texas Animal Health

Commission (TAHC) to protect all livestock and exotic livestock from diseases recognized as communicable by the veterinary profession.

The deer-breeding industry is a prominent part of the community regulated by TPWD and TAHC. Deer breeding had a direct economic impact of \$349.4 million in 2015, as estimated by the Agricultural and Food Policy Center at Texas A&M University. That estimate increases to \$1.6 billion when considering indirect impacts, such as purchases of feed and veterinary supplies, and the economic impact of deer hunting stemming from breeding operations. The production side of the deer-breeding industry typically consists of operations involved in breeding and raising deer; the consumption side typically consists of other industry breeders and hunting operations such as game ranches. Hunting is the primary end market that the industry services, and many industry producers selectively breed deer to attain genetic characteristics desirable to hunters, namely, trophy antler racks. Deer-breeding operations vary, but often involve a certain amount of fenced acreage, with a subset dedicated to breeding pens, where deer are bred, nursed, provided supplemental feed and veterinary care, tagged for identification, and ultimately sold. Sales involve the transfers of deer, which are conducted with TPWD permits.

CHRONIC WASTING DISEASE

Cervids are susceptible to multiple diseases, including chronic wasting disease (CWD), anthrax, tuberculosis, epizootic hemorrhagic disease, pneumonia, and bluetongue. TPWD and TAHC monitor these diseases in the state's cervid population—the former in its capacity as protector of the state's fish and wildlife resources and the latter in its capacity as protector of all livestock and exotic livestock from communicable disease.

TPWD and TAHC report being concerned about CWD before it was discovered in Texas. The disease first was identified in captive mule deer in Colorado in 1967 and later was classified as a transmissible spongiform encephalopathy, or prion disease, which is a family of rare progressive neurodegenerative disorders that can affect, separately, humans and animals. Other animal prion diseases include bovine spongiform encephalopathy, better known as mad cow disease, and scrapie, which affects sheep and goats. The term prions refers to abnormal, pathogenic agents that are transmissible and able to induce abnormal folding of specific normal cellular proteins that are found most abundantly in the brain. The abnormal folding leads to brain damage and

the characteristic signs and symptoms of the disease. Those symptoms include drastic weight loss (or wasting), stumbling, and listlessness, which can render CWD-positive animals vulnerable to other mortality factors separate from the disease, such as predation and vehicle collisions.

CWD has spread steadily and has been reported in 25 states in the continental U.S. and two Canadian provinces, as shown in **Figure 1**. Although the overall occurrence of CWD in free-ranging deer and elk is relatively low nationwide, infection rates greater than one in 10 have been found in locations where the disease is established. Infection rates in some captive herds can be much higher, with a rate of 79.0 percent reported within one captive herd. In that case, CWD was diagnosed in a white-tailed deer from a captive farm in Wisconsin, after which the farm was quarantined and then depopulated more than four years later. Sixty of the 76 animals at the time of depopulation were found to be positive for the CWD-associated prion.

CWD presents stakeholders with challenges unlike other diseases affecting cervids. It is fatal and has no treatments or vaccines. CWD has a long incubation period of a reported minimum of approximately 17 months, with an unknown maximum. It is not known when during the course of infection an animal may be infectious. It is believed that CWD prions likely spread among animals through bodily fluids, either through direct contact or indirectly through environmental contamination of soil, food, or water. No known management strategies are available to mitigate the risk of indirect transmission of CWD when an environment has been contaminated, which makes eradication of the disease difficult, if not impossible, in areas where CWD has been long established before detection.

Given these characteristics, the risk of inadvertently spreading CWD is highest during the artificial movement of deer by human transport. In such a scenario an infected or exposed animal, whether it is a breeder deer or a trapped free-ranging deer, could be transported across the state in a trailer and disperse the disease into additional captive or free-ranging populations that otherwise would have been impossible given the deer's natural movement patterns.

To date, no cases of CWD infection have been reported in people. However, animal studies have suggested that CWD poses a risk to some types of nonhuman primates that eat meat from CWD-infected animals or come in contact with brain or bodily fluids from infected deer or elk. The Centers for Disease Control and Prevention advises against handling

FIGURE 1
CHRONIC WASTING DISEASE DETECTED IN NORTH AMERICA
AUGUST 2018



SOURCES: Legislative Budget Board; Centers for Disease Control and Prevention.

or eating meat from deer and elk that look sick or are acting strangely or that are found dead.

AGENCY SCOPES OF AUTHORITY

The Texas Parks and Wildlife Code provides TPWD varied authority regarding the management of cervids, including the authority to take or manage native cervids for disease diagnosis or prevention; the authority to regulate the means, methods, and places in which it is lawful to hunt, take, or possess game animals; and the authority to regulate the conditions within which a person may possess a live native cervid with a TPWD-issued permit. **Figure 2** shows a comparison of TPWD’s deer-related permits.

The Texas Agriculture Code, Section 161.041, requires TAHC to protect livestock from communicable disease and authorizes the agency to “act to eradicate or control any disease or agent of transmission for any disease that affects

livestock, exotic livestock, domestic fowl, or exotic fowl, regardless of whether the disease is communicable, even if the agent of transmission is an animal species that is not subject to the jurisdiction of TAHC.” This latter condition includes the native cervid species of white-tailed and mule deer, which are within TPWD’s jurisdiction, because the statutory definition of exotic livestock includes only nonnative animals from the deer family. Statute addresses the overlap, however, by prohibiting TAHC from infringing on or superseding the authority of any other state agency, including TPWD’s authority relating to wildlife. Statute also requires TAHC to assume responsibility for disease control efforts if a conflict of authority exists, but to work collaboratively with the other state agency—TPWD, in this case—to enable each agency to carry out its responsibilities effectively.

**FIGURE 2
TEXAS PARKS AND WILDLIFE DEPARTMENT DEER-RELATED PERMITS
FISCAL YEAR 2018**

PERMIT	PURPOSE	FEE
Deer breeder permit	Authorizes individuals to hold white-tailed and mule deer in captivity for the purpose of propagation	\$200
Deer Management Permit (DMP)	Authorizes owners of high-fenced properties to detain white-tailed deer temporarily in breeding pens located on the property for the purpose of natural breeding	\$1,000
Trap, Transplant, and Transport (TTT) permit	Authorizes municipalities, political subdivisions, and certain qualified individuals to trap white-tailed and mule deer on properties with excess population numbers and to relocate the deer to properties with sufficient habitat to support the additional animals	\$750 per release site
Trap, Transplant, and Process (TTP) permit	Authorizes cities, towns, villages, counties, special districts, property owners associations, and certain qualified individuals to capture surplus deer, process their carcasses, and donate the resulting venison to penal facilities or charitable organizations for human consumption	\$0
Scientific research permit	Authorizes employees or representatives of certain entities to collect, salvage, band, or hold native Texas wildlife for scientific purposes	\$53 (unless exempt)
Zoological research permit	Authorizes agents of certain facilities to hold native wildlife to further scientific understanding of protected wildlife, encourage management and conservation of protected wildlife, or further awareness and understanding of the biology of protected wildlife	\$158

SOURCE: Texas Parks and Wildlife Department.

AGENCY ACTIVITIES

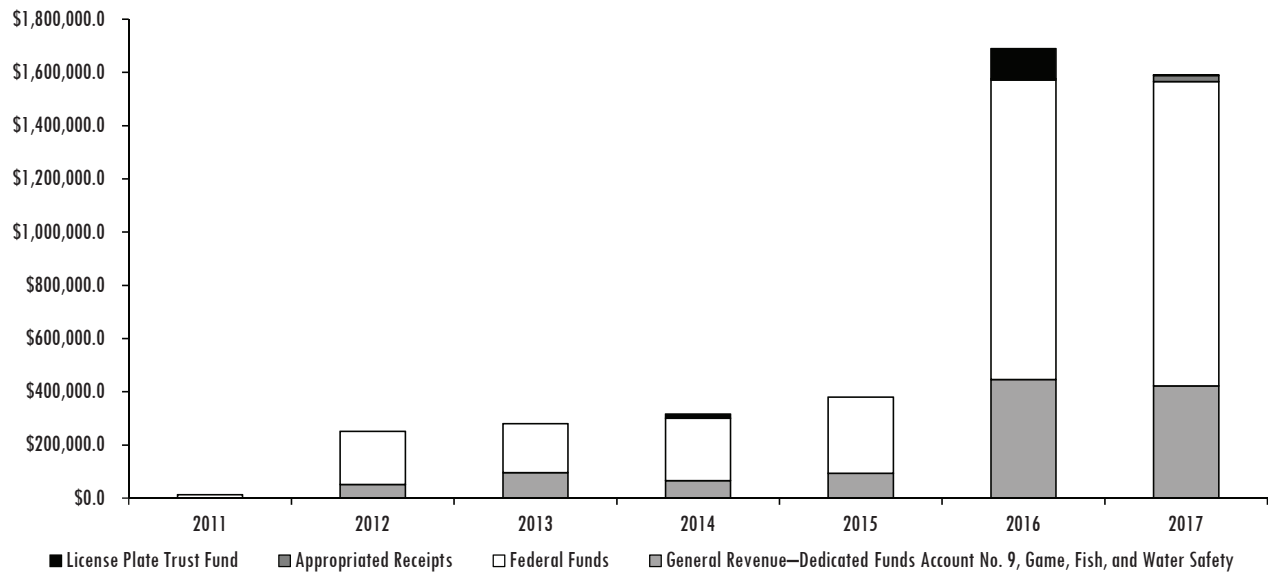
TAHC and TPWD collaborate on cervid disease management in many ways, with most examples related to the management of CWD. The agencies co-chair the CWD Task Force, which was established in 2006 to work with public and private stakeholders in developing rules and monitoring and managing CWD-related issues. TPWD provides biological information and statistics for native and nonnative species, and TAHC provides epidemiological expertise. Both agencies approve herd plans, which are requirements for disease testing and management established for deer-breeding facilities that have CWD-positive animals. Both agencies also coordinate to develop containment and surveillance zones in and around areas that have CWD and to train agency staff and others to collect samples for disease testing. Agency definitions of containment and surveillance zones terms vary slightly, but containment zones typically are geographic areas within which CWD has been detected or detection is probable, and surveillance zones are geographic areas within which the presence of CWD could reasonably be expected. The artificial movement of deer is restricted in both types of zones, and hunters who harvest CWD-susceptible species in either are required to bring their animals to a TPWD check station within 48 hours for testing.

Independently of TAHC, TPWD monitors disease in cervid and other wildlife populations by investigating reports of sick animals and mortalities. TPWD also tests roadkill, deer

exhibiting clinical symptoms of disease, and hunter-harvested deer throughout the state. Independently of TPWD, TAHC’s role varies based on the disease, but typically includes the following actions:

- surveillance, which consists of varying levels of disease testing to detect presence of a disease, assess its spatial distribution and prevalence, and monitor changes in prevalence and direction of spread or contraction;
- reporting;
- setting testing and record-keeping requirements;
- epidemiological investigations to determine the disease source and exposure;
- issuing movement restrictions such as hold orders and quarantines;
- developing herd plans;
- conducting records and premises inspections;
- assisting the U.S. Department of Agriculture (USDA) to gather data for potential federal indemnification of affected herds or animals;
- proposing and establishing Texas entry requirements and disease risk zones; and
- enforcing all TAHC cervid regulations.

FIGURE 3
TEXAS PARKS AND WILDLIFE DEPARTMENT CHRONIC WASTING DISEASE-RELATED EXPENDITURES
FISCAL YEARS 2011 TO 2017



SOURCE: Texas Parks and Wildlife Department.

TAHC also sets entry requirements for nonnative cervids. The agency also administers Texas’ voluntary native and nonnative herd certification programs for CWD, tuberculosis, and brucellosis and the Certified CWD Postmortem Sample Collector Authorized Personnel Program, which trains nonveterinarians to collect and submit samples for official post-mortem CWD testing in Texas.

ACTIVITIES IN OTHER STATES

Texas is joined by the other 49 states in conducting CWD testing on free-ranging cervids. Methods and sampling levels vary; however, most other states also test some combination of roadkill, hunter-harvested deer, and deer exhibiting clinical symptoms of disease. Forty-five states in addition to Texas also test captive cervids for CWD, although in some states this testing is voluntary. The four states that don’t test for CWD in captive cervids—Nevada, South Carolina, Washington, and Wyoming—either don’t permit captive cervids or have a nominal number of ranches with captive animals.

Bans on the importation and movement of cervid carcasses and body parts also are common—41 states join Texas in implementing restrictions or outright bans but with exceptions for items such as deboned meat, cleaned hides, and taxidermy mounts. States including Arkansas, Michigan, Minnesota, Virginia, and West Virginia have implemented

CWD management or containment zones with enhanced movement restrictions and testing.

CHRONIC WASTING DISEASE FUNDING

TPWD reports CWD-related expenditures pursuant to the General Appropriations Act (GAA), Article VI, Parks and Wildlife Department, Strategy A.1.1, Wildlife Conservation. The Legislature appropriated \$147.6 million in All Funds to TPWD from fiscal years 2011 to 2017 within this strategy, which includes funding for the regulation and management of other species of animals, management and operation of TPWD’s wildlife management areas, wildlife surveys and research, and the issuance of wildlife permits. According to TPWD, CWD-related expenditures for the same period totaled approximately \$4.5 million (3.1 percent of appropriations within the Wildlife Conservation strategy), and other expenditures related to general disease management totaled \$64,880 during the period. As **Figure 3** shows, the majority of the CWD-related expenditures are financed by Federal Funds. TPWD reports that these funds consist of the following grants: (1) a federal grant for CWD surveillance issued as part of a cooperative agreement between TPWD and the USDA Animal and Plant Health Inspection Service; and (2) a portion of a Federal Aid in Wildlife Restoration Act grant that was used to carry out CWD monitoring and

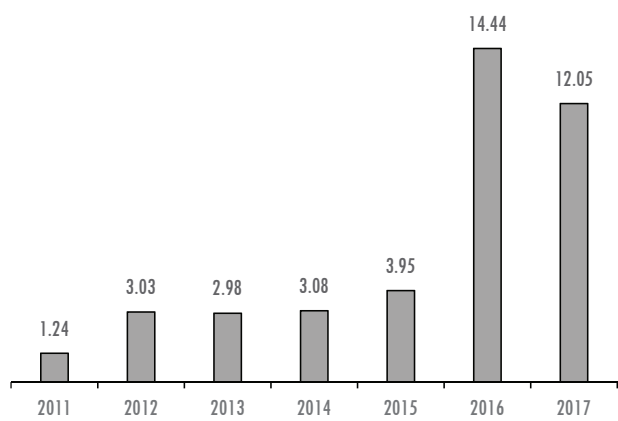
testing. The Federal Aid in Wildlife Restoration Act, commonly known as the Pittman-Robertson Act, provides cost-shared federal aid to states on a formula basis for the management and restoration of wildlife.

Expenditures increased during fiscal years 2016 and 2017 due to expanded TPWD activities involving CWD following the detection of the disease in a deer breeding facility in June 2015, as discussed in the following section.

Figure 4 shows full-time-equivalent positions for hours that TPWD staff attributed to CWD-related tasks for fiscal years 2011 to 2017.

TAHC receives appropriations for a CWD program pursuant to GAA, Article VI, Animal Health Commission, Strategy A.1.1, Field Operations, which covers the agency’s statewide, field-based, animal health management and assurance programs. The Legislature initiated the CWD program funding during fiscal year 2005 for the purpose of furthering CWD surveillance in breeder deer and in elk, decreasing the risk of introduction of CWD, and providing early disease detection. TAHC also uses appropriations outside the CWD program for purposes related to CWD. As shown in **Figure 5**, total CWD-related expenditures for the agency from fiscal years 2005 to 2017 are approximately \$2.1 million in General Revenue Funds, or 1.2 percent of total agency appropriations during that period (approximately \$171.9 million in All Funds).

**FIGURE 4
TEXAS PARKS AND WILDLIFE DEPARTMENT FULL-TIME-EQUIVALENT POSITIONS RELATED TO CHRONIC WASTING DISEASE
FISCAL YEARS 2011 TO 2017**



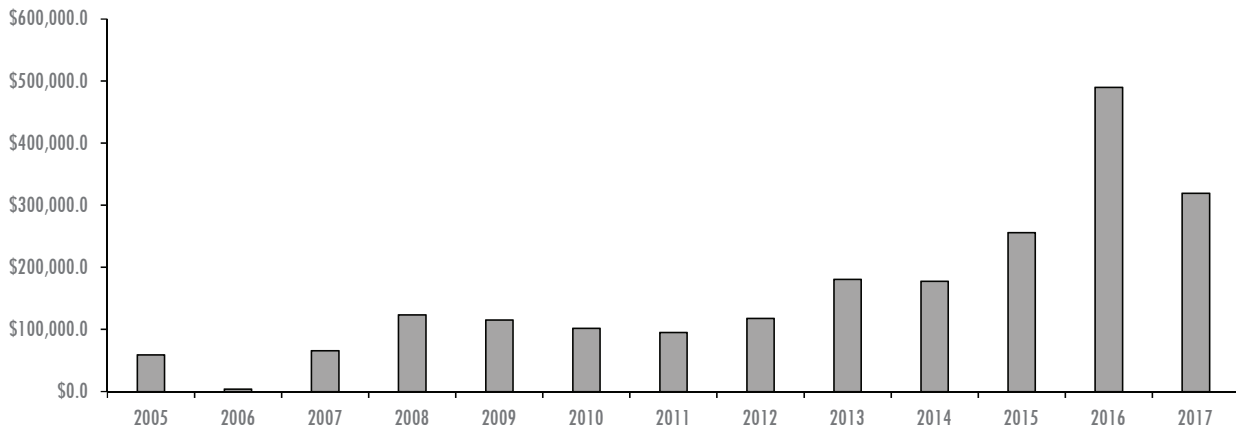
NOTE: Texas Parks and Wildlife staff hours shown are attributed to chronic wasting disease-related tasks in terms of full-time-equivalent positions.

SOURCE: Texas Parks and Wildlife Department.

TEXAS REGULATORY RESPONSE TO CHRONIC WASTING DISEASE

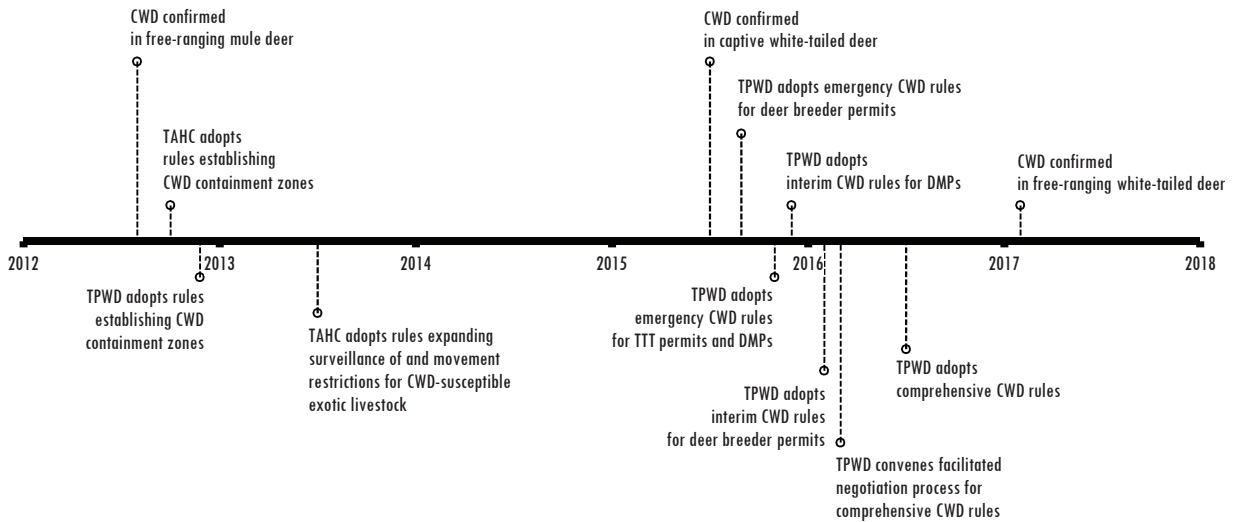
The state’s regulatory response to CWD began in calendar year 1999 with TAHC’s development of a voluntary status-monitoring program in which participating owners of herds were required to submit annual inventories and submission of samples from all cases of mortality in animals age 17 months or older. In 2002, following the discovery of CWD in multiple other states, TPWD began testing roadkill and

**FIGURE 5
TEXAS ANIMAL HEALTH COMMISSION CHRONIC WASTING DISEASE-RELATED EXPENDITURES
FISCAL YEARS 2005 TO 2017**



SOURCE: Texas Animal Health Commission.

FIGURE 6
CHRONIC WASTING DISEASE EVENTS IN TEXAS
CALENDAR YEARS 2012 TO 2017



NOTE: CWD=chronic wasting disease; TAHC=Texas Animal Health Commission; TPWD=Texas Parks and Wildlife Department; TTT=Trap, Transport, and Transplant Permit Program; DMP=Deer Management Permit.
 SOURCE: Legislative Budget Board.

hunter-harvested deer for CWD, and TPWD and TAHC adopted rules intended to prevent the importation of potentially diseased deer and elk into the state. Testing by TPWD and rulemaking from both agencies continued until 2005, when, at the recommendation of TPWD’s White-tailed Deer Advisory Committee, TPWD closed the Texas border to the entry of out-of-state captive white-tailed and mule deer and increased regulatory requirements regarding disease monitoring and record keeping due to the threat that CWD posed. Those rules were updated in 2010 to address other disease threats to white-tailed and mule deer.

Despite these efforts, Texas confirmed the first state cases of CWD in July 2012 among free-ranging mule deer in Hudspeth County, part of a western region of the state known as the Trans-Pecos. **Figure 6** shows a timeline of significant events related to the discovery of CWD in Texas, beginning with these confirmed cases in 2012. TPWD, TAHC, and the CWD Task Force already had collaborated on a CWD management plan with a response structured for the region after the detection of the disease in mule deer harvested in New Mexico within two miles of the Texas border. The plan called for the establishment of movement restriction zones in the region. The zones were established by TAHC rule in September 2012 and TPWD rule in November

2012. TAHC also adopted rules in June 2013 expanding its surveillance of elk, which began in December 2005, to include other CWD-susceptible exotic livestock.

CWD cases were confined to Hudspeth County until June 2015, when the disease was confirmed in a captive white-tailed deer in a Medina County deer breeding facility west of San Antonio. The Medina County tissue samples were submitted by the breeder facility as part of routine deer mortality surveillance. TPWD responded by temporarily disabling access to the online database by which deer breeders obtain transfer permits to transport deer, placing movement restrictions on breeder facilities that had received deer from the Medina County facility or shipped deer to the facility during the previous two years, and disallowing release of captive deer from all breeder facilities into the wild.

TPWD adopted emergency rules in August 2015 that included the following requirements: (1) specific testing requirements for deer breeders to move deer to other deer breeders or for purposes of release; (2) similar testing requirements on release sites; and (3) restriction of the release of breeder deer to enclosures surrounded by a fence of at least seven feet in height capable of retaining deer at all times. TPWD also adopted emergency rules in October 2015 to address movement of white-tailed or mule deer in accordance

FIGURE 7
AFFILIATIONS OF PARTICIPANTS IN FACILITATED NEGOTIATIONS WITH CHRONIC WASTING DISEASE STAKEHOLDERS
FEBRUARY 2016 TO APRIL 2016

2015 Stakeholder Group	Private Lands Advisory Committee
Breeder User Group	Texas Deer Association
Chronic Wasting Disease Task Force	Texas Parks and Wildlife Department
Deer Breeders Corporation	Texas Wildlife Association
Exotic Wildlife Association	White-tailed Deer Advisory Committee
North American Deer and Elk Farmers Association	Deer Breeders Corporation

SOURCE: Texas Parks and Wildlife Department.

with a trap, transport, and transplant (TTT) permit or a deer management permit (DMP).

TPWD replaced the emergency rules with interim rules in November 2015 for deer breeders and in January 2016 for DMP (the TTT emergency rules were allowed to expire). The agency intended for the interim rules to maintain regulatory continuity during the 2015–2016 deer season and the period immediately thereafter, and to review all the interim rules following the close of the season.

That review began in February 2016, when TPWD invited a group of stakeholders, shown in **Figure 7**, to participate in a negotiation process facilitated by the Center for Public Policy Dispute Resolution at the University of Texas School of Law. According to TPWD, the agency took this step to address criticisms from some deer breeders that official and ad hoc TPWD advisory committees were “stacked” with members predisposed against the interests of the deer-breeding industry. The purpose of the negotiation was to develop a consensus concerning the essential components of eventual regulations to comprehensively address and implement effective CWD management strategies. Stakeholders represented various interests, including deer breeders, landowners, hunters, veterinarians, wildlife enthusiasts, TAHC, and TPWD. The results of the negotiation formed the basis of comprehensive rules, which were proposed in April 2016 and adopted in June 2016, following the solicitation of public comment and public testimony. Those rules remain in place as of October 2018, with some modification, such as the adjustment of the CWD movement restriction zones set by TPWD and TAHC.

The detection of CWD continues in Texas, with most cases found in white-tailed breeder deer from one of five deer-breeding facilities, and the most recent cases confirmed in December 2018, as of January 2019. The total for calendar

years 2012 to 2018 is 139 out of approximately 131,000 tests conducted beginning in fiscal year 2003. **Figure 8** shows the number of positive CWD cases in Texas from calendar years 2012 to 2018.

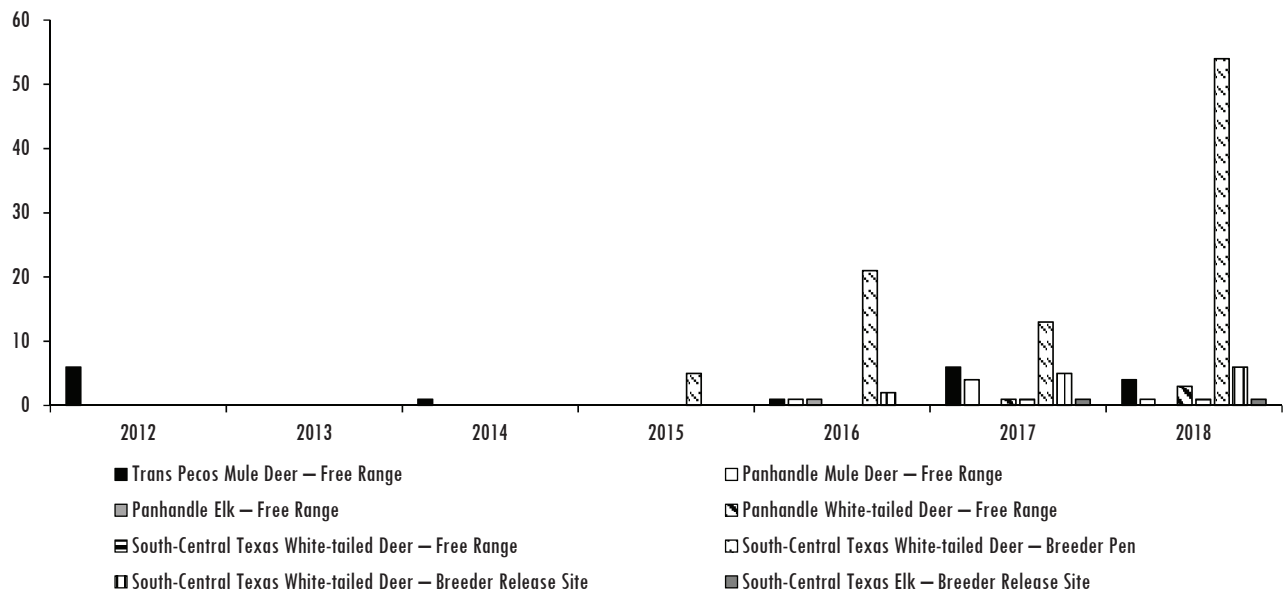
In comparison, Wisconsin, which has had a widely studied CWD outbreak since 2002, has recorded more than 4,200 positive CWD cases in free-ranging and captive deer from more than 210,000 tested samples. Wisconsin’s population of white-tailed deer was estimated at approximately 1.4 million in 2017.

To test white-tailed and mule deer in Texas, TPWD pays for the costs of general CWD surveillance, and the holders of TPWD deer-related permits and the owners of deer-release sites pay for testing related to permitted activities. To test nonnative cervids, landowners pay for the testing of the first three cervids harvested on their properties to comply with TAHC’s CWD surveillance requirements. Testing costs vary depending on the type of sample and how samples are collected, but costs are a minimum \$25 for a single tissue test for both TPWD and private individuals. Testing levels are based on herd-level statistical sampling where the number of samples can decrease for bigger herds without sacrificing statistical confidence in detecting the disease.

DEER-BREEDING INDUSTRY RESPONSE TO REGULATION

Representatives of the deer-breeding industry have been vocal critics of the state’s regulatory response to CWD. The rules adopted following the discovery of CWD in captive white-tailed deer require deer-breeding facilities to meet certain testing standards for deer to be moved under TPWD transfer permits. In addition to resulting in an administrative burden to meet those standards, the rules limit the ability of some facilities to transfer deer for sale or purchase. This limitation has led some deer breeders to claim that they are being singled out unfairly by regulators. TPWD’s response

FIGURE 8
POSITIVE CHRONIC WASTING DISEASE CASES IN TEXAS
CALENDAR YEARS 2012 TO 2018



SOURCE: Texas Parks and Wildlife Department.

centers on the agency’s determination that more than 75.0 percent of the deer breeders in Texas were linked by no more than three degrees of separation to the facility in Medina County where the first CWD-positive white-tailed deer was discovered. This scale of interconnectedness, coupled with the risk of inadvertently moving CWD to new areas of the state posed by the artificial movement of deer (e.g., in a trailer as part of a transfer between deer breeders), informed TPWD’s imposition of restrictions on movement. However, the privilege of movement enables deer breeders to set a market outside of paid access to deer on a breeder’s own property.

A second element of criticism involves the perception that regulators are acting on a stigma against breeder deer. Some critics outside the deer-breeding industry argue that breeder deer are unnatural, more prone to diseases such as CWD due to the circumstances of their captivity, and more likely to spread disease as part of the industry. Respondents to that criticism have attributed this perception to jealousy of the trophies that deer breeders are able to raise or fear of the industry’s encroachment on hunting operations that tout the quality of free-ranging deer. This notion of a stigma also is related to the issue of deer tagging or identification. The Texas Parks and Wildlife Code requires breeder deer to be identified by a visible identification tag while held in a

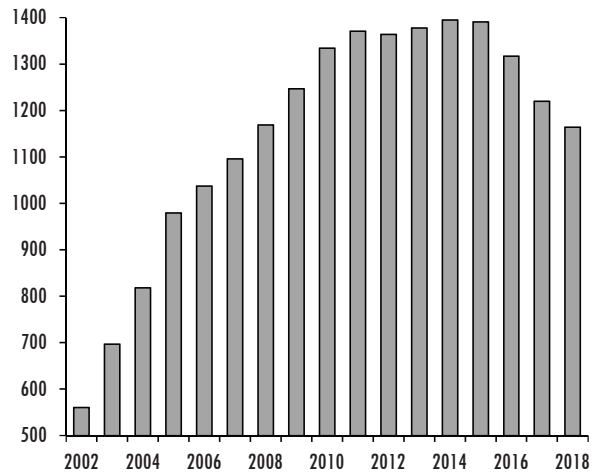
permitted deer-breeding facility. Recent efforts to expand the means of identification to include scannable subcutaneous microchips, which are nonvisible and supported by some deer breeders, have been resisted by some ranchers and hunters who state that visible identification is necessary to track and contain potentially diseased breeder deer that could threaten free-ranging deer’s health.

Another aspect of criticism centers on the issue of private ownership. Some deer breeders state that captive deer are privately owned and, therefore, outside of TPWD’s regulatory jurisdiction. TPWD holds that deer breeders possess deer in bailment, or without the rights of ownership, because state law deems that all wild animals inside state borders are the property of the people of the state. According to TPWD, breeder deer are never sold in the legal sense; a deer breeder receives monetary compensation for transferring the permitted privilege of possession of a breeder deer to another permitted deer breeder or for agreeing to release a breeder deer on a landowner’s property.

As shown in **Figure 9**, the number of permitted deer breeders in Texas decreased during permit years 2016 and 2017, and TPWD projects that trend will continue for permit year 2018. (A permit year begins July 1 and ends June 30 of the following calendar year.) Certain TPWD

testing requirements for compliant deer-release sites will expire March 1, 2019, because the testing regimen within that period will have produced statistical confidence that enables the expiration. Legislative Budget Board staff found no indications that the collaboration between TAHC and TPWD results in duplication of effort, nor that either agency exceeds its scope of authority or fails to engage stakeholders adequately in response to CWD.

FIGURE 9
TEXAS PARKS AND WILDLIFE DEPARTMENT DEER BREEDER PERMITS ISSUED, PERMIT YEARS 2002 TO 2018



NOTE: Amount for permit year 2018 is projected.
SOURCE: Texas Parks and Wildlife Department.

IMPROVE STATE AND PUBLIC GROUNDWATER QUALITY INFORMATION

Surface water is the property of the state, but groundwater is considered private property and belongs to the landowner above it. Owners residing above the same aquifer can influence the quantity and quality of each other's supply. Private or domestic wells can be used for various purposes, such as irrigation, drinking water and industrial uses. Groundwater information regarding quality is less robust than it is for surface water or public drinking water systems. For example, of the approximately 140,000 wells in the Texas Water Development Board groundwater database, the agency has information related to whether the well meets drinking water standards for approximately 8.0 percent of those wells. The Texas Water Development Board estimates that approximately 1.5 million water wells have been drilled in Texas since 1900.

Information that the state collects shows that harmful contaminants such as arsenic, radionuclides, and nitrates have been detected throughout the state. In its report to the Eighty-fifth Legislature, Regular Session, 2017, the interagency Texas Groundwater Protection Committee identified 3,426 groundwater contamination cases during calendar year 2017. According to academic studies and evaluations conducted by the Texas A&M AgriLife Extension Service, the majority of landowners with private wells do not test the quality of their water. Private well owners are not required to test for water quality; therefore, they run the highest risk of being exposed to contaminants. Owners also may expose others that consume water from the same aquifer segment to contaminants, such as through an abandoned well. Readily accessible information to the public regarding an area's contaminant risks is not available.

FACTS AND FINDINGS

- ◆ Although the number of water disease outbreaks has decreased nationwide since the 1980s, the proportion of outbreaks originating from groundwater sources has increased.
- ◆ Private water wells are not required to be tested for water quality. However, during the sale of the property, the source of the water supply and condition of the well are required to be disclosed.

- ◆ Statute requires the Texas Commission on Environmental Quality to mail copies of certificates of Municipal Setting Designations, which informs those within a municipal territory that groundwater is not potable, to nearby well owners as part of notification requirements of nonpotable groundwater sources.

CONCERNS

- ◆ Statute requires landowners to be notified by mail in case of groundwater contamination within 30 days. However, according to Texas Commission on Environmental Quality staff, no comprehensive list of well owners in the state has been compiled, which complicates timely notification.
- ◆ According to Texas Commission on Environmental Quality staff, the requirement to mail notices of Municipal Setting Designation certificates is a redundant and unnecessary activity.
- ◆ According to survey information, from 65.0 percent to 80.0 percent of well owners have never had their groundwater tested for contaminants. Guidance regarding potential contaminants and testing facilities is not readily available.
- ◆ The state collects water quality data related to approximately 8.0 percent of all water wells reported into the Texas Water Development Board groundwater database. Additional opportunities to collect information voluntarily from those well owners that perform drinking water tests is available but is not pursued because no system is in place to receive and integrate these results with other state water data sets.
- ◆ Texas Department of Licensing and Regulation staff estimates approximately 150,000 water wells in the state are abandoned or unplugged. According to the Texas Groundwater Protection Committee, these wells represent a significant threat to groundwater quality because contaminated runoff can enter an aquifer directly via the well.

OPTIONS

- ◆ **Option 1:** Amend statute to authorize the Texas Commission on Environmental Quality to notify private well owners of potential contamination through email, doorknob hanger or other delivery methods.
- ◆ **Option 2:** Amend statute to authorize the Texas Commission on Environmental Quality to notify applicable entities of a Municipal Setting Designation certificate via a website, in lieu of mailing copies of the certificate.
- ◆ **Option 3:** Include a rider in the 2020–21 General Appropriations Bill requiring the Texas Water Development Board, with the assistance of members of the Texas Groundwater Protection Committee, to modify existing databases and provide additional, consolidated, location-specific information to the public, including groundwater quality, contamination events, and nearby certified testing facilities.
- ◆ **Option 4:** Amend statute to require the Texas Commission on Environmental Quality to establish a process with accredited laboratories to receive water quality testing data. An opt-out provision would be provided to those not wishing to share that information with the state.
- ◆ **Option 5:** Amend statute to increase information reported to buyers and to the state about abandoned wells during the real estate disclosure process and require that the Texas Department of Licensing and Regulation is notified if an abandoned well is identified.
- ◆ **Option 6:** Amend statute to establish a statewide abandoned water well-plugging program administered by Groundwater Conservation Districts and the Texas Department of Licensing and Regulation, funded through one of the following mechanisms:
 - establish a fee on new water well construction; or
 - appropriate an existing state revenue source, such as General Revenue Funds, or by expanding the allowable use of the General Revenue–Dedicated Account No. 655, Petroleum Storage Tank Remediation.

DISCUSSION

Two primary sources of water provide consumable use: groundwater and surface water. Surface water is found in ponds, lakes, rivers, streams, and bays. Groundwater filters down from the earth's surface and accumulates underground in aquifers. More than half of the water used in Texas, including domestic, agricultural, and industrial uses, is supplied by aquifers for various purposes.

In Texas, surface water is owned publicly and governed by the state. Before using surface water, a permit must be obtained from the Texas Commission on Environmental Quality (TCEQ). A permit may be granted only if the applicant makes beneficial use of water; if water is available and its use does not impair vested water rights; if the applicant practices water conservation; and if the use of water is not detrimental to public welfare.

In Texas, groundwater is considered property of the landowner. A landowner has the right to capture the water beneath the property and to sell, lease, and move the water pumped from that property to another location. This rule, referred to as the rule of capture, was adopted by the Supreme Court of Texas in 1904. Groundwater use or actions that affect the quality of that water can affect that supply and the quality of water available to neighboring property owners that use that same portion of an aquifer.

Groundwater conservation districts (GCD) are local governmental organizations in Texas that are responsible for groundwater management. GCDs manage groundwater by adopting rules in accordance with the provisions of the Texas Water Code and their enabling legislation. Texas Water Code, Chapter 36, authorizes GCDs to regulate groundwater production through permitting of applicable water wells, well-spacing requirements, and other rules deemed necessary to conserve, preserve, protect, recharge, and prevent waste of groundwater, and to control subsidence, which is the gradual caving in or sinking of land. As of August 2018, Texas had 100 GCDs with two more pending confirmation, serving more than two-thirds of the state's land area.

The federal Safe Drinking Water Act (SDWA) protects public drinking water supplies throughout the U.S. Pursuant to the SDWA, the U.S. Environmental Protection Agency (EPA) sets standards for drinking water quality. The EPA, state governments, tribes, water systems, and water system operators collaborate to provide safe drinking water. EPA, delegated states, and tribes regulate public drinking water systems that provide drinking water to 90.0 percent of the

U.S. population. A public water system provides water for human consumption through pipes or other constructed conveyances. According to TCEQ data from June 2017, 79.2 percent of water used by public water systems was derived from groundwater sources. Additionally, 78.0 percent of the water for agricultural use comes from groundwater. EPA does not regulate private wells nor does it provide recommended criteria or standards for individual wells.

The Seventy-first Legislature, Regular Session, 1989, established the policy of nondegradation of the state's groundwater resources as the goal for all state programs. The state's groundwater protection policy recognizes the following factors:

- variability of the state's aquifers in their potential for beneficial use and susceptibility to contamination;
- value of protecting and maintaining present and potentially usable groundwater supplies;
- need to keep present and potential groundwater supplies reasonably free of contaminants for the protection of the environment and public health and welfare; and
- importance of existing and potential uses of groundwater supplies to the economic health of the state.

The state's groundwater protection policy requires that the discharge of pollutants, disposal of waste, and other regulated activities are conducted in a manner that will maintain current uses and not impair potential uses of groundwater or pose a public health hazard. The Seventy-first Legislature, Regular Session, 1989, established the Texas Groundwater Protection Committee as an interagency committee to coordinate state actions for the protection of groundwater quality. The committee is administered through TCEQ and is composed of the following state agencies and the nonprofit Texas Alliance of Groundwater Districts:

- TCEQ;
- Texas Water Development Board (TWDB);
- Railroad Commission of Texas;
- Department of State Health Services (DSHS);
- Texas Department of Agriculture (TDA);

- Texas State Soil and Water Conservation Board (TSSWCB);
- Texas A&M AgriLife Research;
- University of Texas Bureau of Economic Geology; and
- Texas Department of Licensing and Regulation (TDLR).

GROUNDWATER CONTAMINANTS

According to Texas A&M AgriLife Research staff, the lack of requirements for owners of private water wells to perform routine water quality testing increases the risk of exposure to compromised water quality. Public drinking water systems are required by federal and state law to perform extensive testing for many potential contaminants. The public water systems often have systems in place to address contamination issues if they arise. According to a 2010 study published by the American Society for Microbiology, cases of drinking water disease outbreaks have decreased for public water supply systems nationwide since the 1980s. However, the proportion of remaining outbreaks coming from groundwater, particularly those affecting private wells, has increased. The federal Centers for Disease Control and Prevention (CDC) cites a variety of potential sources of contamination of groundwater, including the following most common sources:

- naturally occurring chemicals and minerals, such as arsenic, radon, and uranium;
- local land use practices, such as fertilizers, pesticides, livestock, animal feeding operations, and biosolids application;
- manufacturing processes;
- sewer overflows; and
- malfunctioning wastewater treatment systems (e.g., nearby septic systems).

Unlike surface water, groundwater typically is not classified as contaminated or impaired. Total dissolved solids (TDS) are a measure, typically expressed in milligrams per liter (mg/l), of the salinity and minerals dissolved in water. Groundwater can be classified according to its potential use, by salinity levels, in the following measurements:

- 1–1,000 mg/l TDS content is considered fresh water, suitable for human consumption and all other uses;

- greater than 1,000–3,000 mg/l TDS is considered slightly saline, suitable for livestock, irrigation, industrial use, mineral extraction, oil and gas production, and human consumption if fresh water is unavailable;
- greater than 3,000–10,000 mg/l TDS is considered moderately saline, suitable for industrial use, mineral extraction, and oil and gas production. If fresh and slightly saline water are unavailable, moderately saline water may be used for livestock and for human consumption after relatively economical treatment; and
- greater than 10,000 mg/l TDS is considered very saline to brine, suitable only for mineral extraction and for oil and gas production without extensive treatment.

According to TWDB's 2011 *Aquifers of Texas* study, the majority of groundwater used for drinking in Texas meets TDS and EPA maximum acceptable levels for specific contaminants. However, in some parts of the state, naturally occurring levels of certain substances and human-caused contamination prevent the water from meeting those standards. At certain levels, some minerals, such as nitrate, fluoride, arsenic, and other heavy metals, may render fresh and slightly saline water unsuitable for human consumption. High levels of arsenic in drinking water can cause cancer and other health problems. TWDB's 2011 report indicates that wells with arsenic levels that exceed federal standards can be found throughout the state, but they are most concentrated in western and southeastern Texas. Radionuclide also can cause cancer and has been identified in concentrations exceeding federal levels in wells throughout the state, particularly in central and western Texas. Nitrates in drinking water can cause blue baby syndrome in infants and are found in high concentrations in wells in central and western Texas and the Panhandle region. Bacteria also may render fresh and slightly saline water unsuitable for human consumption without disinfection.

According to the Water Quality Association, a national water treatment industry group, during and after heavy rains, water can become contaminated with microorganisms such as bacteria, sewage, heating oil, agricultural or industrial waste, chemicals, and other substances that can cause serious illness. Hurricane Harvey inflicted heavy rainfall and damage, predominately on the Texas Gulf Coast, in August 2017. Hurricane Harvey is tied with 2005's Hurricane Katrina as

the costliest tropical cyclone on record, causing \$125.0 billion in related damages, primarily from flooding in the Houston metropolitan area. After Hurricane Harvey, nearly 60.0 percent of water samples from 50 private wells in Harris County tested positive for bacteria found in feces, including total coliform and escherichia coli. Federal and state law do not require the monitoring or regulation of the water quality of private wells, even after flooding events. According to staff at the Texas Water Resources Institute (TWRI), a unit of Texas A&M AgriLife Research, the lack of state oversight and monitoring of groundwater quality is a concern for planning and management of this resource, particularly as it relates to flooding events and their potential effects on groundwater resources via inundated water wells. TCEQ, through the Texas Groundwater Protection Committee (TGPC), coordinated with TWRI and the Texas Well Owners Network program, offered by the Texas A&M AgriLife Extension Service, to assist private water well owners who requested assistance after Hurricane Harvey. The agencies posted guidance and resources on their websites regarding how to determine whether water was safe to drink, including how to sample and disinfect a private well.

EMERGING CONTAMINANTS

In addition to contaminants for which state agencies test, other substances may also affect groundwater quality. Any biological or chemical substance (e.g., pharmaceuticals, personal care products, and new chemical formulations) that is not currently monitored or regulated but could enter the environment and is known or suspected to cause adverse ecological or human health effects is considered an emerging contaminant. According to TCEQ staff, the agency has not established standards for emerging contaminants such as perfluoroalkyl and polyfluoroalkyl substances. These substances are referred to more commonly as PFAS but can include other chemicals. PFAS can be found in common consumer products, such as cookware and stain repellents, and they have been found in contaminated water. Studies on the effects of these chemicals on animals and humans has shown that increased or prolonged exposure can affect the immune system and cause increased cholesterol levels and cancer. TCEQ staff stated that if new federal regulations address this topic, the agency would review and determine whether to adopt equally stringent state standards. In the context of site-specific environmental remediation projects, however, TCEQ has established soil and groundwater cleanup standards for 16 PFAS in its Texas Risk Reduction Program (TRRP). These types of projects are isolated to

releases made from specific sources, including petroleum storage tanks, industrial solid waste facilities, and municipal hazardous waste facilities. As such, entities that produced or used PFAS and contaminated soil or groundwater may be required to mitigate those sources if they are subject to TRRP.

According to TWRI staff, emerging contaminants, particularly PFAS, are a significant concern for water quality in the state. Studies indicate that exposure to PFAS of greater than the advised EPA levels may result in adverse health effects. These include developmental effects to fetuses during pregnancy or to breastfed infants; cancer; and effects to the liver, immune system, or thyroid. Limited information is available nationwide, including in Texas, and federal guidance on how to address PFAS if detected also is limited. PFAS could be addressed in accordance with the federal Comprehensive Environmental Response, Compensation, and Liability Act, commonly known as the Superfund. According to EPA, site-specific conditions inform how to determine cleanup levels, and, as of September 2018, the federal agency is developing groundwater cleanup recommendations for PFAS at Superfund sites. Several states, including Michigan, New Jersey, and Vermont, have taken steps to categorize and provide maximum contaminant level thresholds for PFAS. TGPC recommends that the state improves the detection, quantification, and research on the environmental and human health effects of emerging contaminants in groundwater.

TRACKING WATERBORNE ILLNESS

No comprehensive studies exist regarding the percentage of private wells in Texas that have water quality contaminants. Survey studies performed in Pennsylvania, Wisconsin, and Virginia, indicate that 40.0 percent to 58.0 percent of private wells in those states exceed at least one federal Safe Drinking Water Act health-based standard, most commonly for bacterial contamination. TWDB considers bacteria, nitrates, and nitrites as significant health threats from untreated groundwater. These contaminants can cause gastro-enteric illness and represent immediate risks to young children and pregnant mothers. In North Carolina, 99.0 percent of statewide emergency-department hospital visits for acute gastrointestinal illness associated with exposure to waterborne microbial contaminants were attributable to private-well contamination.

Texas has no systematic way to track whether illnesses are caused by private-well contamination and notify others at risk from the same source. According to staff at DSHS and

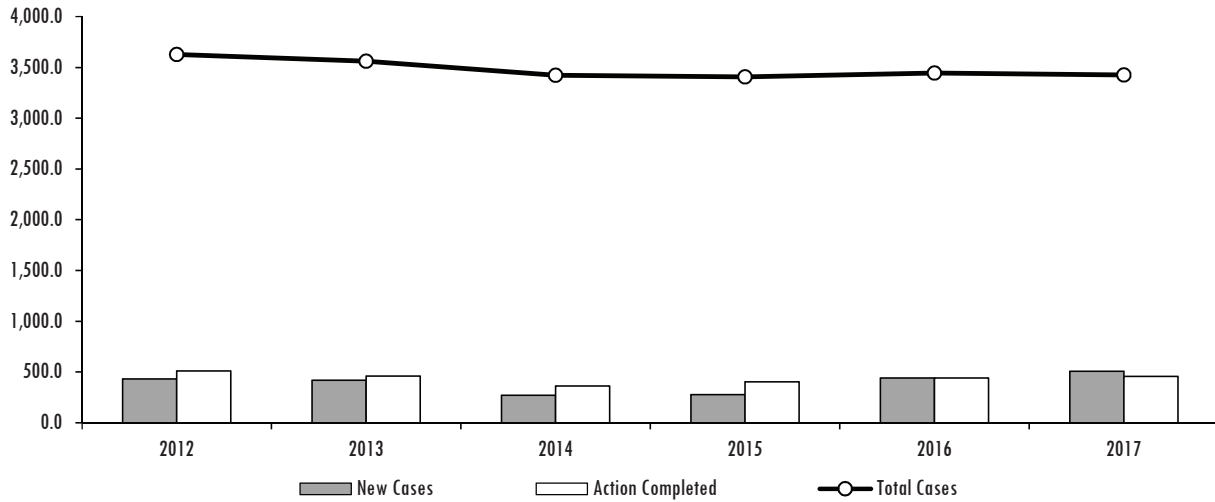
TCEQ, neither agency actively tracks the number or source of waterborne illness in the state, or links illnesses with possibly contaminated water supplies. DSHS staff, referencing the federal National Outbreak Reporting System, traced the primary mode of transmission in 18 outbreaks to water from calendar years 2013 to 2017. One-third of these outbreaks were due to legionellosis, which can cause pneumonia and resulted in 250 deaths nationwide in 2017. According to Texas A&M AgriLife Research staff, waterborne illnesses are difficult to track and often are attributed to other causes, such as food poisoning. The DSHS Infectious Disease Control Unit has reporting requirements for infectious diseases, which include waterborne illnesses, and promotes awareness of waterborne illnesses as they arise. According to the CDC, a waterborne disease outbreak is defined as two or more cases that can be linked by time, illnesses, or condition, and to which water could have been a contributing factor. According to TCEQ staff, the agency notifies DSHS in the event that a potential waterborne illness is reported to TCEQ. Additional data would improve the state's ability to determine potential links between illnesses and water sources.

GROUNDWATER CONTAMINATION DATA

According to TGPC's Joint Groundwater Monitoring and Contamination Report, 3,426 groundwater contamination cases were reported during calendar year 2017. Approximately 83.5 percent (2,860) of the documented cases were within TCEQ's jurisdiction. The most common contaminants reported included gasoline, diesel, and other petroleum products. More than half (54.3 percent) of TCEQ's documented contamination cases were reported by the Petroleum Storage Tank Remediation (PSTR) Program. PSTR was established in 1989 to receive fees and funds for corrective and enforcement actions concerning underground and aboveground petroleum storage tanks, including the cleanup of leaks from storage tanks. Other contamination sources include dry-cleaning facilities, landfills, industrial sites, and refineries. The remainder of the cases are within the jurisdictions of the Railroad Commission of Texas (RRC) (565 cases, or approximately 16.5 percent) and GCDs (one case, or less than 0.1 percent).

As shown in **Figure 1**, the number of new and existing groundwater cases and actions completed to address contamination have remained relatively constant in recent years. Total cases represents the sum of new cases, actions completed, and ongoing investigations, and other steps in the monitoring and correction of groundwater contamination events. Addressing groundwater contamination can take a

FIGURE 1
TEXAS GROUNDWATER CONTAMINATION EVENT CASE HISTORY, CALENDAR YEARS 2012 TO 2017



SOURCE: Texas Groundwater Protection Committee.

significant amount of time from conducting investigations to cleanup and remediation. According to TGPC staff, the average age of petroleum storage tank cases in the 2017 report is 12.6 years, representing a straightforward cleanup process in relatively shallow groundwater, using proven technology on well-characterized contaminants. The average age of corrective action cases is 17.3 years, representing contaminants that are more difficult to clean up, typically in deeper groundwater zones. The average age of Superfund cases is 21.9 years, representing the most difficult contaminants to clean up, typically in more complex geologic settings and often in deeper groundwater.

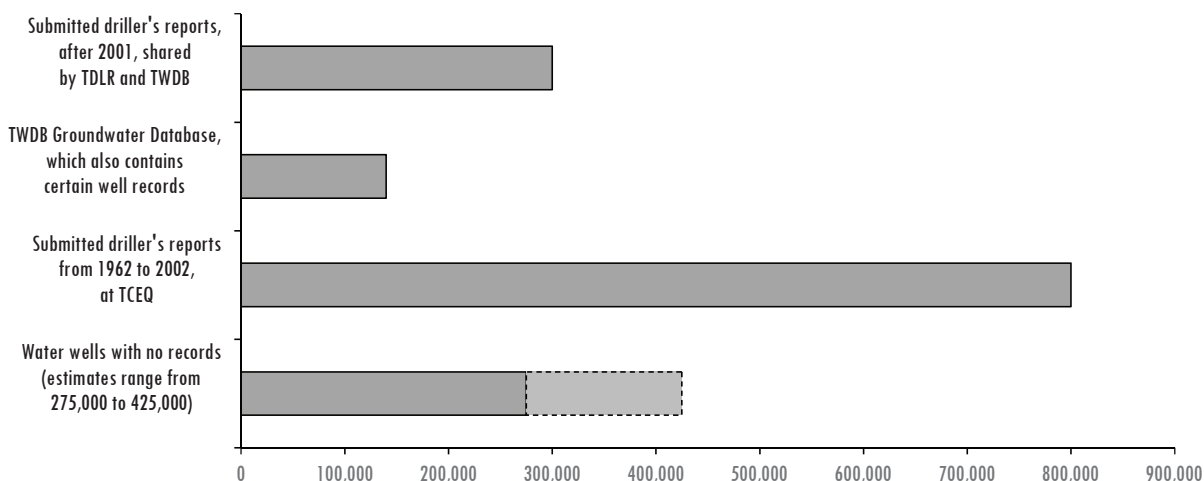
GROUNDWATER QUALITY AND WELL DATA COLLECTION PRACTICES

Information about the actual number of wells in Texas and the quality of well water is incomplete. Multiple state agencies collect and track water from the state’s wells. According to TWDB staff, approximately 1.5 million water wells have been drilled throughout Texas since 1900, although data describing the quality of those wells is incomplete. TWDB performance measure data shows that, for fiscal year 2018, the agency received approximately 65.2 percent of the information needed to monitor the state’s water supplies. This performance measure includes information from seven TWDB program areas. One of these program areas, groundwater Quality Samples, received 44.5 percent of the information necessary to categorize groundwater quality throughout the state. Percentages are

derived from information meeting certain quality standards supplied by TWDB and its partners, such as the U.S. Geological Survey. TWDB staff determines the amount of data necessary to monitor various aspects of the state’s water supply. The measurement of groundwater quality, as conducted by TWDB, measures naturally occurring constituents and not human-caused contaminants within an aquifer. According to TWDB staff, monitoring for other organic or bacterial constituents or in response to specific, local concerns, may call for more targeted or frequent monitoring.

TDLR performs licensing and testing of water well drillers (WWD) and pump installers. A WWD drills, bores, cores, or constructs a water well. It includes an owner, an operator, a contractor, and a drilling supervisor. A pump installer installs or repairs well pumps and equipment. Since the early 1960s, licensed WWDs have been required to file well reports indicating intended water use, well location, and basic well construction information at the time boreholes are drilled. This information previously was stored in TCEQ’s Water Well Report Viewer, which contains older well reports with only construction information related to the well. No additional data is added to this database, and staff state that wells listed are located within an approximately 7.0-square-mile defined grid. Information is stored in the Submitted Drillers Report Database, which began in 2001 and is populated from the online Texas Well Report Submission

FIGURE 2
WATER WELLS IN TEXAS BY DATA SOURCE, FISCAL YEAR 2018



NOTES:

- (1) TDLR=Texas Department of Licensing and Regulation; TWDB=Texas Water Development Board; TCEQ=Texas Commission on Environmental Quality.
- (2) Well numbers are estimates and may contain overlap in data submitted and recorded by state agencies or other entities, such as U.S. Geological Survey.

SOURCE: Texas Water Development Board.

and Retrieval System, which is a cooperative TDLR and TWDB application.

According to TWDB staff, water quality data can be provided in water well reports; however, if any is provided, it is limited to a broad qualitative description (e.g., salty) rather than measured results. If an individual drills a water well on privately owned property for personal use, that driller is not required to be licensed. However, the well must be constructed in compliance with the construction standards prescribed in law. **Figure 2** shows the estimated number of water wells in the state and the source of information about those wells.

During the last century, TWDB has received access from TDLR and TCEQ to some water-quality data from approximately 57,000 of the 140,000 wells in its groundwater database, and information related to springs and oil and gas tests. Approximately 11,400 of these wells, or 20.0 percent, provide groundwater for public drinking water systems regulated by the TCEQ. These wells are required to conduct water quality testing and report the results to TCEQ to demonstrate compliance with applicable drinking water standards. This data is the most accurate source of groundwater quality analysis, representing 0.8 percent of the estimated 1.5 million wells in Texas. Neither the TWDB nor TCEQ databases contain verified geolocation information,

nor do they necessarily contain accurate or complete owner address data. TDLR typically collects samples for water quality analysis by request when a complaint about poor water quality is reported or if the agency has reason to consider that the well has deteriorated.

NOTIFICATION OF GROUNDWATER CONTAMINATION

The Texas Water Code, Section 26.408, requires state agencies that are aware of groundwater contamination that may affect a drinking water well to notify TCEQ, which is required to notify nearby well owners and any related GCD that may be affected. This notification is required to be sent through first class mail within 30 days of TCEQ being informed of the contamination. According to TGPC data for calendar year 2017, TCEQ used 27 days, on average, before notifying well owners that groundwater was contaminated.

According to TGPC staff, in instances in which TCEQ is required to provide a notice of groundwater contamination, the TDLR water well driller database is not sufficient to provide accurate or complete mailing addresses. TCEQ staff must conduct research to find mailing addresses for well owners, which can be time-consuming. Option 1 would amend the Texas Water Code, Chapter 26, to remove the requirement that notification of potential contamination must be sent to well owners via postal mail. Other direct

means such as email, a doorknob hanger, or other delivery methods may be more effective and expeditious ways of notifying private water well owners. TDLR does not capture email addresses on well reports. The executive director of TDLR prescribes the content of the forms and, as part of Option 1, would be required to collecting additional contact information, to ease future communication efforts, such as an email address.

NOTIFICATION OF MUNICIPAL SETTING DESIGNATIONS

The Seventy-eighth Legislature, Regular Session, 2003, established a Municipal Setting Designation (MSD), which provides a less expensive and faster alternative to existing environmental regulations governing the investigation and cleanup of contaminated groundwater. A property owner, including a local government, may submit a request to TCEQ to establish an MSD for a property within the requestor's jurisdiction. This designation certifies that groundwater at the property is prohibited from potable use because it is contaminated in excess of the applicable potable-water standards. The prohibition must be in the form of a city ordinance or a restrictive covenant that is enforceable by the city and filed in the property records. By offering this alternative to address the problem of contaminated groundwater that will not be used as potable water, entities may be more inclined to develop and redevelop properties in municipal areas that have contaminated groundwater.

The Texas Health and Safety Code, Section 361.805, requires MSD applicants to submit notice information to any affected municipality, private water well owner and retail public utility within 5.0 miles of the proposed location. Notification must include information specified in the statute, including that the notified party has up to 60 days after receiving the notice to file comments with TCEQ. The applicant must submit copies of the notice letters, including signed delivery receipts to TCEQ. During calendar year 2017, 32 MSDs were certified for a total of 353 MSDs certified since 2003.

The Texas Health and Safety Code, Chapter 361, requires TCEQ to provide certain private well owners, regardless of whether they submitted comments on the MSD application, with copies of the issued MSD certificate. Information about the MSD is provided to affected parties via mail upon application and again upon issuance, which, according to TCEQ staff, is a redundant and unnecessary activity. Option 2 would amend statute to authorize TCEQ to notify affected landowners that the MSD certificate will be published via the TCEQ website. This notification would be part of the

initial notification made by an applicant to well owners. According to TCEQ, this notification method would result in administrative savings of approximately \$10,000 annually and more efficient communication with certain private well owners. Landowners would continue to have the opportunity to weigh in on the proposed designation and would be informed about how and approximately when to access a certificate online when it is issued. TCEQ still would be required to notify private well owners when a decision regarding an MSD application has been made if the owners commented on the application and provided TCEQ with email addresses for notification.

PUBLIC AWARENESS OF WATER QUALITY

A 2018 study published in the *Journal of Water and Health* assessed public attitudes and perceptions regarding drinking water in Texas. The study found that more than 65.0 percent of Texans receiving their primary drinking water from private supplies, usually their private wells, have never had their water supplies tested. Similarly, the Texas Well Owner Network, an organization administered within the Texas A&M AgriLife Extension Service, routinely asks participants how often they test their wells. Approximately 80.0 percent of respondents state that they have never tested their wells or tested them only once when the wells first were constructed. Most health-related contaminants cannot be seen, tasted, or smelled. As previously described, a significant information deficit exists regarding the quality of groundwater in the state. Information available from sources such as the TWDB 2011 *Aquifers of Texas* study suggests that areas throughout the state have groundwater that is unsuitable for human consumption, unless additional filtration and treatment are applied. Human activity that affects groundwater quality negatively also can affect the water quality for others that consume from the same portion of that aquifer.

PUBLIC ACCESSIBILITY TO WATER QUALITY INFORMATION

Current methods for the public to query water quality data related to groundwater supplies and any reports of contamination are fragmented. Water well and groundwater data are located in several separate online viewers that TWDB and TCEQ manage. Additionally, agencies have no centralized, reporting and tracking system for groundwater contamination data. Case information regarding groundwater contamination is not available in real time because it is compiled annually for TGPC's annual report.

Wisconsin and Rhode Island are examples of states that provide a high level of access to groundwater quality data,

including private well data. The Rhode Island Private Drinking Water Well Information application offers features such as the ability to search for a specific property and to receive a list of recommended tests that should be performed. These features are customized based on location and are updated as new water quality information is provided to the state. According to Rhode Island Department of Health staff, the program was developed at a cost of roughly \$36,000 in calendar year 2013. The well data was geocoded from the collection address on state laboratory reports, and was linked to the water quality results. The wellhead protection and hydrology data were imported from a separate data set. New Hampshire implemented an application, known as Be Well Informed, in 2015 to help private well owners interpret their water quality test results and to identify appropriate water treatment options.

The Texas Natural Resources Information System (TNRIS) is a function within TWDB. Pursuant to the Texas Water Code, Section 16.021, what is now TNRIS was established by the Sixtieth Legislature, Regular Session, 1967, to serve Texas agencies and residents as a centralized clearinghouse for data related to natural resources, census, emergency management, and other socioeconomic information. The division houses data including topics related to air quality, radioactive waste, and surface water quality. However, the division does not report on private water well quality-related data. According to the Eighty-fifth Legislature, General Appropriations Act, 2018–19 Biennium, it is expected that TNRIS will respond to 150,000 requests for information per fiscal year.

Option 3 would include a rider in the 2020–21 General Appropriation Bill to require TNRIS, with the assistance of TGPC member agencies, to provide the public with regularly updated and location-specific information regarding groundwater quality, reports of groundwater contamination, and TCEQ-certified laboratory-testing facilities. This option would require TWDB, TCEQ, TDLR, and other TGPC member entities to examine the databases and public information applications developed for potential consolidation or integration. The publicly accessible electronic interface would enable users to access this information by searching for registered wells or addresses or searching by county or region of the state.

Augmenting existing database functionality also would provide more timely and precise information related to groundwater contamination cases that are brought to the attention of state agencies, which include TCEQ, TDA,

TSSWCB and RRC. This functionality would decrease the amount of time needed to locate landowners to notify them of potential contamination. Option 3 is consistent with a similar recommendation that TGPC made in its report to the Eighty-fifth Legislature, Regular Session, 2017. According to TGPC, risks associated with not tracking groundwater contamination properly can result in delayed response to new occurrences of contamination or to new contaminants found at an existing site; duplication of investigation or cleanup measures by independent agencies; and unnecessary public exposure to contamination through lapses in notification efforts.

The TWDB groundwater database was restructured during fiscal year 2015. The database accepts additional types of information that previously were not supported, including water quality analysis information, for sites that have accurate latitude, longitude, and depth. TWDB also is developing a public water system viewer, which will enable the public to search for a public water provider using a home address, view the service area of the water system, and link to related agency data. The application is scheduled for public release in January 2019. However, according to TWDB staff, the agency does not yet have an application that enables GCDs or individuals to upload their water-quality data directly into the agency's database. Option 3 also would enhance state resources by enabling well owners to register or amend information regarding their wells online.

Costs will be incurred to improve the system functionality described in Options 3 and 4. Costs could be absorbed among the nine state agencies that participate in TGPC. If costs are determined to be significant, a potential source of funding to augment existing resources is the federal Drinking Water State Revolving Fund (DWSRF), administered in Texas by TWDB. The DWSRF was established to provide financial assistance to political subdivisions for purposes authorized by the federal Safe Drinking Water Act. The DWSRF consists of monies derived from federal grants, loan principal and interest payments, and investment earnings. For state budgeting purposes, DWSRF is a method of finance called an Other Fund, held outside the state Treasury, and expenditures made from the fund do not factor into state budget certification activities.

TWDB assesses fees on loan recipients for recovering administrative costs associated with the DWSRF. These fees are placed in a separate account held outside of the program funds. The fees are an assessment of 2.25 percent of the portion of the DWSRF financial assistance that is provided

and are calculated and assessed in full at closing. According to TWDB staff, the agency could use administrative funds or fees for activities that benefit the collection, monitoring, and communication of water quality information. The balance of funds in the fee account as of fiscal year 2018 was \$33.5 million. The purpose of the fund balance is to ensure that sufficient funds are available to support TWDB staff in the administration of outstanding financial DWSRF activities, if federal funding for this program is eliminated, which has not occurred. DWSRF funds also could be used to fund 1.0 full-time-equivalent (FTE) position to manage the TNRI augmented well data system, to respond to public inquiries regarding the application, and to oversee the development of potential enhancements to communicate additional beneficial information.

INCREASE WATER QUALITY TEST DATA SHARING

The state receives approximately 44.5 percent of groundwater quality information that TWDB determines necessary to assess the quality of the aquifers in the state. A small portion of this data includes water quality information related to bacterial and organic compounds that can pose significant health hazards. Increasing the amount of information that the state receives would facilitate accurate communication with the public about potential health hazards. Increased water quality testing information could inform regulatory decision making about waterborne illnesses and emerging contaminants to ensure the health and safety of Texans.

Governmental entities assist in the collection of groundwater quality data that typically is not shared with TCEQ, TWDB, or TDLR for inclusion in relevant databases. These entities periodically offer regional water testing opportunities to the public, free of charge. For example, in August 2018, the Texas Well Owner Network (TWON) offered residents in Bursleson and Milam counties well water testing at no cost. The TWON program is an educational training offered by the Texas A&M AgriLife Extension Service in cooperation with the TSSWCB and other partner agencies and organizations. This event also was sponsored by the Post Oak Savannah Groundwater Conservation District, Texas A&M AgriLife Extension Service, and TWRI. DSHS and TSSWCB also conduct or contract water quality testing. Other entities such as GCDs also may test for water quality; however, GCDs determine their responsibilities related to collecting, analyzing, and monitoring groundwater quality.

The Rhode Island Private Drinking Water Well application contains the results of water quality tests conducted at state-

certified testing facilities. Databases managed by the state of Texas do not contain this information. In Texas, certain testing facilities are accredited by TCEQ through the National Environmental Laboratory Accreditation Program. As of fiscal year 2018, 147 facilities were certified for drinking water, and 184 facilities were certified for nonpotable water sources. Becoming an accredited laboratory is a voluntary activity, but the certification process helps to ensure that analysis and data provided by the laboratory is legitimate and conducted according to established standards. TCEQ requires, as part of its quality assurance process, that testing and compliance samples are analyzed by accredited laboratories.

Aside from work that TCEQ funds directly or for analyses the TCEQ laboratory conducts, laboratories do not provide data directly to TCEQ. To expand the state's ability to receive water quality data from external sources, Option 4 would amend statute to require TCEQ to work with certified laboratories to transmit additional testing results to the state. This collaboration could be structured as an opt-out arrangement when samples are submitted for testing. The collaboration would enable the following actions: (1) enhance TWDB's knowledge related to groundwater quality supplies in the state; (2) provide data that DSHS could use as part of its outbreak surveillance activities to link waterborne illnesses to a specific water source; and (3) inform the public regarding local contamination so that private owners can monitor and test their water supplies. The information also would benefit DSHS to collect information related to birth defects, blood lead levels, and cancer and to link illnesses with possibly contaminated water supplies. Additionally, the increase in data available to the state through Option 3 could assist TCEQ in identifying emerging contaminants that warrant additional regulatory scrutiny.

ABANDONED WATER WELLS

Texas A&M AgriLife Extension defines an abandoned water well as a direct conduit from the surface to the aquifer below. Any contaminants on the surface can flow directly into the groundwater without natural filtration from the soil. If a concentrated chemical enters the aquifer through an abandoned well, the health of anyone who uses water from the aquifer, including other nearby wells, could be at risk. Additionally, abandoned wells represent a potential threat to human and animal life because one could fall down a well. According to TDLR staff, the last analysis the agency conducted in 2001 estimated that Texas has 150,000 abandoned wells. The exact number of abandoned wells

cannot be determined because records were not required before 1965. Considering these factors, TGPC has stated that abandoned wells and unplugged test-holes represent a significant threat to the state's groundwater quality.

State law requires landowners or other entities that possess an abandoned or deteriorated well to have the well remediated in accordance with TDLR's standards and procedures. The following methods address abandoned wells: (1) returning the well to an operable state; (2) capping the well to prevent surface water or contaminants from entering it; or (3) plugging the well from the bottom up to more permanently seal it from the aquifer. Landowners are permitted to do this work themselves or to hire a licensed well contractor, provided the quality of work meets legal requirements. If the well is plugged, a report is required to be sent to TDLR and the local GCD, if applicable. GCDs also share the same responsibility to enforce provisions related to abandoned wells, as established by the Texas Occupations Code, Section 1901.255.

To enforce these requirements, TDLR, TCEQ, and the local GCDs entered into a memorandum of understanding, pursuant to the Texas Occupations Code, Section 1901.256, to locate and address abandoned wells. If TCEQ field staff locate a well while performing field inspections, the staff report the well through the TDLR online reporting system. TDLR works with local GCDs to address the well. If the well is determined to be abandoned or deteriorated, TDLR staff will notify the landowner via mail that they have 180 days from the date of that letter to bring the well into compliance. If these requirements are not met, all information is forwarded to the TDLR Enforcement Division to proceed with action. TDLR has an enforcement plan related to the water well driller and pump installer program that includes penalties for landowners that fail to bring an abandoned well into compliance. For a first violation, a landowner can be assessed penalties from \$500 to \$3,000. For repeat violations, that penalty can be up to \$5,000. The Texas Occupations Code provides the executive director of TDLR the ability to enforce, by injunction, an order against anyone who violates the statute. According to TDLR staff, that remedy has not been utilized within the last five years.

According to TDLR staff, during calendar year 2017, 37 wells were investigated in the enforcement process, of which 25 were reported as new abandoned wells. During this period, 16 wells were plugged, one well was determined not to be abandoned, and two complaints were referred to a local GCD for investigation and possible administrative action.

Eighteen other wells were in various stages of notification, review, or investigation.

IMPROVING DISCLOSURE DURING SALE OF PROPERTY

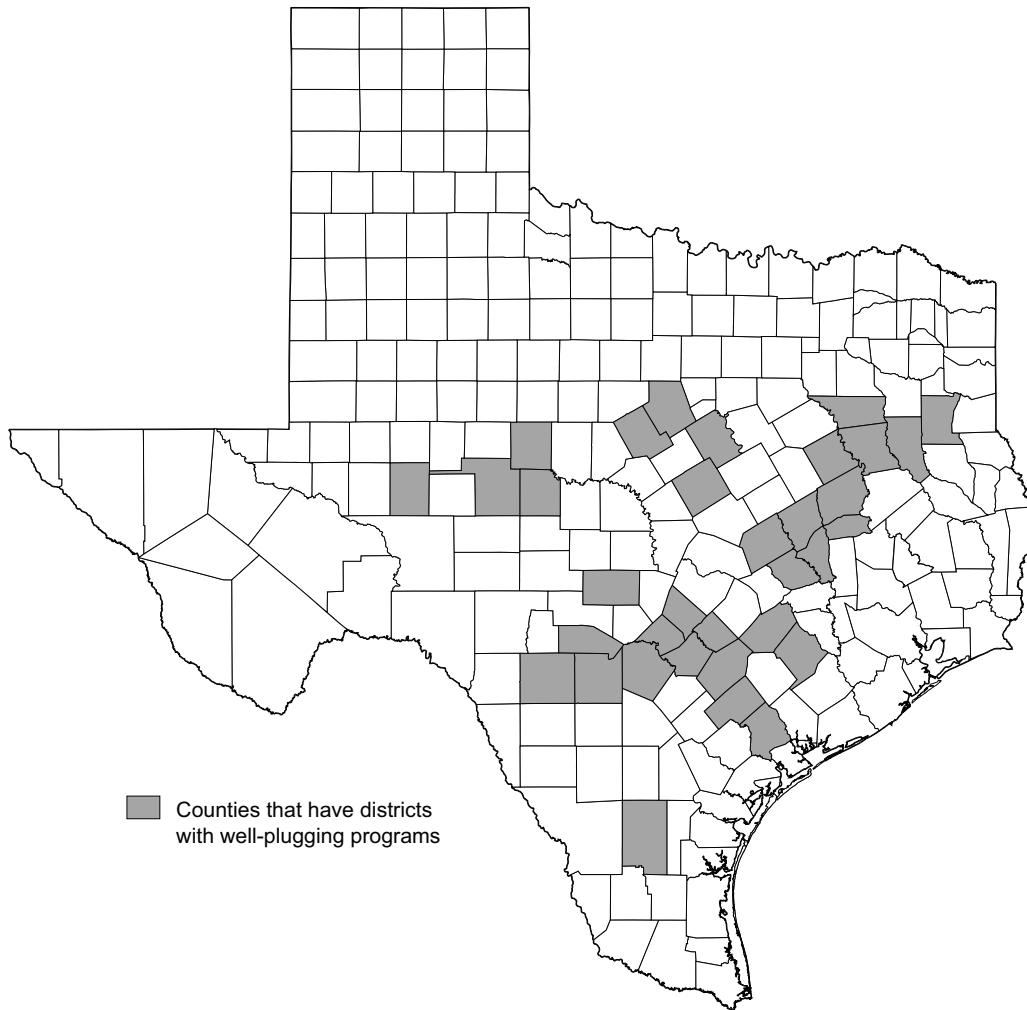
In Texas, real estate sale requirements state that the seller must disclose whether a well is located on the property and what its condition is. However, no water well inspection is required relating to the sale of property. The disclosure of an abandoned well does not compel action to be taken as part of receiving that disclosure. The state also does not receive information that is completed as part of the disclosure process during the sale or transfer of property. The Texas Real Estate Commission prescribes the disclosure forms, but the agency does not receive the completed forms or track the number of sales that include disclosure of a well on the property or its condition. Option 5 would amend the Texas Property Code to require the property transfer disclosure process to include the number of wells that are on the property and their condition. If an abandoned well is found and disclosed, it would be required that the seller convey to the buyer the legal consequences of having an abandoned well before the final sale, and TDLR must be notified immediately of this condition. This notification could be communicated online through TDLR's Abandoned Well Reporting System (AWRS). Any individual that finds an abandoned or deteriorated well can report it through the AWRS.

ESTABLISHING AN ABANDONED WELL PLUGGING FUND

According to an interim report produced by the House Committee on Natural Resources to the Seventy-seventh Legislature, 2001, owners of abandoned wells have little incentive to comply voluntarily with statutory plugging or capping provisions. Some areas of Texas have assistance programs for plugging abandoned wells. According to TGPC information, and as shown in **Figure 3**, at least 17 of 100 GCDs have plugging programs available; however, the scope of these programs varies. For example, eight of the 17 GCDs offer cost sharing or reimbursement, ranging from \$300 to \$3,000. Others indicate that a program exists, or refer to a third-party contractor to handle the plugging. GCDs that have abandoned well-plugging programs do so of their own volition.

According to TGPC, some GCDs make match-funding available to landowners; however, a state funding source to assist landowners with abandoned well-plugging efforts would result in an increase in the number of wells plugged and, thus, decrease the threats to groundwater quality.

FIGURE 3
TEXAS COUNTIES WITH GROUNDWATER CONSERVATION DISTRICTS THAT HAVE WELL-PLUGGING PROGRAMS
FISCAL YEAR 2014



SOURCE: Texas Groundwater Protection Committee.

Option 6 would amend statute to establish a statewide abandoned water well-plugging program. The option would require TDLR to adopt rules regarding the structure and requirements of the program, including any cost sharing requirements, with authority delegated to GCDs to administer within their territory. Abandoned wells where the landowner cannot be located would be prioritized, followed by those with insufficient funds to address the wells independently. In areas of the state where no GCD exists, TDLR would assume responsibility for that area. TDLR, with the assistance of GCDs, would report to the Legislature regarding the status of abandoned water wells in Texas every five years. One method to fund Option 6 would authorize

program costs to be recouped through a new fee that would be added to the cost of new well construction that is performed by a licensed water well driller or pump installer. The Texas Water Code, Chapter 36, provides general authority for GCDs to charge fees and states that revenue from those fees may be used for any lawful purpose. TDLR staff estimate that approximately 15,600 new wells are drilled per year. Assuming additional TDLR administrative costs and that eventually approximately 150 wells would be plugged statewide per year through this program, at a cost of approximately \$2,500 per well, this option could result in an estimated fee on new well construction of approximately \$32.75. As the number of new wells constructed and number

of abandoned wells that TDLR and GCDs are able to address per year are variable, however, these amounts may be subject to change.

Alternatively, Option 6 could also be funded through existing state revenue sources, such as General Revenue Funds. As another alternative, statute could be amended to expand the allowable uses of an existing revenue source to include these activities. For example, the General Revenue–Dedicated Petroleum Storage Tank Remediation (Account No. 655) is used to pay expenses associated with the state’s groundwater petroleum cleanup program. The primary source of revenue for Account No 655 is the petroleum product delivery fee, which is assessed on the delivery of a petroleum product that is removed from a bulk storage facility for distribution or sale within the state. The associated program engages in corrective and enforcement actions concerning petroleum storage tanks, which, according to TGPC, is one of the leading causes of groundwater contamination. As of the beginning of fiscal year 2018, the account had a balance of \$134.3 million. According to TCEQ, approximately \$82.6 million in ongoing projected cleanup and monitoring costs could be related to releases at 366 petroleum-contaminated sites. A portion of the difference of approximately \$51.7 million could be appropriated to incrementally fund the well-plugging program, contingent on amending statute to establish this program funding as an eligible use.

FISCAL IMPACT OF THE OPTIONS

Option 1 would amend statute to modify the method and timeliness of communication by TCEQ with landowners that potentially are affected from groundwater contamination events. No significant fiscal impact is anticipated as a result of the option.

Option 2 would amend statute to authorize TCEQ to notify applicable entities, as part of the Municipal Setting Designation process, regarding the ability to check proposal status and certificates online, in lieu of mailing the certificate. TCEQ staff estimate a savings of \$20,540 in associated administrative costs and staff time for the 2020–21 biennium. TCEQ would be authorized to reallocate any realized savings toward other agency priorities.

Option 3 would include a rider in the 2020–21 General Appropriations Bill to require TWDB, with the assistance of TGPC member agencies, to make information technology (IT) and database improvements. These changes would provide agencies and the public with additional information

**FIGURE 4
FIVE-YEAR FISCAL IMPACT OF OPTIONS 3 AND 4
FISCAL YEARS 2020 TO 2024**

YEAR	PROBABLE SAVINGS/(COST) IN DRINKING WATER STATE REVOLVING FUNDS (OTHER FUNDS)	PROBABLE ADDITION/ (REDUCTION) OF FULL-TIME- EQUIVALENT POSITIONS
2020	(\$500,000)	1.0
2021	(\$500,000)	1.0
2022	(\$63,616)	1.0
2023	(\$63,616)	1.0
2024	(\$63,616)	1.0

SOURCES: Legislative Budget Board; Texas Water Development Board.

regarding groundwater quality, contamination cases, and nearby testing facilities.

Option 4 would amend statute to require TCEQ to establish a process to receive water-quality-testing information from accredited laboratories, providing an opt-out provision for those not wishing to share this data with the state. IT systems would be augmented to enable easier submission to the state of water quality data from the public and governmental entities. According to TWDB, additional resources would be required to accomplish these provisions. It is estimated that the onetime costs to the TWDB-administered Drinking Water State Revolving Fund for Options 3 and 4 would be less than \$1.0 million for the 2020–21 biennium and would require an additional and ongoing 1.0 FTE position to administer and communicate with stakeholders regarding system operations, as shown in **Figure 4**.

Option 5 would enhance real estate disclosure requirements related to abandoned wells and increase TDLR notification of the existence of abandoned wells during the sale of property. It is assumed this can be absorbed within existing resources, and no significant fiscal impact is anticipated.

Option 6 would establish a statewide abandoned water well-plugging program and fund, held outside of the General Revenue Fund but retained within the state Treasury. This program would be administered by GCDs within their territories and by TDLR in areas of the state that are not served by a GCD. It is assumed that TDLR would require an additional 2.0 FTE positions for a Hydrologist II and an Administrative Assistant III for a cost of approximately \$135,987.0 per fiscal year. It is assumed that the agency would contract the plugging of abandoned wells to licensed water

**FIGURE 5
FIVE-YEAR FISCAL IMPACT OF OPTION 6, ESTABLISHING A FEE ON NEW WATER WELL CONSTRUCTION
FISCAL YEARS 2020 TO 2024**

YEAR	PROBABLE SAVINGS/(COST) FROM NEW WATER WELL-PLUGGING FUNDS	PROBABLE REVENUE GAIN/(LOSS) FROM NEW WATER WELL-PLUGGING FUNDS	PROBABLE ADDITION/(REDUCTION) OF FULL-TIME-EQUIVALENT POSITIONS
2020	(\$280,907)	\$280,907	2.0
2021	(\$260,987)	\$260,987	2.0
2022	(\$385,987)	\$385,987	2.0
2023	(\$385,987)	\$385,987	2.0
2024	(\$510,987)	\$510,987	2.0

SOURCES: Legislative Budget Board; Texas Department of Licensing and Regulation.

well drillers or pump installers. An estimated onetime cost to adjust the Texas Well Report Submission and Retrieval System and set up a payment portal through Texas.gov would be \$19,920. TDLR’s related administrative and contract functions would be paid from revenue deposited to the new fund. According to TDLR staff, it is assumed that the number of abandoned wells addressed for the 2020–21 biennium would be 50 per year, increasing to 150 per year in subsequent years. GCD involvement in administering this program also may affect the number of abandoned wells to be addressed per year, the impact of which cannot be determined. One method to fund Option 6 would require a fee to be collected for construction of new wells, to be remitted to the state and distributed by TDLR to GCDs proportionally. This fee could be based on the number of abandoned wells identified in GCDs’ territories. The fee would offset the cost of administering the program; therefore, this would be revenue-neutral to the state, as shown in **Figure 5**.

An additional method to fund Option 6 would use existing state revenue sources, which could be derived from General Revenue Funds or from repurposing an alternate revenue source, such as amending statute to expand the allowable use of the General Revenue–Dedicated Account No. 655. This use of state revenue would result in a cost of approximately \$0.5 million for the 2020–21 biennium, as shown in **Figure 6**. The fiscal impact is contingent on fee amounts established by TDLR and the number of wells that feasibly can be addressed per year.

The introduced 2020–21 General Appropriations Bill does not include any adjustments as a result of these options.

**FIGURE 6
FIVE-YEAR FISCAL IMPACT OF OPTION 6, USING EXISTING REVENUE SOURCES
FISCAL YEARS 2020 TO 2024**

YEAR	PROBABLE SAVINGS/(COST) IN GENERAL REVENUE FUNDS OR GENERAL REVENUE–DEDICATED FUNDS	PROBABLE ADDITION/(REDUCTION) OF FULL-TIME-EQUIVALENT POSITIONS
2020	(\$280,907)	2.0
2021	(\$260,987)	2.0
2022	(\$385,987)	2.0
2023	(\$385,987)	2.0
2024	(\$510,987)	2.0

SOURCES: Legislative Budget Board; Texas Department of Licensing and Regulation.

CLARIFY OVERSIGHT OF REGIONALIZATION AT THE TEXAS JUVENILE JUSTICE DEPARTMENT

In 2015, the Eighty-fourth Legislature continued its efforts to reform the state's juvenile justice system by passing legislation to establish a regionalization model of juvenile justice. The Legislature required the Texas Juvenile Justice Department to develop a plan to support regional cooperation among probation departments, established a reimbursement grant program to divert youth from commitment in state-run correctional facilities to settings closer to home, and expanded the authority of the Office of Independent Ombudsman for the Texas Juvenile Justice Department to inspect all county and private-run post-adjudication facilities and other residential facilities in which a youth adjudicated delinquent is placed by a court order.

The actions by the Eighty-fourth Legislature built upon the reforms that were begun by the Eightieth Legislature, 2007, and continue the approach of pairing legislative reform with financial support for juvenile probation departments to serve more youth in their communities. When the Eightieth Legislature established the Office of Independent Ombudsman, it granted the office investigative authority to protect the rights of youth committed to state-operated facilities. The Eighty-fourth Legislature, 2015, increased these protections for youth who are placed in post-adjudication facilities by expanding the authority of the Office of Independent Ombudsman to investigate allegations of abuse in facilities that serve youth under the juvenile probation department's supervision. However, elements of statutory language describing the ombudsman's duties still refer specifically to protecting youth housed in Texas Juvenile Justice Department facilities. Clarifying the authority of the Office of Independent Ombudsman and strengthening its independence will help the office to protect the rights of youth in post-adjudication facilities.

FACTS AND FINDINGS

- ◆ The primary goals of the regionalization program are to increase the ability of juvenile probation departments to serve youth in their communities and decrease commitments to the secure institutions operated by the Texas Juvenile Justice Department.
- ◆ Statute required the regionalization program to divert 150 juveniles from commitment in the Texas Juvenile Justice Department's secure correctional facilities

during fiscal year 2017 using the Regional Diversions Alternative Program grant. During fiscal year 2017, probation departments diverted 188 juveniles to alternative settings, including local post-adjudication facilities administered privately or by counties.

- ◆ The Eighty-fourth Legislature, 2015, expanded the authority of the Office of Independent Ombudsman for the Texas Juvenile Justice Department to inspect all county and private-run post-adjudication facilities and other residential facilities in which a youth adjudicated delinquent is placed by a court order. The increased inspection requirements increased the number of site visits from 423 during the 2014–15 biennium to 1,203 during the 2016–17 biennium.
- ◆ Of the 299 juveniles discharged from Regional Diversion Alternative placements during fiscal years 2017 and 2018, 229 successfully completed placement and 70 were unsuccessful.

CONCERNS

- ◆ The duties and powers of the Office of Independent Ombudsman for the Texas Juvenile Justice Department are unclear when conducting oversight of post-adjudication facilities that serve youth under juvenile probation departments' supervision.
- ◆ Statute is unclear as to which records the Office of Independent Ombudsman for the Texas Juvenile Justice Department has access when conducting oversight of post-adjudication facilities that serve youth under the supervision of juvenile probation departments.

OPTIONS

- ◆ **Option 1:** Amend statute to clarify that the duties and powers of the Office of Independent Ombudsman for the Texas Juvenile Justice Department apply to post-adjudication facilities that serve youth under the supervision of a juvenile probation department.
- ◆ **Option 2:** Amend statute to provide the Office of Independent Ombudsman with access to relevant records for youth under the supervision of a probation department who are placed in a facility by a court order. The amended statute also would

require the Office of Independent Ombudsman and the Texas Juvenile Justice Department to adopt rules to establish a process to facilitate access to all of the information the Office of Independent Ombudsman needs to effectively investigate, evaluate, and ensure that the rights of youth in custody are protected.

DISCUSSION

The Eighty-fourth Legislature, 2015, continued reforms to the state's juvenile justice system that began in 2007 by enacting legislation to encourage a regionalization model of juvenile justice. Regionalization is an approach to juvenile justice that is characterized by decentralized decision-making and prioritizing serving youth in their communities instead of in large, secure correctional facilities that are located away from the youths' home communities. Most of the reforms of the Texas juvenile justice system since 2007 have tended toward decreasing the state's reliance on incarcerating youth in large, state-run correctional institutions by providing funding for probation departments to serve more of these youth locally.

In April 2007, the Interim Director of the Texas Youth Commission, the agency preceding the Texas Juvenile Justice Department, commissioned a task force of academics and juvenile justice practitioners to make recommendations for reforms to the state's juvenile justice system. In September 2007, the task force published *Transforming Juvenile Justice in Texas: A Framework for Action*, commonly referred to as the Blue Ribbon Task Force Report. The report identified the following principles of an effective juvenile justice system:

- ◆ courts should commit only high-risk, serious, chronic juvenile offenders to the state's juvenile correctional facilities;
- ◆ services should aim to decrease the number of youth who are incarcerated and to use the least restrictive and most home-like environment possible to rehabilitate youth; and
- ◆ Texas should implement a regional management delivery system that supports the use of small, community-based facilities, which enable juveniles to remain as close as possible to their home communities.

The juvenile justice system in Texas is largely decentralized, and most youth in the system are served by their local probation departments. A 2015 report by the Council of State Governments' Justice Center and the Public Policy Research Institute at Texas A&M University, regarding the legislative

reforms during fiscal years 2007 and 2009 concluded that youth who were diverted from state-run correctional facilities and instead placed on probation with their local juvenile probation department were less likely to reoffend than youth committed to state-run correctional facilities.

TEXAS JUVENILE JUSTICE SYSTEM

The state and county governments share responsibility for operating the juvenile justice system in Texas. Counties provide probation services, and the state operates a system of secure correctional institutions and halfway houses. The state is involved in probation by distributing funds, providing training, establishing standards, and monitoring local departments and facilities to ensure compliance with those standards. Before the 2012–13 biennium, the Texas Youth Commission (TYC) operated the secure, state-run institutions and halfway houses, and the Texas Juvenile Probation Commission (TJPC) provided funding, training, and oversight to juvenile probation departments. The Eighty-second Legislature, Regular Session, 2011, abolished TYC and TJPC and consolidated their functions at the newly established Texas Juvenile Justice Department (TJJD).

Local governments are responsible for determining a juvenile's disposition. A disposition in the juvenile justice system is similar to a sentence in the adult system and can include dismissal, supervisory caution, supervision including probation and deferred prosecution, and commitment to TJJD, or certification as an adult to stand trial in the adult system. State law has some limits on dispositions based on offense type and an offender's age, but disposition decisions typically are at the discretion of local judges, probation departments, and district attorneys. A juvenile must be adjudicated delinquent for a felony to be committed to TJJD. Most youth who have participated in the juvenile justice system have not entered the state correctional facilities nor been certified as adults; they have been supervised primarily by local probation departments. During fiscal year 2018, more than 96.0 percent of youth who receive services or supervision receive them through their local probation departments. Among the youth who have been adjudicated delinquent for a felony offense and are eligible for commitment to TJJD, most are placed on supervision, which includes probation and deferred adjudication. From fiscal years 2013 to 2018, approximately 6.0 percent of commitment-eligible youth were committed to TJJD.

Youth who are placed on probation can receive programs and services, including mental health services, substance abuse

treatment, victim–offender mediation, and vocational training from the local probation department. A juvenile under a probation department’s supervision also may be placed into a secure or nonsecure post-adjudication facility for more intensive programming. TJJD has registered 35 post-adjudication facilities operated by county or private operators. These facilities must follow TJJD-mandated standards. However, some youth are placed in residential treatment centers that are overseen by other state agencies.

All service providers that operate programs or facilities that serve youth in the juvenile justice system must comply with all relevant laws, standards, and regulations to ensure that youths receive the services to which they are entitled and that their rights are not violated. TJJD monitors compliance with minimum administrative standards, established in the Texas Administrative Code, at the registered post-adjudication facilities. The Office of Independent Ombudsman (OIO) for TJJD conducts operational oversight and investigates complaints at the secure correctional facilities and halfway houses operated by TJJD, contract facilities that serve some youth who are committed to TJJD, post-adjudication facilities that are registered with TJJD, and any other facilities in which a youth who has been adjudicated delinquent has been placed by a court order.

LEGISLATIVE REFORMS

Following a sexual abuse scandal at TYC, the Eightieth Legislature, 2007, passed legislation to complete the following actions:

- reform TYC and mandate a 12-to-one youth-to-direct supervisory staff ratio;
- prevent misdemeanants from being committed to TYC;
- lower the age limit of commitment-eligible youth to age 19;
- institute a consistent assessment of youth risk and needs at orientation;
- require TYC to consider placing juvenile offenders close to their homes; and
- establish an Office of Inspector General and Office of Independent Ombudsman for TYC.

TJPC received \$57.9 million in new appropriations for the 2008–09 biennium to distribute grants to fund secure

placements, enhanced community corrections programs, and programs for misdemeanants who no longer were TYC-eligible.

TJPC and TYC were each subject to Sunset review in 2009, followed by a special-purpose Sunset review of both agencies in 2011. In 2009, the Sunset Advisory Commission (SAC) recommended that the Legislature consolidate TJPC and TYC. The Eighty-first Legislature, Regular Session, 2009, instead continued the two agencies and appropriated \$45.7 million to TJPC for a new grant program for the 2010–11 biennium to decrease commitments to TYC through the Community Corrections Diversion Program.

In 2011, SAC recommended continuing TYC and TJPC for six more years. Instead, the Eighty-second Legislature, Regular Session, 2011, passed Senate Bill 653, which abolished TJPC and TYC and established TJJD.

The Eighty-fourth Legislature, 2015, established a juvenile justice regionalization program through the enactment of Senate Bill 1630. The legislation required juvenile courts to submit a special commitment finding that a youth has behavioral health or other special needs that cannot be met with the resources available to the community if the court commits the youth to TJJD. The legislation required TJJD to develop a plan to support regional cooperation among probation departments and develop a reimbursement grant program to divert youth from commitment to TJJD.

REGIONALIZATION IN TEXAS

The regionalization program’s primary goals are to enhance the ability of juvenile probation departments to serve youth and decrease commitments to TJJD secure institutions. Senate Bill 1630 established a framework through which probation departments in a region can work cooperatively to better serve youth in their communities instead of committing youth to TJJD’s secure, state-run institutions. It also required organizational changes at TJJD and start-up grants to support collaborative efforts, established a reimbursement grant program to fund alternative placements and programming for youth who might otherwise be committed to TJJD, and expanded the role of the OIO for TJJD to include visiting any post-adjudication facility that serves a Texas youth who was adjudicated delinquent and sent there by the court.

ESTABLISHING A FRAMEWORK FOR REGIONAL COOPERATION

The Texas Human Resources Code, Section 203.017, establishes TJJD’s responsibilities for supporting regional

cooperation among probation departments. TJJD was required to consult with juvenile probation departments to develop a regionalization plan for keeping youth closer to home in lieu of commitment to TJJD. The plan was required to perform the following actions:

- identify post-adjudication facility capacity that may be dedicated to support the plan and the resources needed to implement the plan;
- include a budget review, redirection of staff, and funding mechanisms necessary to support the plan;
- establish a new division of the department responsible for administering the regionalization plan and monitoring program quality and accountability; and
- include sufficient mechanisms to divert at least 30 juveniles from commitment to TJJD during fiscal year 2016 and 150 juveniles from commitment during fiscal year 2017.

To support the regionalization program, TJJD established a regionalization division to perform the following actions:

- approve plans and related protocols to administer the regional model;
- provide training regarding best practices for all local probation departments affected by the regionalization plan;
- assist in research-based program development;
- monitor contract and program measures for the regionalization plan;
- analyze department data to provide guidance to probation departments regarding outcome measures; and
- report performance of specific programs and placements to assist in implementing best practices and maximize the impact of state funds.

TJJD formed the Regionalization Task Force to develop a regionalization plan that would accomplish the goals of Senate Bill 1630. The task force included representatives of each of the regional chiefs associations, advocacy groups, TJJD's advisory council, and TJJD staff. To comply with the legislation's requirements, TJJD adopted the boundaries of the existing seven regional chiefs associations. **Figure 1** shows the regions that TJJD adopted. TJJD asked each region to identify a core need that could be addressed to improve the

region's ability to treat more youth locally, improve outcomes, and decrease the likelihood of commitment to TJJD. Each region developed and submitted a plan to TJJD.

REGIONAL SERVICE ENHANCEMENT PROJECT

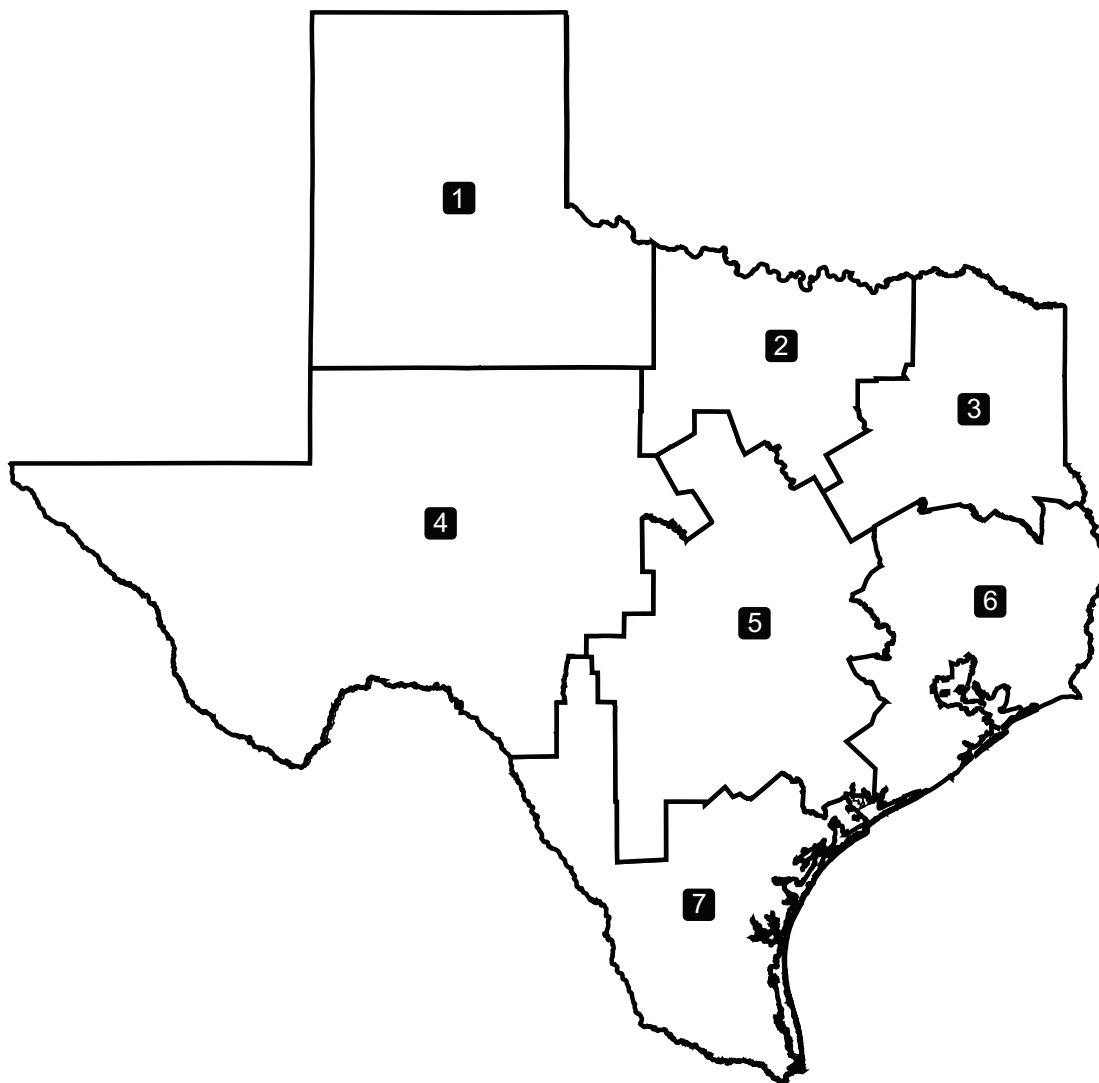
TJJD developed two grant programs to support the regionalization program, the Regional Service Enhancement (RSE) Project and the Regional Diversions Alternatives Program. During the 2016–17 and 2018–19 biennia, TJJD allocated \$1.75 million from the regional diversion alternatives strategy each biennium for RSE. RSE provided each region up to \$125,000 in start-up funds each year of those biennia to increase services available for youth. RSE's purpose is to provide each region with the resources needed to address the primary service gaps identified in the regionalization plan. The RSE grant focuses funds on community-based services for a regionally defined target population. TJJD's regionalization division worked with each region to identify the target population for its enhancement project. **Figure 2** shows the projects each region identified for the RSE start-up funds.

According to TJJD, the state's geographical and cultural diversity and the tradition of local control in the operation of juvenile probation departments presents a challenge for agreeing on one project that meets the needs of all the departments in the region. According to TJJD, some service providers are concerned about receiving enough referrals to make operating in some regions financially viable for vendors. TJJD hopes that the RSE grants will result in more program providers offering services throughout the state, which would enable more youth to be treated within their home regions. TJJD acknowledged that this task is a challenge because probation departments may be uncomfortable using service providers with which they are not familiar, and vendors may choose not to operate in a region unless they know they will receive enough referrals to make the operation financially viable.

REGIONAL DIVERSION ALTERNATIVE PROGRAM

Senate Bill 1630, Eighty-fourth Legislature, 2015, required TJJD to develop a mechanism that was sufficient to divert 180 juveniles from commitment to TJJD during the 2016–17 biennium. To comply with this requirement, TJJD established the Regional Diversion Alternative Program (RDA) to reimburse probation departments that divert youth from commitment to TJJD. TJJD allocated General Revenue Funds from the Regional Diversion Alternatives strategy in the agency's bill pattern for this program in the amount of \$7.8 million during the 2016–17 biennium and

FIGURE 1
TEXAS JUVENILE JUSTICE DEPARTMENT PROBATION REGIONS
FISCAL YEAR 2018



REGIONS

- | | |
|--------------|--------------|
| 1. Panhandle | 5. Central |
| 2. North | 6. Southeast |
| 3. Northeast | 7. South |
| 4. West | |

SOURCE: Texas Juvenile Justice Department.

\$16.5 million during the 2018–19 biennium. During fiscal years 2016 and 2017, 209 juveniles were diverted using RDA funds. During fiscal year 2018, 245 juveniles were diverted using RDA funds.

According to TJJD, the RDA grant is intended to divert youth from commitment to TJJD to placement in an evidence-based program, placement in a TJJD-registered secure or nonsecure post-adjudication facility, or a residential child-care facility. In accordance with the focus of the RDA program, TJJD encourages probation departments to place youth at the

FIGURE 2
TEXAS JUVENILE JUSTICE DEPARTMENT REGIONALIZATION TASK FORCE REGIONALIZATION PLAN'S PLANNED USE OF REGIONAL START-UP FUNDS, AUGUST 2016

REGION	USE OF FUNDS
Central Texas	Establishing telecounseling services and providing technical support to encourage participation.
North Texas	Increasing various services, including substance abuse, sexual behavior counseling, and mental health treatment and programming for female and general offenders.
Northeast Texas	Providing preplacement and aftercare intensive counseling and case management services in the region's less populated counties.
Panhandle and West Texas (joint plan)	Implementing a telecounseling program for individual and family therapy sessions.
South Texas	Implementing a case management and telecounseling program.
Southeast Texas	Using telepsychiatry services to provide mental health assessments, case management, medication services, and crisis intervention.

SOURCE: Texas Juvenile Justice Department.

facility closest to their homes that can meet their service needs. The agency prioritizes serving younger offenders, youths with serious mental illness, youths with developmental or intellectual disability, nonviolent youth offenders, and youths with low-risk to moderate-risk levels for reoffense.

A probation department that applies to use the RDA grant for a youth must submit an application to TJJD that includes the following information:

- the results of the youth's risk and needs assessment;
- a description of the youth's prior misdemeanor and felony referrals and adjudications;
- the felony that would result in recommendation of commitment to TJJD;
- a list of previous interventions with the youth;
- supporting documentation;
- any request for help from TJJD to identify treatment options for the youth; and
- the proposed placement or program for the youth.

The chief probation officer of the department requesting the RDA funds must certify to TJJD that, if not for the Regionalization Diversion program, the department would recommend that the court commit the youth to TJJD. A probation department must exhaust all local options for a youth before applying for the RDA Program grant. According to TJJD, it rejected 30 applications during fiscal year 2016, 81 applications during fiscal year 2017, and 74 applications during fiscal year 2018. Of the 111 juveniles whose diversions

FIGURE 3
REGIONAL DIVERSION ALTERNATIVES PROGRAM GRANT APPLICATIONS THAT RESULTED IN A PLACEMENT OR WERE NOT APPROVED BY THE TEXAS JUVENILE JUSTICE DEPARTMENT, FISCAL YEARS 2016 TO 2018

YEAR	ACCEPTED AND PLACED	NOT APPROVED
2016	21	30
2017	187	81
2018	261	74

NOTE: Some applications are approved by the Texas Juvenile Justice Department and do not result in a placement or a grant being awarded.
 SOURCE: Texas Juvenile Justice Department.

were rejected during the 2016–17 biennium, 33 were committed to TJJD and one was certified as an adult. The other 77 juveniles whose diversion applications were rejected remained within the jurisdiction of their local juvenile probation departments. **Figure 3** shows the number of applications for RDA placements and TJJD's decision from fiscal years 2016 to 2018.

The requirement that a probation department must exhaust all local resources before applying for RDA funds has resulted in departments that operate secure post-adjudication facilities being unable to access RDA funds to place youth in county-operated facilities. This requirement enables TJJD to target the RDA funds to probation departments that do not have sufficient resources to serve a juvenile who may otherwise be appropriate for commitment to TJJD's secure correctional facilities. A probation department may use RDA funds to place a juvenile in a post-adjudication facility operated by another probation department if the receiving department is

accepting contract placements at the facility. TJJD collaborated with probation departments to identify post-adjudication capacity that could be available for regionalization. As of May 2018, 20 of the 35 post-adjudication facilities that are registered with TJJD accept RDA placements. In May 2018, TJJD reported 1,953 beds that were assigned as secure post-adjudication beds by registered county and private-run post-adjudication facilities. Of those beds, 1,630 beds were considered online, that is, available to use with staff budgeted to supervise youth in those beds. As of May 2018, 60.5 percent of the online beds were in facilities that are accepting RDA placements.

Outcome measures for the RDA program are limited because it was not fully implemented until fiscal year 2017. TJJD provided the number of juveniles who were successfully and unsuccessfully discharged from RDA placements during 2017 and 2018. During fiscal year 2017, 99 youth were discharged from RDA-funded placements. Of those youth, 72 were successfully discharged and 27 were unsuccessfully discharged. During fiscal year 2018, 200 youth were discharged from RDA-funded placements. Of those youth, 157 were successfully discharged and 43 were unsuccessfully discharged. During fiscal years 2017 and 2018, 76.5 percent of youth discharged from an RDA-funded placement successfully completed placement. According to TJJD, after sufficient time has elapsed, the department will evaluate the

one-year, two-year, and three-year recidivism rates for all juveniles served by the RDA and RSE programs.

EXPANDED ROLE OF THE INDEPENDENT OMBUDSMAN FOR THE TEXAS JUVENILE JUSTICE DEPARTMENT

As part of regionalization, the Eighty-fourth Legislature, 2015, expanded the authority of the OIO to inspect all county and private-run post-adjudication facilities and any other residential facility in which a youth adjudicated delinquent is placed by a court order. The increased inspection requirements increased the number of site visits for OIO staff from 423 during the 2014–15 biennium to 1,203 during the 2016–17 biennium. The OIO for TJJD is an independent state agency that was established by actions of the Eightieth Legislature, 2007. The OIO was established to investigate, evaluate, and secure the rights of youth committed to TJJD. The independent ombudsman is appointed by the Governor and serves a two-year term. The Texas Human Resources Code, Section 261.003, states that the OIO performs its duties independently of TJJD, and that funding for the OIO is appropriated separately from funding for TJJD. When the OIO was established, it was funded initially through a contingency rider in TYC's bill pattern in the 2008–09 budget and has remained as a goal in TJJD's bill pattern in subsequent biennia. TJJD provides administrative support to the OIO through an informal agreement between the two. **Figure 4** shows some of the duties and powers of the OIO.

FIGURE 4 DUTIES AND POWERS OF THE OFFICE OF INDEPENDENT OMBUDSMAN FOR THE TEXAS JUVENILE JUSTICE DEPARTMENT JULY 2018

- Review the procedures established by the Texas Juvenile Justice Department (TJJD) board of directors and evaluate the delivery of services to children to ensure that the rights of children are fully observed
- Review complaints filed with the independent ombudsman concerning the actions of TJJD and investigate each complaint in which it appears that a child may be in need of assistance from the independent ombudsman
- Conduct investigations of complaints, other than complaints alleging criminal behavior
- Make appropriate referrals
- Review reports received by TJJD relating to complaints regarding juvenile probation programs, services, or facilities and analyze the data contained in the reports to identify trends in complaints
- Immediately report the findings of any investigation related to the operation of a post-adjudication correctional facility in a county to the chief juvenile probation officer and the juvenile board of the county
- Review or inspect periodically the facilities and procedures of any institution or residence in which a child has been placed by TJJD, whether public or private, to ensure that the rights of children are observed fully
- Provide assistance to a child or family who the independent ombudsman determines is in need of assistance, including advocating with an agency, provider, or other person in the best interests of the child
- Review court orders as necessary
- Recommend changes in the procedure relating to the treatment of children committed to TJJD
- Report a possible standards violation by a local juvenile probation department to the appropriate TJJD division

SOURCE: Legislative Budget Board.

**FIGURE 5
COMPARISON OF OFFICE OF INDEPENDENT OMBUDSMAN SITE VISITS FOR FACILITIES THAT SERVE YOUTH COMMITTED TO THE TEXAS JUVENILE JUSTICE DEPARTMENT AND YOUTH UNDER SUPERVISION BY A PROBATION DEPARTMENT AS OF MAY 2018**

FACTOR	JUVENILE WITHIN JURISDICTION OF THE TEXAS JUVENILE JUSTICE DEPARTMENT (TJJD)	JUVENILE WITHIN THE JURISDICTION OF A JUVENILE PROBATION DEPARTMENT
Deputy ombudsmen who attend	2	1
Typical duration of visit (days)	2 days	1 day
Frequency of visits	Secure facilities are visited monthly; state-operated halfway houses are visited every other month; and contracted nonsecure facilities are visited quarterly	All county and privately run facilities in Texas are visited quarterly with more frequent visits to higher-risk facilities; out-of-state facilities visited annually
Access to information	Access to TJJD’s records, Juvenile Justice Information System, law enforcement, and records of a private entity that relate to a youth committed to TJJD	No specific statutory authority
Site visit reports provided	Governor, Lieutenant Governor, Speaker of the House of Representatives, members of the Texas Legislature, the State Auditor’s Office, TJJD Board of Directors, TJJD executive staff, facility superintendent, administrative staff in TJJD’s State Programs and Facilities Division, and the TJJD Director of Treatment Services	Chief probation officer of the county where the facility is located, the facility administrator, TJJD Deputy Director for Probation Services, and TJJD Executive Leadership Team

NOTE: The frequency of planned visits to facilities in Texas serving youth under supervision was decreased in March 2018 from every other month to quarterly and to facilities out of state serving youth under supervision was decreased from twice a year to once a year due to decreased travel funds. In June 2018, the Office of the Independent Ombudsman requested and received unexpended balance authority between fiscal years to move \$68,305.72 from fiscal year 2018 to fiscal year 2019 to fund travel costs for these visits, which enabled the agency to add targeted visits to facilities that the office identifies as high-risk.

SOURCE: Office of Independent Ombudsman for the Texas Juvenile Justice Department.

Before the Eighty-fourth Legislature’s expansion of the OIO’s role in 2015, the office had jurisdiction over secure correctional facilities and halfway houses operated by TJJD and contract facilities that serve some youth committed to TJJD. Rider 35 in TJJD’s bill pattern specified the appropriation of \$560,500 for fiscal year 2016, which included a onetime cost of \$66,500, and \$494,000 for fiscal year 2017, along with 7.0 full-time-equivalent (FTE) positions to the OIO for the expansion of duties to local facilities. The Eighty-fifth Legislature, 2015, decreased the OIO’s biennial 2018–19 appropriation by \$128,610, which included eliminating the onetime cost of \$66,500. However, Rider 31 in TJJD’s bill pattern maintained the appropriation of \$494,000 per year and 7.0 FTE positions.

CLARIFY THE AUTHORITY OF THE OFFICE OF INDEPENDENT OMBUDSMAN

The Texas Human Resources Code, Section 261.101(e), authorizes the OIO to investigate complaints alleging a violation of the rights of youth placed in a secure post-adjudication facility or residential facility that serves juveniles under a probation department’s supervision. The extent of OIO’s authority to inspect these facilities is unclear because

the language describing many of the agency’s duties and powers in the Texas Human Resources Code, Section 261.101, is specific to correctional facilities that serve juveniles who have been committed to TJJD. This language can result in confusion and challenges for OIO when visiting facilities that serve youth supervised by their local probation department. Option 1 would amend the Texas Human Resources Code to clarify that each of the listed duties and powers apply to each facility for which OIO has jurisdiction.

OIO’s site visits to facilities that serve juveniles who have been committed to TJJD differ from visits to those that serve juveniles supervised by their local probation departments. A site visit to a facility that serves youth under the supervision of their local probation department involves fewer OIO employees and less staff time than a visit to facility that serves youth who were committed to TJJD. **Figure 5** shows a comparison of OIO site visits to these types of facilities in both categories.

Expanding the OIO’s authority to investigate additional facilities significantly increased the number of visits made by OIO staff. OIO makes site visits to 31 facilities that serve

FIGURE 6
SITE VISITS BY THE OFFICE OF INDEPENDENT OMBUDSMAN FOR THE TEXAS JUVENILE JUSTICE DEPARTMENT (TJJD)
FISCAL YEARS 2014 TO 2018

YEAR	TJJD SECURE FACILITY	TJJD HALFWAY HOUSE	TJJD STATE CONTRACT	TJJD PAROLE	COUNTY-OPERATED	COUNTY CONTRACT	VISITS
2014	78	48	53	37	0	0	216
2015	83	49	51	24	0	0	207
2016	85	45	52	14	154	147	497
2017	84	47	60	41	221	253	706
2018	83	42	53	44	177	170	569

NOTE: The Office of Independent Ombudsman did not have the authority to make site visits to county-operated or county-contracted post-adjudication facilities before fiscal year 2016.

SOURCE: Office of the Independent Ombudsman for the Texas Juvenile Justice Department.

youth who were committed to TJJD and to 85 facilities that serve youth who are under supervision by juvenile probation departments. **Figure 6** shows the OIO staff visits to different types of facilities from fiscal years 2014 to 2018.

OIO typically has access to more information for youth who are in facilities that serve youth who were committed to TJJD. For youth committed to TJJD, the Texas Human Resources Code provides OIO with access to records from TJJD, the Juvenile Justice Information System (JJIS), local law enforcement agencies, and private entities. JJIS is used to track information for juveniles committed to TJJD. These requirements comply with the standards of practice established by the International Ombudsman Association, which states, “the ombudsman has access to all information and all individuals in the organization.”

In contrast, for youth under juvenile probation supervision, no statute requires that the OIO specifically have access to information in the Juvenile Case Management System, which contains information regarding juveniles in the probation system. Additionally, no statutory requirement specifies that the OIO should have access to information from an entity that is not registered by TJJD but serves juveniles who are on probation, such as residential drug or alcohol treatment facilities licensed by the Health and Human Services Commission (HHSC). In OIO’s Second Quarter Report, Fiscal Year 2018, the agency reported ongoing problems with gaining access to youth grievance files, incident reports, and other records at Azleway Substance Abuse Program, a residential treatment facility licensed by HHSC. Option 2 would amend the Texas Human Resources Code, Sections 261.151 and 261.152, to provide OIO with access to a probation department or board’s records relating to a juvenile placed in a residential facility by court order.

This access would require OIO and TJJD to adopt rules to facilitate access to records. The OIO also would have to coordinate with any organization that registers facilities serving Texas juveniles who have been adjudicated delinquent and placed by a court order. This coordination would ensure that OIO has access to sufficient information to ensure that youth are receiving all services to which they are entitled and that the rights of youth are not violated.

In March 2018, due to insufficient travel funds, OIO decreased the frequency of planned visits to facilities that serve juveniles supervised by a probation department. OIO then requested and received authority to transfer unexpended balances from fiscal years 2018 to 2019 to maintain the site visit frequency adopted in March 2018 and add targeted visits to facilities OIO identified as high-risk.

FISCAL IMPACT OF THE OPTIONS

Options 1 and 2 would have no fiscal impact to the state. The options would clarify the authority of the OIO and ensure that the office has the information it needs to protect the rights of youth under supervision by a probation department who are placed in post-adjudication or residential treatment facility by a court order.

The introduced 2020–21 General Appropriations Bill does not include any adjustments as a result of these options.

IMPROVE STATE MANAGEMENT OF FINANCIAL PROGRAMS FOR LOCAL LAW ENFORCEMENT AGENCIES

Texas has many programs that provide financial support to local law enforcement agencies. This report inventories programs for which the state provides General Revenue Funds and General Revenue–Dedicated Funds to communities for local policing activities and evaluates the management processes used by the administering agencies, which employ different funding structures, formulas, administrative requirements, and levels of evaluation. There are opportunities to improve oversight and consolidate administration of these financial programs.

For the 2018–19 biennium, the Legislature appropriated \$156.4 million in All Funds to the three agencies that administer these programs: the Office of the Governor, the Automobile Burglary and Theft Prevention Authority, and the Comptroller of Public Accounts. The Office of the Governor administers seven local law enforcement grant programs, the most of any agency within the scope of this report. Appropriations for these reimbursement grant programs at the Office of the Governor totaled \$116.6 million in All Funds for the 2018–19 biennium. The Texas Department of Motor Vehicles administers the Automobile Burglary and Theft Prevention Authority, and the agency received appropriations of \$25.7 million in General Revenue Funds for the 2018–19 biennium to administer reimbursement grants. The Comptroller of Public Accounts received appropriations of \$12.0 million in General Revenue–Dedicated Funds for the 2018–19 biennium to allocate formula-based Law Enforcement Officer Standards and Education funding for training and continuing education.

FACTS AND FINDINGS

- ◆ State law and administrative rule require agencies to conduct programmatic and financial monitoring of grant funds to ensure compliance with laws and program rules and to report to the Legislature. Similarly, grant recipients must document their use of grant funds to ensure that they are achieving performance goals and that grant-supported activities comply with applicable federal and state requirements.
- ◆ All three administering agencies are in compliance with statute regarding grant management.

- ◆ In 2004, the State Auditor’s Office found instances of inappropriate Law Enforcement Officer Standards and Education expenditures, and found that local law enforcement agencies had not established proper financial controls.

CONCERNS

- ◆ The Comptroller of Public Accounts administers one law enforcement funding program and has established separate processes for this unique function. These processes already occur at the Office of the Governor for other law enforcement programs and, therefore, could be more efficiently performed at that agency.
- ◆ Oversight at the Comptroller of Public Accounts includes a form completed by recipients attesting to the proper use of funds. However, statute requires no additional verification, which results in a risk that recipients could use funds inappropriately.
- ◆ Statute does not specify how recipients must deposit Law Enforcement Officer Standards and Education funds; therefore, their use by recipients can be difficult to track. For example, some recipients hold lapsed funds outside of a local government treasury, and others combine the lapsed funding with local general funds.

OPTIONS

- ◆ **Option 1** has the following two components to increase efficiency and oversight of the administration of Law Enforcement Officer Standards and Education funding:
 - **Option 1–A:** Amend statute and include a rider in the 2020–21 General Appropriations Bill to transfer the oversight responsibility of Law Enforcement Officer Standards and Education from the Comptroller of Public Accounts to the Office of the Governor. The transfer of funding would be contingent on the enactment of legislation transferring the program; and
 - **Option 1–B:** Amend statute to require recipients of Law Enforcement Officer Standards and Education funds of \$50,000 or greater to submit

documentation annually for review by the Office of the Governor to ensure the appropriateness of expenditures.

- ◆ **Option 2:** Amend statute to require Law Enforcement Officer Standards and Education funding recipients to maintain these funds in a separate account within a local government's treasury.

DISCUSSION

Historically, the Legislature has established multiple programs that provide financial support to local law enforcement agencies. Although each program is intended for a specific purpose, all programs involve varying degrees of state and local coordination, which depend on efficient and effective management standards and processes. Legislative Budget Board (LBB) staff reviewed management practices and fiscal data relevant to programs administered by state agencies that provide state funds primarily to municipal police and county sheriffs' departments.

These programs include financial assistance to police or sheriffs' departments for local law enforcement training and regular policing activities during the past three biennia. Fiscal data focuses on grants funded with General Revenue Funds or General Revenue–Dedicated Funds. Grants to other entities within the justice system, such as crime labs, courts, jails, probation departments, victims' services organizations, or other state agencies are not included. Grants that are fully federally funded are excluded. Furthermore, this report does not evaluate the outcomes of these grants or whether the standards and goals for these programs align with best practices.

AGENCIES ADMINISTERING FUNDS FOR LOCAL LAW ENFORCEMENT

Three agencies administer state funds that provide financial assistance to local law enforcement. This financial assistance is used for various purposes including training, equipment, and additional staff or investigative activities.

OFFICE OF THE GOVERNOR

The Office of the Governor administers multiple grant programs to law enforcement agencies across Texas, including seven programs that provide state funds to police and sheriffs' offices for policing activities. These grant programs are administered by the Office of the Governor's Criminal Justice Division (CJD) and the Homeland Security Grants Division (HSGD).

CJD's goal is to improve public safety and support crime victims through prevention and support services. HSGD aims to prevent terrorism and catastrophes and to prepare communities for hazards that could threaten state and national security. HSGD also funds grants to increase security along the Texas–Mexico and international water borders. These grants provide resources for increased patrols to detect, deter, and disrupt drug, human, and other contraband trafficking and crimes.

These divisions support a range of projects in the juvenile and criminal justice systems. **Figure 1** shows appropriations to the seven grant programs that CJD and HSGD administer from fiscal years 2014 to 2019.

General Revenue–Dedicated Account No. 421, Criminal Justice Planning (Account No. 421), supports a range of activities, including those related to specialty courts, law enforcement training, juvenile justice, prosecution, victims' services, and offender reentry into communities. According to CJD, 116 programs received grant awards totaling \$13.5 million from Account No. 421 during fiscal year 2017. Of this amount, \$217,818 was awarded to local law enforcement departments. The remaining funds were awarded to other grant recipients such as regional councils of government, courts, or nonprofit organizations.

AUTOMOBILE BURGLARY AND THEFT PREVENTION AUTHORITY

The Seventy-second Legislature, Regular Session, 1991, established the Texas Automobile Theft Prevention Authority (ATPA) as the first statewide initiative to decrease automobile theft. The Eightieth Legislature, 2007, expanded the scope of the program to include the decrease of vehicle burglaries. The program's name changed to the Automobile Burglary and Theft Prevention Authority (ABTPA), which the Texas Department of Motor Vehicles (DMV) administers.

State law requires insurance companies to pay a \$2.00 fee for each motor vehicle insurance policy written in Texas. These fees are deposited into the General Revenue Fund, and 50.0 percent of each fee collected may be appropriated to ABTPA for purposes specified in statute. Funds collected but not appropriated remain in the General Revenue Fund. ABTPA funds may be used to help increase the recovery rate of stolen motor vehicles, the clearance rate of motor vehicle burglaries and thefts, and the number of persons arrested for motor vehicle burglary and theft. As established in the Texas Revised Civil Statutes Annotated, Article 4413 (37), Section 6(k), ABTPA allocates funds based on the number of motor

**FIGURE 1
APPROPRIATIONS TO GRANT PROGRAMS ADMINISTERED BY THE OFFICE OF THE GOVERNOR, FISCAL YEARS 2014 TO 2019**

PROGRAM	PROGRAM DESCRIPTION	METHOD OF FINANCE	APPROPRIATIONS (IN MILLIONS)					
			2014	2015	2016	2017	2018	2019
Texas Anti-gang Grant Program	Supports targeted, regional approaches to combat gang violence by coordinating prevention, intervention, and suppression activities.	General Revenue Funds	N/A	N/A	\$5.1	\$5.1	\$5.1	\$5.1
Body-worn Cameras	Supports municipal police departments and county sheriffs' offices to establish or enhance body-worn camera programs that promote officer safety and transparency.	General Revenue Funds	N/A	N/A	\$10.0	N/A	N/A	N/A
Rifle-resistant Body Armor Grant Program	Supports obtaining body armor, including bullet-resistant vests, ballistic plates, and plate carriers.	Other Funds (Economic Stabilization Fund)	N/A	N/A	N/A	N/A	\$25.0	UB (1)
Local Border Security Program	Supports interagency law enforcement operations and patrols to deter and interdict criminals.	General Revenue Funds	N/A	N/A	\$5.1	\$5.1	\$5.1	\$5.1
Internet Crimes Against Children	Supports investigation of Internet crimes against children through task forces made up of multiagency law enforcement personnel from cities across Texas.	General Revenue Funds	\$0.8	\$0.8	\$0.8	\$0.8	\$0.8	\$0.8
National Incident-based Reporting System (NIBRS) Program	Supports law enforcement agencies transitioning to incident-based crime reporting from the Summary Reporting System to NIBRS.	General Revenue–Dedicated Account No. 5153, Emergency Radio Infrastructure	N/A	N/A	\$8.2	\$8.2	\$9.2	UB (2)
Criminal Justice Planning Fund	Addresses system inadequacies throughout the criminal justice system.	General Revenue–Dedicated Account No. 421, Criminal Justice Planning	\$24.7	\$24.7	\$32.8	\$27.8	\$30.2	\$30.2

NOTES:

- (1) Any unexpended balances (UB) remaining in the appropriation for the Rifle-resistant Body Armor Grant Program at the conclusion of fiscal year 2018 are appropriated for the purchase of bullet-resistant personal body armor for fiscal year 2019.
- (2) Unexpended and unobligated balances remaining as of August 31, 2017, estimated to be \$9.2 million, in General Revenue–Dedicated Account No. 5153, Emergency Radio Infrastructure, were appropriated for the 2018–19 biennium to provide grants to local law enforcement agencies for upgrading technology infrastructure to implement incident-based reporting.

SOURCES: Legislative Budget Board; Office of the Governor.

vehicles stolen or the motor vehicle burglary or theft rate. All ABTPA grants are reimbursement grants that require recipients to contribute a minimum 20.0 percent cash match. **Figure 2** shows recent appropriations for ABTPA.

Based on the findings of DMV's 2014 internal audit, ABTPA was restructured to improve grant monitoring standards, including the following changes:

- updating administrative rules;
- redeveloping goals and objectives;

- implementing merit-based award selection;
- updating single-audit requirements and tracking grant recipients' expenses;
- improving reporting requirements and sanctions;
- improving the processes for requests for funds and grant adjustment;
- assigning authorized grant recipient officials' roles;

- updating closeout procedures and fostering strategic partnerships; and
- streamlining grant recipients’ training, deadlines, and technology, and refining ABTPA skill sets.

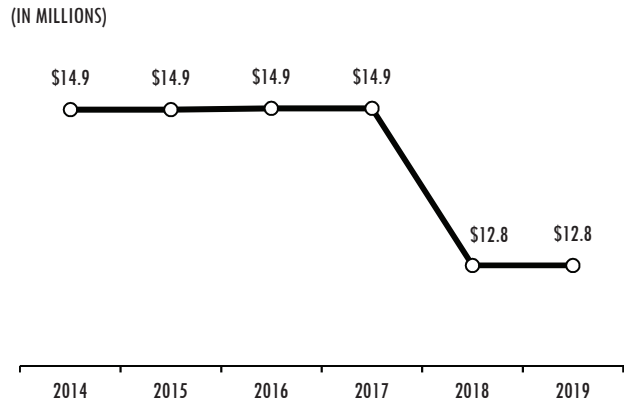
COMPTROLLER OF PUBLIC ACCOUNTS

The General Revenue–Dedicated Account No. 116, Law Enforcement Officer Standards and Education (Account No. 116), is a dedicated account in the state Treasury. The Comptroller of Public Accounts (CPA) collects and deposits proceeds from court costs into the account. The General Appropriations Act specifies appropriations to CPA for the total amount to be distributed to local law enforcement agencies. The agencies must use the funds to provide continuing education for law enforcement. As established in the Texas Occupations Code, Section 1701.157(a), 20.0 percent of the funds collected are divided equally among all local law enforcement agencies in Texas. The remaining 80.0 percent is distributed according to the number of officers per department that work more than 32.0 hours per week and receive compensation and benefits offered by government entities. The Legislature has appropriated \$6.0 million each fiscal year from Account No. 116 from fiscal years 2014 to 2019.

AGENCIES’ MONITORING AND REPORTING ACTIVITIES

Each agency that distributes funds to support local law enforcement entities has established a system to monitor the use of funds. **Figure 3** shows each agency’s monitoring activities.

**FIGURE 2
AUTOMOBILE BURGLARY AND THEFT PREVENTION
AUTHORITY APPROPRIATIONS FROM GENERAL REVENUE
FUNDS
FISCAL YEARS 2014 TO 2019**



SOURCES: Legislative Budget Board; Texas Department of Motor Vehicles.

Figures 4 and 5, respectively, show the number of desk reviews, site visits, and post-payment reviews that the Office of the Governor and ABTPA conducted from fiscal years 2013 to 2017. Statute does not require CPA to conduct desk or site reviews.

DOCUMENT SUBMISSION TOOLS

The Office of the Governor integrates grant management through an online system called eGrants. Grant recipients and applicants can obtain grant-related resources from the

**FIGURE 3
MONITORING TECHNIQUES OF LAW ENFORCEMENT FUNDING AT SELECT AGENCIES, JUNE 2018**

TECHNIQUE	COMPTROLLER OF PUBLIC ACCOUNTS	AUTOMOBILE BURGLARY AND THEFT PREVENTION AUTHORITY	OFFICE OF THE GOVERNOR
Audit Authority	X	X	X
Certification	X	X	X
Desk Review		X	X
Financial Reporting	X	X	X
Inventory Reporting	N/A	X	X
Progress Reporting		X	X
Site Review		X	X
Supplanting Check		X	

NOTE: The Texas Occupations Code, the Texas Revised Civil Statutes Annotated, the Texas Government Code, and administrative rule require agency program funds to be nonsupplanting; however, not all programs require local match contributions. Therefore, a supplanting check may not be applicable, and an agency does not perform this activity. Statute does not require the Comptroller of Public Accounts to perform additional monitoring such as desk reviews or site visits.
SOURCE: Legislative Budget Board.

FIGURE 4
OFFICE OF THE GOVERNOR'S PROGRAM AND FINANCIAL MONITORING
FISCAL YEARS 2013 TO 2017

YEAR	PROGRAM DESK REVIEW	PROGRAM SITE REVIEW	FINANCIAL DESK REVIEW	FINANCIAL SITE REVIEW	FINANCIAL POST-PAYMENT REVIEW
2013	2	0	0	0	3
2014	1	0	1	0	1
2015	0	0	2	0	0
2016	1	0	11	3	4
2017	6	1	8	2	0

SOURCE: Office of the Governor.

website, such as information on available funding opportunities and grant and financial management guides. After an applicant has registered in the system, authorized grant officials at the applying agency use eGrants to submit grant project information to the Office of the Governor for review.

ABTPA provides an online grant-management tracking system on its website, which serves as an interface between grantors and recipients.

To receive Law Enforcement Officer Standards and Education funding from Account No. 116, eligible law enforcement agencies must submit an allocation basis form to CPA. Allocations are made based upon the law enforcement agency's response, in accordance with statute. CPA maintains a database of these local law enforcement agencies.

NONSUPPLANTING CONTROLS

Each program analyzed in this report prohibits the use of state grant funds to replace or supplant local funds. Each agency has its own approach to address the supplanting of funds. For example, the Texas Occupations Code, Section 1701.157(e), requires recipients of Law Enforcement Officer Standards and Education funding from Account No. 116 to certify to CPA that the funds do not replace local funds for training law enforcement officers and support personnel. The Texas Government Code also requires that CJD funds do not supplant local funds. According to the Office of the Governor, grant agreements require grant recipients to certify that they will not supplant funds. Other documents from the Office of the Governor also instruct grant recipients not to supplant funds.

ABTPA rule also prohibits grant funds from supplanting local funds, and the agency specifies this prohibition in grant agreements. However, unlike CPA and the Office of the

FIGURE 5
AUTOMOBILE BURGLARY AND THEFT PREVENTION
AUTHORITY'S PROGRAM AND FINANCIAL MONITORING
FISCAL YEARS 2014 TO 2017

YEAR	DESK REVIEW	SITE VISIT
2014	26	4
2015	10	1
2016	24	12
2017	9 (1)	6

NOTE: (1) As of July 2018, the Automobile Burglary and Theft Prevention Authority had conducted nine comprehensive annual financial report desk reviews for fiscal year 2017.

SOURCE: Automobile Burglary and Theft Prevention Authority, 2018.

Governor, ABTPA employs a supplanting check. ABTPA confirms grant recipients' proposed match and in-kind match contributions by expense category using historical recipient data for reimbursement grants. The supplanting check includes a match-ratio analysis, which informs a risk assessment. The analysis does not disqualify or preclude an applicant or grant recipient from receiving reimbursement, but it could prompt further inquiry. Although this analysis can be performed only with historical expenditure data, it can help to mitigate the risk of supplantation.

RISK ASSESSMENT

To strengthen grant monitoring, each of the three agencies developed a risk assessment to identify high-risk grant applicants. The results of these risk assessments are used to determine if additional monitoring is needed throughout the grant cycle. For reimbursement grants, high-risk grant recipients are more likely to undergo either a programmatic or financial review.

Office of the Governor staff have developed a financial risk-assessment system, which scores and weighs the following criteria:

- date of the recipient's last Office of Compliance and Monitoring review;
- history of noncompliance;
- cumulative award amount of all recipients' CJD and HSGD grants active anytime within the preceding calendar year; and
- total number of recipients' CJD and HSGD grants active within the preceding calendar year.

An ABTPA assessment considers the following risk factors:

- unsatisfactory performance history;
- noncompliance with terms and conditions of grant award;
- habitually late submission of required reports; and
- late submission of fourth-quarter expenditure reports.

According to CPA, the two risk factors that may lead to additional scrutiny of grant recipients are failure to submit the report form and overreporting the number of qualified positions.

SANCTIONS

Each of the three agencies has developed sanctions or other consequences to help ensure that grant recipients meet program requirements.

If the Office of the Governor determines that a grant recipient materially fails to comply with any term of the grant agreement, sanctions may include the following actions: imposing a Corrective Action Plan (CAP); withholding grant funds; suspending or terminating grants; prohibiting the grant recipient from applying for or receiving additional grants until repayment is made and any other compliance or audit finding is satisfactorily resolved; or other appropriate measures.

According to ABTPA, if any findings are identified as a result of a comprehensive annual financial report (CAFR) review, a desk review, or an onsite visit, the grant recipient is required to submit either a written response that disputes the finding or a CAP specifying how it intends to remedy the finding. In addition to the CAP, sanctions set by the ABTPA board may

include increased monitoring, withholding of funds, or grant revocation.

Because statute refers to Law Enforcement Officer Standards and Education funding as an allocation and not a grant, CPA does not impose sanctions. However, according to CPA, to receive this funding, eligible entities must submit the allocation basis form to CPA. The information provided in this form must be returned in a timely manner to ensure the correct allocation of available funding. An agency that fails to return the form does not receive an allocation.

ADMINISTRATION AND STRUCTURE OF ACCOUNT NO. 116, LAW ENFORCEMENT OFFICER STANDARDS AND EDUCATION

CPA's oversight consists of recipients completing a form attesting to the proper use of funds. Statute requires no additional verification, which results in a risk that recipients could use funds inappropriately. Additionally, because CPA does not administer other grants to law enforcement agencies, CPA has to maintain contacts and processes specifically for this function.

The Office of the Governor has experience working with law enforcement agencies and has the infrastructure in place to coordinate with law enforcement (i.e., eGrants and the Criminal Justice Division). The Office of the Governor also employ a risk-based allocation methodology and sanctions that would enable the agency to administer Law Enforcement Officer Standards and Education funding from Account. No. 116 effectively. Option 1–A would amend the Texas Occupations Code and include a rider in the 2020–21 General Appropriations Bill to transfer the oversight and funding of continuing education funds from CPA to the Office of the Governor. The transfer of funding would be contingent on the enactment of legislation transferring the program.

To ensure the appropriateness of expenditures, Option 1–B would amend the Texas Occupations Code to require recipients of funds from Account No. 116 of \$50,000 or greater to submit documentation (e.g., receipts, training logs, certificates, or invoices) annually for the Office of the Governor to review. For fiscal year 2016, 2,021 agencies received these allocations, which averaged \$593.77 per award. Among these agencies, 12 allocations were greater than \$50,000; therefore, only these agencies would be required to substantiate their affidavits.

FUNDS OUTSIDE THE LOCAL TREASURY

In 2004, the State Auditor's Office (SAO) audited Account No. 116. The audit results included the following findings:

- a significant number of local law enforcement agencies lacked controls to ensure that unspent Law Enforcement Officer Standards and Education (LEOSE) funds allocated from Account No. 116 are retained and spent only for the statutory purpose;
- some jurisdictions appeared to have used LEOSE funds allocated from Account No. 116 to supplant local funding for continuing education; and
- a significant number of agencies retained funds allocated from Account No. 116 outside of their jurisdictions' treasuries, which could make tracking funds difficult.

When a government entity combines LEOSE and local funding, it can be difficult to determine whether it has spent the LEOSE funding before spending the local funds. This combining of funding from different sources hinders the entity's ability to ensure that it retains any unspent LEOSE funds allocated from Account No. 116 at the end of a fiscal period and to spend those funds for the intended purpose only.

Although this audit occurred in 2004, these risks remain because statute does not require a separate account for funding allocated from Account No. 116 within a local government's treasury. According to SAO, establishing a separate fund would be a preferred way for agencies to safeguard the funds and to meet other statutory requirements. Option 2 would amend statute to require LEOSE recipients to maintain funds allocated from Account No. 116 in a separate account within a local government's treasury.

FISCAL IMPACT OF THE OPTIONS

Option 1–A would transfer the oversight responsibility of funding allocated from Account No. 116 from CPA to the Office of the Governor, and Option 1–B would require the Office of the Governor to review additional documentation for recipients of amounts greater than \$50,000. No net fiscal impact is anticipated as a result of Option 1–A and Option 1–B. According to CPA, removing this responsibility would not significantly decrease staff costs because these staff also work on several other programs. This option assumes that the Office of the Governor could absorb costs related to the transfer of responsibility. The transfer of funding would be

contingent on the enactment of legislation to transfer the program to the Office of the Governor.

Option 2 would require LEOSE recipients to maintain LEOSE funds in a separate account within a local government's treasury. No fiscal impact is anticipated as a result of Option 2.

The introduced 2020–21 General Appropriations Bill does not include any adjustments as a result of these options.

IMPROVE OVERSIGHT OF THE TEXAS COUNTY JUDGE SALARY SUPPLEMENT

Texas has 254 constitutional county judges, one for each county. These judges serve as the presiding officers of the county commissioners courts and as the judges of the constitutional county courts. The position has executive, legislative, and judicial responsibilities. The Seventy-fifth Legislature, 1997, established a state-funded salary supplement of \$5,000 for constitutional county judges. The supplement is intended to compensate these judges for dedicating additional workload to judicial duties if at least 40.0 percent of the functions they perform are judicial functions. The Legislature has increased the supplement, and the Eighty-fourth Legislature, 2015, set the supplement at 18.0 percent of the annual compensation provided to a district judge in the General Appropriations Act, which was \$25,200 for fiscal year 2018.

Statute does not define judicial functions nor provide requirements conducive to quantifiable measurement and verification. Salary supplements are granted based upon an affidavit submitted by county judges. The State Auditor's Office has authority to audit county judge salary supplements; however, no audits have been performed, and supplements are unlikely to be audited due to the low amount of individual payments. No agency is tasked with verifying or monitoring whether recipients of the supplement perform the functions required in compliance with the law. The Office of Court Administration and the Comptroller of Public Accounts have received questions about judges' performing less than the amount of judicial functions required to obtain the supplement, but neither agency has the authority to audit the salary supplements. As a result, these agencies refer all complaints back to the counties. Without additional oversight, the state risks distributing funds to recipients that do not meet statutory requirements.

FACTS AND FINDINGS

- ◆ Judicial duties for a county judge include presiding over certain civil, probate, misdemeanor, juvenile, and mental health cases and performing magistrate duties.
- ◆ According to the Comptroller of Public Accounts, Judiciary Section, during fiscal year 2018, 220 of the 254 constitutional county judges received the state salary supplement.

- ◆ The county judge salary supplement is supported by a \$40 filing fee in civil cases and a \$15 criminal court cost collected by the county clerk where the judge is entitled to the supplement. The amounts collected from these charges are remitted to the Comptroller of Public Accounts for deposit in Judicial Fund No. 573 (Other Funds).
- ◆ The salary supplement is funded through General Revenue Funds and Other Funds from Judicial Fund No. 573. For the 2018–19 biennium, the county judge salary supplement is estimated to be funded with \$4.8 million in Other Funds from Judicial Fund No. 573 and \$6.4 million in General Revenue Funds.

CONCERNS

- ◆ Statutory language about salary supplement eligibility is not conducive to quantifiable measurement because an objective metric, such as percentage of work time or a specific number of cases, is not provided. Also, judicial functions are not defined in statute or administrative rules. Without an explicit definition, it is difficult to determine compliance with the salary supplement criteria.
- ◆ Constitutional county judge salary supplements are granted based solely on a county judge's affidavit. Additionally, limited data is available to help assess judicial function workload, such as case-level data regarding county judges' magistratical and pretrial activities.
- ◆ Although the State Auditor's Office has authority to audit county judge salary supplements, supplements are unlikely to be audited due to the low amount of individual payments. No audits have been performed. Moreover, neither the Comptroller of Public Accounts nor the Office of Court Administration has audit authority. Therefore, the state has limited oversight to ensure that are distributed to recipients who meet statutory requirements.
- ◆ Constitutional county judges are the only judges in Texas required to meet a 40.0 percent statutory performance measurement to receive a supplement.

Therefore, the statute lacks uniformity with other county-level supplements and salary requirements.

OPTIONS

- ◆ **Option 1** has the following three components to help ensure that state-funded salary supplements are distributed to constitutional county judges who meet statutory requirements:
 - **Option 1–A:** Amend statute to clarify that eligibility for the constitutional county judge supplement is based on 40.0 percent of work time addressing judicial functions and to require the Texas Judicial Council to define what qualifies as a judicial function for this purpose. Require the Office of Court Administration to develop a method to verify whether a constitutional county judge has met the eligibility criteria.
 - **Option 1–B:** Amend statute to require additional reporting of magistrate and pretrial activities from constitutional county courts to the Office of Court Administration to support the verification of county judge judicial workload. The statute also would require the Office of Court Administration to prescribe what data should be reported that is relevant to the salary supplement and make the data available online in the Office of Court Administration’s Court Activity Reporting and Directory System.
 - **Option 1–C:** Amend statute to require constitutional county courts to report to the Office of Court Administration the number of times per fiscal year a salary supplement is disputed. The statute also would authorize the Office of Court Administration to review documentation and make determinations in cases of disputed salary supplements. Include a contingency rider in the 2020–21 General Appropriations Bill to require the Office of Court Administration to include in its annual report to the Legislature and the Legislative Budget Board the number of times a salary supplement was disputed during the previous fiscal year. The rider also would require the Office of Court Administration to provide a summary report related to its review of disputed salary supplements.

- ◆ **Option 2:** Amend statute to remove the performance requirement of 40.0 percent of judicial function, authorizing all 254 constitutional county judges to receive the state supplement.

DISCUSSION

The county judge position in Texas is unique in that it can include executive, legislative, and judicial functions. Judicial functions for a county judge include hearing certain civil, probate, misdemeanor, juvenile, and mental health cases and performing magistrate duties. However, not all county judges perform judicial functions. In urban counties, the county judge typically devotes full attention to the administration of county government. Additionally, county judges are not required to be licensed attorneys, but must be “well-informed in the law of the state,” according to the Texas Constitution. According to a 2014 Office of Court Administration (OCA) study, 33 of the 254 county judges in the state are licensed to practice law. County judges are elected to four-year terms and serve as the presiding officers of the county commissioners courts and as judges of the constitutional county courts. Each commissioners court sets the county judge’s base salary; therefore, base salaries vary based on county size and budget.

The Texas Constitution establishes one constitutional county court for each of the state’s 254 counties. In addition to these, the Legislature has established statutory county courts to aid the constitutional county courts in their judicial functions. Texas has 246 statutory county courts serving 92 counties, and 162 counties do not have statutory courts. In counties without statutory county courts, also known as county courts-at-law, the constitutional county judges are the only judges with jurisdiction of Class A and Class B misdemeanors and probate matters. Without these constitutional courts, this workload would be added to the district courts, which would require statutory change to give district courts misdemeanor jurisdiction. Therefore, constitutional county courts have significant effects on court dockets. In counties with a statutory county court, the constitutional county judges primarily handle uncontested probate and guardianship caseloads. Without the constitutional county judges performing this function, the workload would be added to the statutory county courts. **Figure 1** shows a summary of judicial responsibilities among constitutional county courts and statutory county courts.

**FIGURE 1
CONSTITUTIONAL COUNTY JUDGES' JUDICIAL RESPONSIBILITIES AT COUNTY-LEVEL COURTS, 2018**

COUNTY-LEVEL COURT	COURTS	COUNTIES SERVED	COUNTIES WITH A STATUTORY COUNTY COURT	COUNTIES WITHOUT A STATUTORY COUNTY COURT
Constitutional County Courts	254	254	<ul style="list-style-type: none"> • Uncontested probate and guardianship 	<ul style="list-style-type: none"> • civil actions from \$200 to \$10,000; • uncontested probate and guardianship; • misdemeanors with fines greater than \$500 or jail sentence; • juvenile matters; and • certain appeals cases
Statutory County Courts (1)	246	92	<ul style="list-style-type: none"> • civil cases from \$200 to \$200,000; • uncontested probate and guardianship (1); • misdemeanors with fines greater than \$500 or jail sentence; • juvenile matters; and • certain appeals cases 	N/A (162)

NOTE: (1) The actual jurisdiction of each statutory county court varies according to the statute that established it. For example, a few statutory county courts hear felony cases. Some statutory courts may have higher maximum jurisdiction amounts. In a county that has a statutory probate court, it is the only court with probate jurisdiction. A statutory county court does not have the jurisdiction of a statutory probate court granted by the Texas Estates Code. Municipal, justice, and district courts also handle other types of cases.

SOURCE: Office of Court Administration.

OVERVIEW OF THE STATE-FUNDED SALARY SUPPLEMENT FOR CONSTITUTIONAL COUNTY JUDGES

The Seventy-fifth Legislature, 1997, established a state-funded salary supplement for constitutional county judges. The supplement originally was set at \$5,000 and was available to county judges if at least 40.0 percent of their performed duties are judicial functions. The supplement amount was increased to \$10,000 by the Seventy-sixth Legislature, 1999, and to \$15,000 by the Seventy-ninth Legislature, Regular Session, 2005. Senate Bill 1025, Eighty-fourth Legislature, 2015, amended the supplement to 18.0 percent of the annual compensation provided for a district judge in the General Appropriations Act, which was \$25,200 for fiscal year 2018.

The salary supplement is supported by a \$40 filing fee in civil cases and a \$15 criminal court cost in the county court collected by the county clerk where the judge is entitled to the supplement. The amounts collected from these charges are remitted to the Comptroller of Public Accounts for deposit in Judicial Fund No. 573 (Other Funds). Amounts collected in excess of the cost of the supplement are required to be returned to counties proportionally. The supplement is funded through General Revenue Funds and Other Funds (Judicial Fund No. 573). For the 2018–19 biennium, the county judge salary supplement is estimated to be funded with \$4.8 million in Other Funds (Judicial Fund No. 573) and \$6.4 million in General Revenue Funds.

By statute, most judges in Texas, with the exceptions of justices and municipal court judges, receive state funding for salaries or supplements. For example, the base salary of district judges is paid directly by the state. Several state and local judicial positions have state salaries or salary supplements that are linked statutorily to a district judge’s salary. However, only constitutional county judge salary supplements require a set amount of judicial functions to be met.

Figure 2 shows certain state and local judicial positions that receive salary supplements.

Figure 3 shows the amount of state appropriations for certain judicial supplements and salaries for the 2018–19 biennium.

IMPROVE OVERSIGHT OF THE STATE-FUNDED SALARY SUPPLEMENT FOR CONSTITUTIONAL COUNTY JUDGES

To help ensure that state-funded salary supplements are distributed to constitutional county judges who meet statutory requirements, the state should take steps in the following areas to improve oversight: (1) clarify eligibility requirements by basing them on quantifiable measures and defining what qualifies as a judicial function; (2) develop a method to verify whether a judge has met the eligibility criteria; (3) require additional reporting regarding magistrate and pretrial activities from constitutional county courts to OCA to include judicial functions performed outside of the courtroom; and (4) require constitutional county courts to

**FIGURE 2
COMPENSATION OF STATE AND LOCAL JUDICIAL POSITIONS, FISCAL YEAR 2018**

POSITION	STATE COMPENSATION	LOCAL COMPENSATION	MAXIMUM SALARY
District Judge	\$140,000	Up to \$18,000	\$158,000 (1)
Presiding Judge of the Administrative Judicial Region – Active	\$140,000	Up to \$33,000	\$173,000 (2)
Presiding Judge of Administrative Judicial Region – Retired or Former District Judge or Appellate Judge	N/A	\$35,000 to \$50,000	\$35,000 to \$50,000
Constitutional County Judge	\$25,200 supplement if claimed	Set by county commissioners court, varies based on county size and budget	N/A
Statutory County Judge	\$84,000	At least \$55,000	At least \$139,000
Statutory Probate Judge	\$40,000	At least \$100,000 (3)	None

NOTES:

- (1) Local administrative judges in counties with more than five judges are eligible to receive a salary supplement of \$5,000 annually from the state.
- (2) Active district judges who also are presiding judges of administrative judicial regions also may receive the salary supplement available to a district judge, making their maximum salary \$191,000.
- (3) The commissioners court sets the annual salary of each judge of a statutory probate court at an amount that is at least equal to the total annual salary received by a district judge in the county.

SOURCE: Legislative Budget Board.

report disputed supplements and authorize OCA to review documentation and determine disputed supplements.

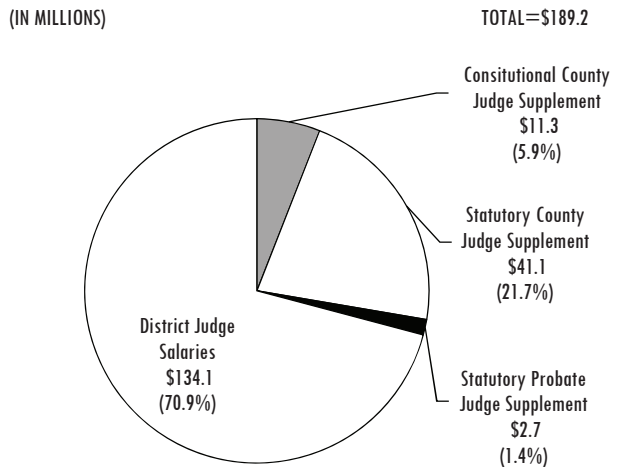
CLARIFY ELIGIBILITY REQUIREMENTS

The Texas Government Code, Section 26.006, requires that at least 40.0 percent of the county judge’s functions are judicial functions. The statute requires the judge to file an affidavit to certify that this requirement has been met.

The judicial responsibilities are set in the Texas Constitution, the Texas Administrative Code, and other statutes. However, judicial functions are not defined in any of these laws. Without an explicit definition, it is difficult to establish which activities may qualify a judge to receive the salary supplement.

For example, in 2015, in Austin County, the local auditor refused to disburse the supplement to the constitutional county judge, contending that the performance requirement was not met. The auditor asked the state to clarify the phrase judicial function. The Attorney General Opinion No. KP-0090, 2016, redirected interpretation to the exercise of statutory jurisdiction and did not specify which activities may qualify. The opinion also suggested that, if a county auditor has concerns regarding an improperly requested salary supplement, the auditor should confer with the Comptroller of Public Accounts (CPA) regarding disbursing the supplement.

**FIGURE 3
STATE APPROPRIATIONS FOR CERTAIN JUDICIAL SUPPLEMENTS AND SALARIES
2018–19 BIENNIUM**



NOTE: Salary and supplements are appropriated from General Revenue Funds and Other Funds (Judicial Fund No. 573) for the 2018–19 biennium.

SOURCE: Legislative Budget Board.

Option 1–A would amend the Texas Government Code, Section 26.006, to clarify that eligibility for the constitutional county judge salary supplement is based on 40.0 percent of work time addressing judicial functions. The amended statute also would require the Office of Court Administration,

Texas Judicial Council, to define what constitutes a judicial function for the purpose of providing the salary supplement.

The Forty-first Legislature, Regular Session, 1929, established the Texas Judicial Council to continuously study and report on the organization and practices of the Texas judicial branch. As the policy-making body for the state judiciary, the Texas Judicial Council studies methods to simplify judicial procedures, expedite court business, and better administer justice. It examines the work accomplished by the courts and submits recommendations for improvement of the system to the Legislature, the Office of the Governor, and the Supreme Court of Texas. The agency receives and considers input from judges, public officials, members of the state bar, and the public. The Texas Judicial Council would be positioned well to define what activities represent judicial functions considering the separation of powers among the legislative, executive, and judicial branches.

DEVELOP A METHOD TO MEASURE JUDICIAL WORKLOAD

Current statutory language makes it difficult to determine compliance with the salary supplement requirement that 40.0 percent of the functions that a constitutional county judge performs are judicial functions. The language is not conducive to quantifiable measurement because a metric, such as time or a set amount of functions, is not provided. The state cannot perform meaningful oversight or monitoring because the provision does not contain quantifiable metrics necessary for observation and review.

Option 1–A also would amend the Texas Government Code, Section 26.006, to require the Office of Court Administration to develop a method to verify whether a constitutional county judge has met the eligibility criteria.

In implementing this option, OCA could enhance its ability to measure the judicial workload of all county judges. It is difficult to monitor statutory compliance with salary supplement requirements due to limited data. However, a general baseline of workload could be established based on of a quantitative workload study. A workload study could be used at state and local levels to inform decisions about the needs of constitutional county courts and other judicial resources. By measuring the current judicial workload of these judges, the state could more effectively assess if judges are meeting the statutory requirement.

The National Center for State Courts published *Measuring Current Judicial Workload in Texas, 2007*, June 2008. The

study's charge was to evaluate how many judicial officers, including district judges, associate judges, masters, magistrates, and referees, are needed in Texas to provide the equitable handling of cases in district courts. The researchers calculated the average amount of work time that judicial officers devote to different types of cases. OCA uses those averages to estimate the resources needed in each district court based on case types. OCA could use a similar methodology to study constitutional county courts, assess the adequacy of judicial resources in each jurisdiction, and determine the approximate judicial workload of a county judge.

ENHANCE DATA REPORTING

Salary supplements are granted based on a county judge's affidavit about workload; however, no supporting documentation is required. Individual workload is difficult to verify because county judges also perform judicial duties outside of the courtroom, including magistratical and pretrial activities, and data regarding these activities is not collected or reported regularly.

The Texas Code of Criminal Procedure states magistrates' powers and duties, including issuing a warrant of arrest or a summons, finding probable cause, giving warning, and setting bail. Magistrates also may assess arrestees and recommend release or supervision of individuals released on bond. **Figure 4** shows the categories of case data that OCA collects by docket for constitutional county courts. OCA does not collect magistratical and pretrial activity data; however, this data could be included to support constitutional county judge affidavits.

Option 1–B would amend the Texas Government Code, Section 26.006, to require additional reporting on magistrate and pretrial activities from constitutional county courts to OCA to support the measurement of county judge judicial workload. The statute also would require that OCA prescribes what data should be reported that is relevant to the salary supplement and make the data available online through OCA's Court Activity Reporting and Directory System. This data can be used to assess statewide activity, facilitate analysis of constitutional county judge and court workload to inform decisions about the need for courts and other judicial resources, and promote transparency.

Option 1–B would support the Texas Judicial Council's June 2018 recommendation that, "The Judicial Council should collect case-level data from all courts and should expand the collection of data from magistrates." The Texas Judicial

**FIGURE 4
CONSTITUTIONAL COUNTY COURTS CASE CATEGORIES BY DOCKET, FISCAL YEAR 2018**

CRIMINAL	CIVIL	JUVENILE	PROBATE AND GUARDIANSHIP	COURT-ORDERED MENTAL HEALTH CASES
Driving While Intoxicated – First Offense	Injury or Damage – Motor Vehicle	Juvenile Cases – Adjudications and Findings of Conduct Indicating Need for Supervision	Independent Administration	Temporary Mental Health Services
Driving While Intoxicated – Second Offense	Other Injury or Damage	Delinquent Conduct Cases	Dependent Administration	Extended Mental Health Services
Theft	Real Property		All Other Estate Proceedings	Modification – Inpatient to Outpatient
Theft by Check	Contract – Consumer or Commercial Debt		Guardianship	Modification – Outpatient to Inpatient
Drug Possession – Marijuana	Contract – Landlord and Tenant		All Other Cases	Orders to Authorize Psychoactive Medications
Drug Possession – Other	Other Contract			
Family Violence Assault	Civil Cases Relating to Criminal Matters			
Assault – Other	All Other Civil Cases			
Traffic	Other Civil Cases			
Driving While License Suspended or Invalid				
Other Misdemeanor Cases				

SOURCE: Office of Court Administration.

Council acknowledges having insufficient information about magistrate and pretrial activities. The agency suggests capturing activities including the following: magistrate warnings, requests for counsel, emergency protection orders, emergency mental health hearings, orders for ignition interlock devices, and activities regarding bail amounts and pretrial release. Information regarding magistratical activities is limited to justices of the peace and municipal judges; however, as previously mentioned, constitutional county judges can perform magistrate duties.

AUTHORIZE OCA TO DETERMINE ELIGIBILITY FOR DISPUTED SALARY SUPPLEMENTS

Pursuant to the Texas Government Code, Chapter 321, the State Auditor’s Office (SAO) has general authority to audit the supplements because they are state funds. However, as of fiscal year 2018, no audits have been performed. State audits are unlikely to occur due to the SAO’s risk assessment process and the amounts of individual supplements. OCA and CPA each have received questions about judges not performing the amount of judicial functions needed to earn the supplement, but neither agency has the authority to audit

the salary supplements. As a result, these agencies refer all complaints back to the counties. Therefore, in the case of the Attorney General opinion suggesting that the county auditor and CPA consult when a judge’s eligibility is disputed, CPA is limited in its ability to provide reconciliation. For a disputed supplement, CPA asks the contesting party to work with the county auditor and judge to resolve the matter, or asks the judge to send CPA a written revocation of the current affidavit. Therefore, the state has limited oversight to ensure that state funds are distributed to recipients who meet statutory requirements.

Option 1–C would amend the Texas Government Code, Section 26.006, to require constitutional county courts to report to OCA the number of times per fiscal year a salary supplement is disputed. This data would be used to monitor statewide activity and identify trends to inform performance assessments and promote transparency. The statute also would authorize OCA to review documentation and determine eligibility for disputed salary supplements. Option 1–C also would include a contingency rider in the 2020–21 General Appropriations Bill to require OCA to include in its

annual report to the Legislature and the Legislative Budget Board the number of times a salary supplement was disputed during the previous fiscal year and to provide a summary report related to its review of disputed salary supplements.

REMOVE STATUTORY PERFORMANCE REQUIREMENT

As an alternative approach, the Legislature could remove the statutory performance requirement for constitutional county judges to achieve uniformity and similarity to other county-level supplements and salaries. Option 2 would amend the Texas Government Code, Section 26.006, to remove the requirement for 40.0 percent of judicial functions, authorizing all 254 constitutional county judges to receive the state supplement.

FISCAL IMPACT OF THE OPTIONS

Option 1 would direct state agencies to improve oversight of the county judge salary supplement through the following actions: clarifying eligibility criteria and defining judicial functions; developing a method to verify whether a county judge meets such eligibility requirements; requiring additional reporting regarding magistratical and pretrial activities and the number of disputed supplements; and authorizing the review of disputed salary supplements. This option is intended to help ensure that county judges who receive the supplement meet statutory requirements. It is assumed that Options 1–A, 1–B, and 1–C would have no significant fiscal impact to the state. However, local governments might incur a cost related to additional reporting requirements.

To provide the supplement for judges that do not receive it, Option 2 would result in a cost of \$856,800 in General Revenue Funds per fiscal year to the Judiciary Section, Comptroller's Department, based on current judicial compensation levels. If district judge salary increases, this amount would increase because a constitutional county judge's supplement is 18.0 percent of a district judge's salary that is set in the General Appropriations Act. With this increase, the cost of the constitutional county judge supplement would total \$13.0 million per biennium in General Revenue Funds and Other Funds.

The introduced 2020–21 General Appropriations Bill does not include any adjustments as a result of these options.

IMPROVE REPORTING FOR COSTS RELATED TO ONLINE HIGHER EDUCATION

The majority of college and university students attend all of their courses on physical campuses. However, the number of students enrolled in at least one distance education course at Texas public institutions of higher education increased 26.8 percent from fiscal years 2013 to 2017. As enrollment has increased in online higher education, institutions have growing interest regarding whether online courses can lead to student success, increase access, and decrease costs for institutions or their students. Research shows that online classes may increase access to education for nontraditional students, decrease certain fees, and enable students to continue working while enrolled in school. However, it is unclear whether students pay less for online education. As institutions invest in online education capabilities, they also may increase tuition and add technology fees.

As policy makers seek to decrease the financial burden of higher education on students, states have examined the tuition and institutional costs of online courses. Several entities in Texas have conducted studies to better understand the delivery of online education, including the Texas Higher Education Coordinating Board, the State Auditor's Office, and the Legislative Budget Board. These studies found results that were consistent with previous findings, finding that it is difficult to track and compare expenditures of online education across institutions. Many institutions use the same faculty, staff, and technological resources for online and on-campus courses. Additionally, institutions' accounting systems do not always separate expenses by mode of instruction. A standardized accounting method for costs by mode of instruction across institutions would enable policymakers and administrators to better evaluate the costs of delivering higher education as the modes of instruction evolve.

FACTS AND FINDINGS

- ◆ In spring 2017, 7.0 percent of university undergraduate students enrolled in all of their courses through online distance education, compared to 15.2 percent at community and technical colleges. Overall, 11.9 percent of university, community, and technical college students in Texas were enrolled exclusively in online undergraduate courses.

- ◆ The Texas Higher Education Coordinating Board's 2013 Report on the Cost of Distance Education found that it was difficult to collect uniform cost information. Institutions use diverse accounting practices, and the integration of technology and teaching across various types of courses, including on-campus instruction, varies.
- ◆ A Legislative Budget Board survey found that 91.1 percent of surveyed Texas institutions of higher education do not track expenditures for online and on-campus courses separately.

CONCERNS

- ◆ Institutions of higher education are not required to measure the cost of online education compared to traditional delivery methods. Despite continued growth in enrollment and semester credit hours associated with online education, most institutions do not track costs separately. Consequently, limited data is available to determine whether online education results in cost savings or additional expenses for the state and institutions.

OPTION

- ◆ **Option 1:** Amend statute to require the Texas Higher Education Coordinating Board to develop an accounting method that could be used by general academic institutions and public community and technical colleges to standardize and separate the reporting of expenditures and revenue related to delivering education online and on-campus. The agency would be required to report to the Legislature and the Legislative Budget Board, no later than September 1, 2020, the methodology and costs associated with implementation of the accounting method.

DISCUSSION

Distance education encompasses numerous modes of instruction, including study abroad, dual credit, online courses, and interinstitutional course agreements. In fall 2017, statewide distance education courses made up 19.1

FIGURE 1
STUDENTS AT TEXAS INSTITUTIONS OF HIGHER EDUCATION ENROLLED ONLY IN UNDERGRADUATE COURSES IDENTIFIED AS FULLY DISTANCE EDUCATION, SPRING 2017

INSTITUTION	TOTAL STUDENTS	STUDENTS ENROLLED IN FULLY DISTANCE EDUCATION	PERCENTAGE ENROLLED IN DISTANCE EDUCATION
Public Universities	471,862	32,879	7.0%
Community and Technical Colleges	703,447	107,134	15.2%
Total	1,175,309	140,013	11.9%

SOURCE: Texas Higher Education Coordinating Board.

percent of total semester credit hours at public universities and 36.7 percent at community and technical colleges.

The Texas Higher Education Board (THECB) categorizes distance education courses that are delivered primarily online as “fully distance education” courses. To be included in this category, mandatory on-campus attendance cannot exceed 15.0 percent of instructional time. Mandatory on-campus attendance may include orientation, laboratory time, exam review, or an in-person test. In a hybrid or blended course, from 50.0 percent to 85.0 percent of the planned instruction occurs when the students and instructor are not in the same location. Fully distance education, or online education, represents the majority of all distance education offerings at Texas public universities, and nearly half of all distance education semester credit hours at community and technical colleges. **Appendix A, Figures A-1 and A-2**, show the amount of fully distance education semester credit hours as a percentage of overall distance education, and as a percentage of total semester credit hours for Texas public universities and state, community, and technical colleges.

Although online education is the most common form of distance education, it represents a small share of overall semester credit hours. In fall 2017, 14.3 percent of total statewide credit hours at Texas public universities were online, compared to 18.3 percent of total statewide credit hours at community and technical colleges. Particularly for Texas public universities, the percentage of total credit hours of online education varies widely by institution. These institutions share common goals of instruction, research, and public service, and each also has a unique regional or statewide mission. For example, in fall 2017, fewer than 4.0 percent of total semester credit hours attempted at the University of Texas (UT) at Austin were primarily online. In comparison, nearly 50.0 percent of total credit hours attempted at the University of Texas of the Permian Basin were offered online. UT at Austin is a research university with more than 50,000 students enrolled during fall 2017;

UT of the Permian Basin is a master degree-granting institution with approximately 7,000 students.

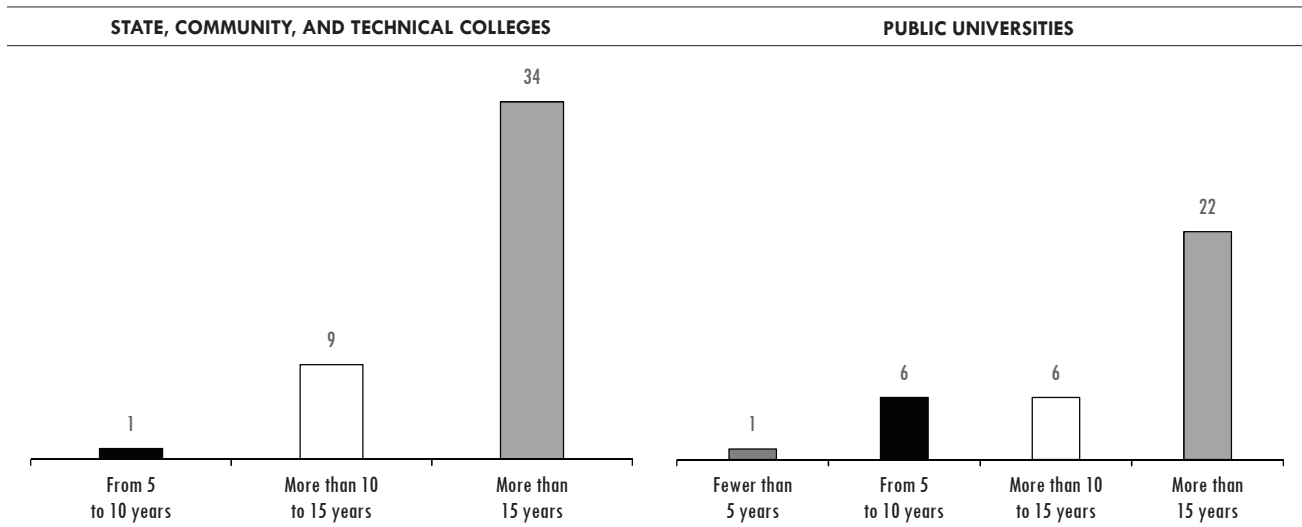
In terms of enrollment, as shown in **Figure 1**, 7.0 percent of Texas university undergraduate students were enrolled only in fully distance education classes in spring 2017, compared to 15.2 percent at community and technical colleges, accounting for 11.9 percent of students overall. The number of students enrolled in at least one distance education course at Texas public institutions of higher education increased 26.8 percent from fiscal years 2013 to 2017. As a result, these students require resources for online and on-campus classes.

LEGISLATIVE BUDGET BOARD ONLINE HIGHER EDUCATION SURVEY

In an effort to better understand the context of online higher education in Texas, Legislative Budget Board (LBB) staff surveyed public universities and state, community, and technical colleges. The survey was based in part on the State Auditor’s Office (SAO) 2011 report on distance education. SAO surveyed the 37 public general academic institutions of higher education in Texas that offer undergraduate degrees and asked about their experiences implementing distance education at various locations, including on-campus and electronic media delivery. In 2012, LBB staff completed a similar overview of online distance education at Texas community college districts, receiving 40 complete responses for a response rate of 80.0 percent.

In September 2018, LBB staff sent an updated survey that focused on the cost of delivering online education. This survey specifically asked institutions about their online higher education programs, as opposed to distance education overall. Among the 37 public universities, or general academic institutions, LBB staff received 35 responses, one of which accounted for a system with two universities. Forty-four state, community, and technical colleges responded to the survey. Among the 50 community college districts, one district responded at the campus level, and others responded

FIGURE 2
YEARS THAT TEXAS INSTITUTIONS OF HIGHER EDUCATION HAVE OFFERED ONLINE COURSES
SEPTEMBER 2018



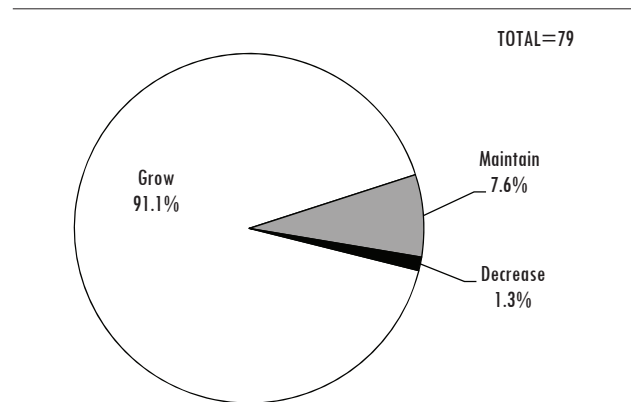
SOURCE: Legislative Budget Board 2018 Online Higher Education Survey.

as a system. Four community colleges responded at the system level, representing 19 campuses. The technical colleges also responded as a system, representing six individual campuses. **Appendix A, Figure A-3**, shows institutions that responded to the survey.

The results of the survey provide an overview of online education, with particular emphasis on the cost of providing online courses. Many Texas institutions are accustomed to offering online education. As shown in **Figures 2 and 3**, a majority of institutions surveyed have offered online courses for more than 15 years, and more than 90.0 percent of surveyed institutions and systems seek to grow the number of online classes offered.

The LBB’s 2018 online higher education survey had similar findings regarding tuition to a 2015 survey conducted by THECB’s Learning Technology Advisory Committee (LTAC). LTAC used the survey results to gain a better understanding of online education and the use of learning technologies. Nearly half of Texas public institutions of higher education responded to LTAC’s survey, along with seven independent colleges and universities. Among institutions surveyed by LTAC regarding price, 49.0 percent of institutions reported that they had the same tuition and fee structures for online courses, and 42.0 percent reported that tuition costs were greater for online courses. **Figure 4** shows that 96.2 percent of responding institutions in the

FIGURE 3
PERCENTAGE OF SURVEYED TEXAS INSTITUTIONS OF HIGHER EDUCATION SEEKING TO GROW THE NUMBER OF ONLINE COURSES OFFERED
SEPTEMBER 2018

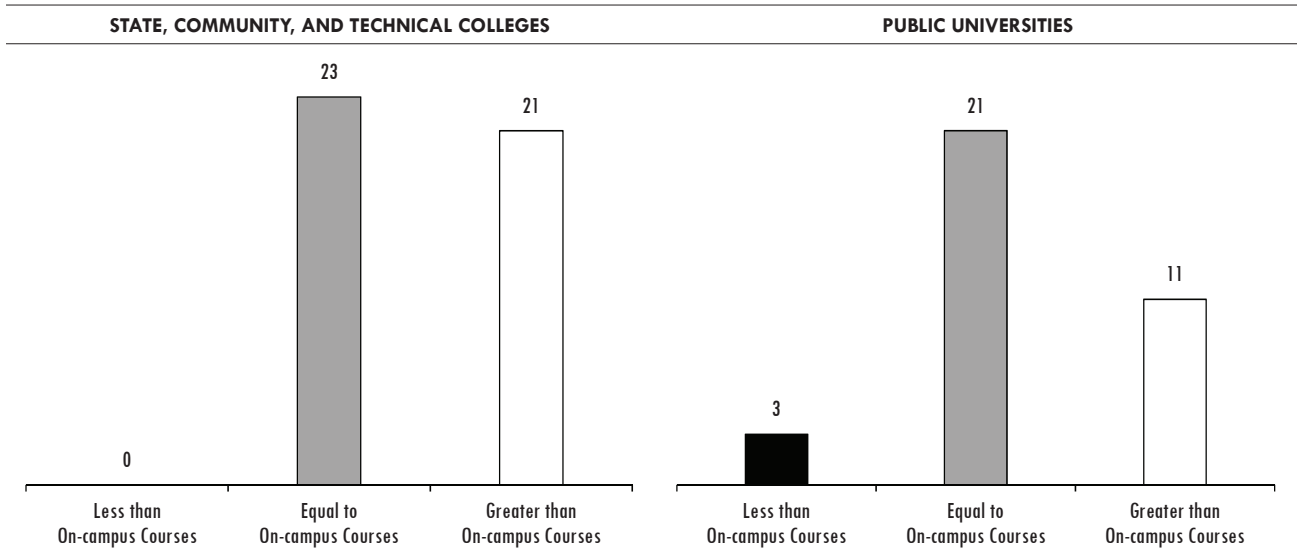


SOURCE: Legislative Budget Board 2018 Online Higher Education Survey.

LBB’s survey charge the same tuition or more for online courses compared to on-campus courses.

With enrollment growing and plans for expansion, Texas institutions have a vested interest in understanding how online courses affect the higher education system. The current Texas Higher Education Strategic Plan, *60x30TX*, outlines the priorities of the state’s higher education system. The overarching goal is that, by fiscal year 2030, 60.0 percent

**FIGURE 4
TUITION AND FEES OF ONLINE COURSES COMPARED TO ON-CAMPUS COURSES AT TEXAS INSTITUTIONS OF HIGHER EDUCATION, SEPTEMBER 2018**



SOURCE: Legislative Budget Board 2018 Online Higher Education Survey.

of the population ages 25 to 34 in Texas will earn a certificate or degree. One institution responding to the survey reported that online courses enable it to serve older students and nontraditional students, and other institutions are seeking to provide additional options through online learning to more traditional students on campus. *60x30TX* recognizes that enrolling in college can mean attending courses on-campus or online. As a result, online courses have the potential to increase access to education and the number of degrees earned.

The *60x30TX* plan also focuses on student debt with its goal that, by fiscal year 2030, undergraduate student loan debt will not exceed 60.0 percent of first-year wages for graduates of Texas public institutions. Online education may decrease costs for students by eliminating the need to travel to campus or secure childcare. However, institutions may need to invest in technology and course development, which can increase costs that are passed on to students. As a result, questions remain about whether online education can lead to cost savings for students and institutions, or whether the purpose of online courses is to increase access and meet demand.

**DEVELOPMENT OF ONLINE COURSES
IN HIGHER EDUCATION**

THECB approves each higher education course based on its mode of instruction. For courses delivered online, THECB evaluates whether statewide demand for the course exists, as

opposed to the demand for on-campus courses within a 50-mile radius. Before an institution adopts a new distance education course, it must submit a plan to THECB that explains how distance education fits into the institution’s mission, how it will be evaluated, and what support services exist for students and faculty, among other criteria. This submission requirement applies only to institutions that have never offered distance education.

According to LBB’s 2018 survey, demand is one of the most cited factors in an institution’s decision to develop and deliver an online course, followed by faculty willingness to develop or teach an online course. Institutions were asked to rank which of five factors had the greatest influence on the decision to develop and deliver an online course, with a ranking of one being the most influential. Other factors included funding availability, availability of staff to provide technical assistance, and the need to purchase additional equipment. Institutions cited the need to purchase additional equipment as the least important factor when considering to develop and deliver an online course.

To maintain quality, THECB established a set of standards that institutions must use when they are developing and delivering online courses and programs. The Principles of Good Practice for Academic Degree and Certificate Programs and Credit Courses Offered Electronically include the

following guidelines for institutions developing online courses:

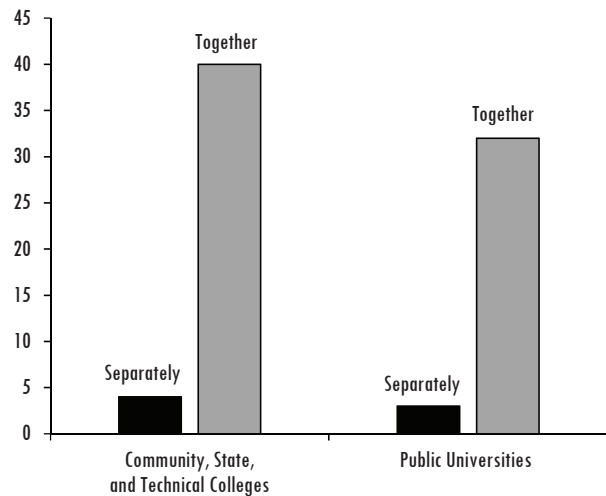
- it is the institution's responsibility to review educational programs and courses it provides electronically and certify continued compliance with these principles;
- academic standards for all programs or courses offered electronically will be the same as those for programs or courses delivered by other means at the institution where the program or course originates;
- student learning in programs or courses delivered electronically should be comparable to student learning in programs offered at the campus where the programs or courses originate; and
- the institution evaluates the program's or course's educational effectiveness, including assessments of student learning outcomes, student retention, and student and faculty satisfaction.

THECB is reviewing these principles, originally adopted in 1997 and last updated in March 2010, to establish a definition of effective online education and a uniform standard of assessment for Texas institutions of higher education. These principles, and the responses from institutions in LBB's survey, emphasize that demand, quality, and student success remain priorities, regardless of how a course is delivered.

DETERMINING THE COST OF ONLINE HIGHER EDUCATION

As online higher education becomes more prevalent, the impact of online courses on cost and state funding is unclear. Texas institutions of higher education are not required to measure the cost of online education compared to more traditional delivery methods, and few institutions separate their expenditures in this way, as shown in **Figure 5**. Despite continued growth in enrollment and semester credit hours associated with online education, most institutions do not track costs separately. THECB conducts an annual expenditure study that determines the average cost of instruction by program; however the study does not report a separate cost for each mode of instruction. A majority of surveyed institutions had to estimate expenditures and revenue related to online courses or were unable to separate them from other modes of instruction. Consequently, little is known about the comparative costs of developing and delivering online courses across higher education and the impact that these costs have on student tuition.

FIGURE 5
TEXAS INSTITUTIONS OF HIGHER EDUCATION THAT TRACK EXPENDITURES RELATED TO ONLINE AND ON-CAMPUS COURSES SEPARATELY
SEPTEMBER 2018



SOURCE: Legislative Budget Board 2018 Online Higher Education Survey.

THECB, SAO, and LBB staff previously found that distance education-related expenditures and revenues are not readily available. Collecting cost information is complicated by the overlapping use of technology in on-campus and online courses, which makes it challenging for institutions to determine how to assign the cost of resources. In addition, definitions of distance education expenditures and revenue vary across institutions, meaning that data is not comparable. As a result, it is difficult to determine whether the state could realize savings as institutions increase the number of online courses available to students, or if it should make additional investments.

In its 2013 Report on the Cost of Distance Education, THECB found significant diversity in distance education costs, projected costs, and course effectiveness across public institutions. The agency acknowledged that it would be difficult to develop a standardized measure for calculating the cost to develop online courses across the various institutions, considering diversity in size and resources. According to THECB, institutions use the accounting categories developed by the National Association of College and University Business Officers (NACUBO). NACUBO developed these categories before the growth of online learning; therefore, the categories do not differentiate costs by mode of instruction. Consequently, many institutions do

FIGURE 6
FULL-TIME AND PART-TIME STAFF (NOT FACULTY) EMPLOYED TO DEVELOP AND DELIVER ONLINE EDUCATION, BY TEXAS HIGHER EDUCATION INSTITUTION TYPE, 2016–17 BIENNIUM

INSTITUTION	MINIMUM	MAXIMUM	AVERAGE
Public Universities (1)	0.0	70.0	10.6
Community and State Colleges	0.0	25.0	2.8
Community and Technical College Systems	0.0	70.0	31.6

NOTE: (1) One university responded for two campuses, and one university did not respond.
 SOURCE: Legislative Budget Board 2018 Online Higher Education Survey.

not have accounting systems programmed to report the costs of online education separately from the costs of education delivered on-campus. However, the report recommended that THECB should work with a committee of representatives from Texas public institutions to develop a cost methodology and tool for uniform data collection of online education costs. The tool should capture direct costs, such as instructional configuration, and indirect costs, such as facilities maintenance. According to THECB, the agency has not developed a uniform tool for data collection due to the complexity of the issue and the extensive staff resources it would require.

LBB staff inquired with two institutions that separate expenditures by mode of instruction to allocate resources to online learning and academic departments. Both of these institutions have developed detailed accounting codes and have tracked separate expenditures by mode of instruction for at least nine years. As educational offerings have evolved, including the development of hybrid courses, these institutions are reevaluating how to allocate costs and revenue for courses delivered through a combination of instructional modes. The allocation of resources and expenses can vary by institution. One institution has an online learning department that delivers course work and receives revenue from fully online courses. The other institution distributes distance education revenue directly to individual departments for instructional salaries. Both institutions track the revenue and expenditures of online learning resources centrally, including the institutions’ learning management system, which is a virtual platform that allows faculty to manage course content, communicate with students, and track online instruction and student outcomes. However, other institutions can track this data at the department level.

COST DRIVERS IN ONLINE HIGHER EDUCATION

Although it can be difficult to track expenditures separately, institutions have identified cost drivers when developing and delivering online courses compared to on-campus instruction.

These cost drivers include faculty training, learning management systems for course delivery, technical infrastructure, and student support services. To gain a better understanding of cost, the LBB’s 2018 survey asked institutions to define the major cost categories that they used to determine the actual or estimated online course expenditures for fiscal year 2017. Most respondents answered that faculty and staff salaries and associated benefits were the primary cost driver. Other reported expenses include the learning management system, marketing, and equipment. Multiple institutions cited being certified or working toward Quality Matters program certification to ensure quality and effectiveness within their online offerings. Quality Matters is a subscription-based, quality-assurance program that provides guidance for improving online courses and training for faculty and staff.

Some institutions dedicate staff to provide technical support, review online courses, and assist with instructional design and course development. However, staff at other institutions can be cross-functional and provide technical or other support services regardless of instructional methodology. **Figure 6** shows the minimum, maximum, and average number of staff reported by institutions to be assisting only with the development and delivery of online education.

Professional development for faculty that teach distance education is an additional expense for institutions, because faculty may not have formal training focused on teaching online courses. Some institutions require faculty to be trained in online course delivery, and others provide optional trainings. **Figure 7** shows the minimum, maximum, and average hours of training required before faculty can teach an online course, according to LBB’s 2018 survey.

The types of faculty training also can vary by institution. **Figure 8** shows the most common forms of professional development reported by institutions, including on-campus courses, online courses, and webinars. According to survey

**FIGURE 7
HOURS OF PROFESSIONAL DEVELOPMENT REQUIRED FOR TEACHING ONLINE COURSES BY TEXAS HIGHER EDUCATION
INSTITUTION TYPE, 2018**

INSTITUTION	MINIMUM	MAXIMUM	AVERAGE
Public Universities (1)	0.0	40.0	7.4
Community and State Colleges	0.0	72.0	10.8
Community and Technical College Systems	2.0	40.0	17.2

NOTE: (1) One university responded for two campuses, and one university did not respond.
SOURCE: Legislative Budget Board 2018 Online Higher Education Survey.

responses, 39.2 percent of institutions also provide faculty incentives for teaching online courses, including stipends for teaching large classes, course development, course delivery, and attending workshops.

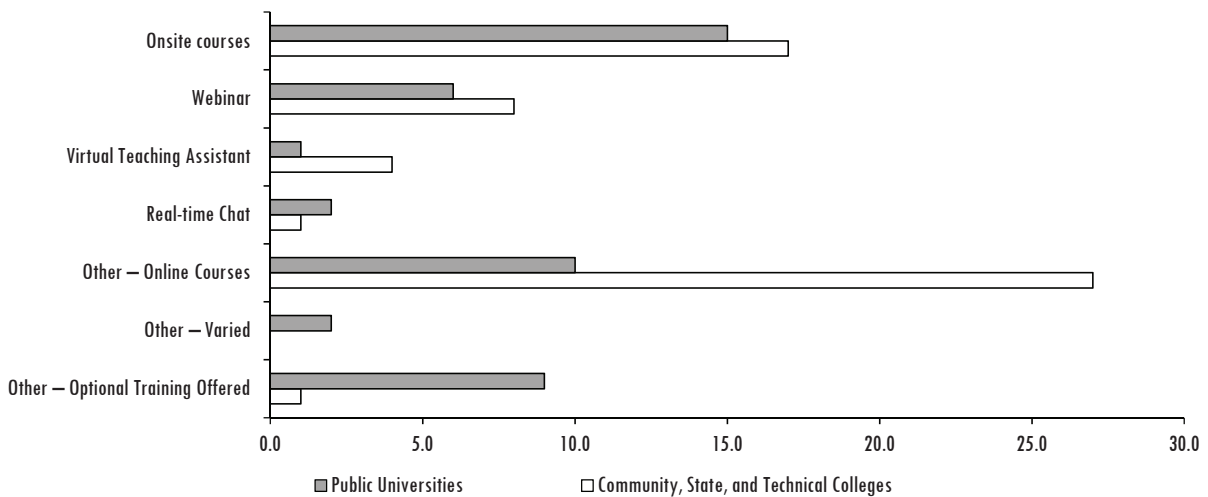
To offset costs related to distance education, 60.0 percent of surveyed public universities collect a distance education fee, as do 52.3 percent of state, community, and technical colleges. For students that enroll in online courses only, many schools offer exemptions for common on-campus expenses, such as recreation and student center fees. These exemptions affect a small number of students at some institutions.

Consistent with prior findings, LBB’s 2018 survey found that it is difficult to measure how much institutions are spending on online education, which complicates efforts to determine the influence of online education on potential changes in state funding. However, this form of education has continued to increase, as institutions work to meet the needs of students,

and the technology will continue to evolve. Balancing the needs of students and funding of online higher education will continue to be an important topic for the Legislature.

To better understand the cost of delivering online education and more traditional delivery methods, Option 1 would amend statute to require THECB to develop an accounting method that could be used by general academic institutions and public community and technical colleges to standardize and separate the reporting of expenditures and revenue related to delivering education online and on-campus. THECB would be required to report to the Legislature regarding the costs associated with implementing the accounting method. This option would provide the Legislature with the most feasible approach to determining relative costs by mode of instruction and a realistic assessment of costs associated with its implementation. If it subsequently chose to require institutions to account for costs in this way, the Legislature

**FIGURE 8
TYPES OF FACULTY PROFESSIONAL DEVELOPMENT REQUIRED TO TEACH ONLINE COURSES AT TEXAS INSTITUTIONS OF
HIGHER EDUCATION, SEPTEMBER 2018**



NOTE: Institutions could select multiple items. Responses marked as other were coded based on common descriptions provided.
SOURCE: Legislative Budget Board 2018 Online Higher Education Survey.

could identify a need for additional investments in online education or opportunities for savings as the use of online education continues to increase and evolve.

INFRASTRUCTURE FUNDING AND ONLINE HIGHER EDUCATION

In addition to institutions not distinguishing costs by delivery method, state formula funding for institutions of higher education also does not differentiate between online and on-campus courses.

Typically, formula funding for higher education in Texas varies by institution type and program level, and it is a means of distributing state funds to institutions for various expenditures, including faculty salaries, administration, student services, libraries, and other support. Formulas do not institute a statutory or constitutional entitlement. Informational strategies in the state budget represent how state funds are allocated. However, higher education entities, unlike other state agencies, are not required to spend appropriations within a specified strategy, with a few exceptions. Courses are weighted for general academic institutions through the Instruction and Operations formula, which multiplies the number of semester credit hours by the program level and weighted discipline, along with a standard rate based on available funding. Semester credit hours are not counted differently based on the mode of instruction in this formula. Approximately 85.0 percent of formula funds for public general academic institutions are calculated through this formula. Funding varies among two-year public institutions, including state, community, and technical colleges. Community colleges receive tuition, fee, and local tax revenues that augment appropriations of state General Revenue Funds. State and technical colleges receive General Revenue Funds based on formulas for two-year institutions allocated by either contact hours or returned valued to the state. A contact hour is a unit of measure that represents an hour of scheduled instruction given to students, of which 50 minutes is direct instruction.

As the number of online courses grows, institutions may avoid costs for building new infrastructure because these courses would not depend on available teaching space. Approximately 15.0 percent of formula funds for general academic institutions are distributed through the Infrastructure Support Formula and Small Institution Supplement. Institutions with enrollments of fewer than 10,000 receive funding through this supplement in addition to the Infrastructure Support Formula. The Infrastructure

Support Formula is calculated using a set utility rate and a rate that accounts for physical plant, grounds, maintenance, and custodial services. This amount is multiplied by the predicted square footage for each institution, which is calculated using the Space Projection Model, developed by THECB. For general academic institutions, the amount of teaching space (classrooms, laboratories, meeting rooms, etc.) is predicted using the number of full-time-student equivalents by program. Space is predicted based on the program area, with each area allotted square footage per student based on specific needs. The model also accounts for office space, calculated based on the larger of the number of full-time-equivalent faculty or educational and general expenditures. The Space Projection Model does not account for the proportion of courses delivered outside of on-campus teaching space.

Community colleges do not receive state funding for physical plant operations or maintenance, which are supported by local taxes. They are funded using formulas that include core operations, student success, and contact hours. Each college receives the same biennial amount in General Revenue Funds for core operations to cover operating costs. For the 2018–19 biennium, 11.0 percent of the remaining funds were distributed based on student success points, and 89.0 percent of the funds were distributed based on the number of contact hours. Funding formulas do not distinguish between online and on-campus courses.

The Eighty-fourth Legislature, General Appropriations Act, 2016–17 Biennium, required THECB to study the Space Projection Model and recommend potential updates for the space prediction calculations. THECB has found that the model predicts an excess amount of space, even when accounting for growth. The amount of teaching space needed has not increased as much as the model predicted. The amount of predicted office space compared to actual square footage did not vary as much statewide, but the space varied widely among institutions.

THECB staff also evaluated online education by comparing the number of semester credit hours taught fully online as a percentage of the total number of credits. THECB found that it may need to consider the differences in space needs as more courses are offered fully online. THECB also found that, although salary and benefits costs typically are the same for both modes of instruction, facility costs may be an area of savings related to online courses. However, the THECB study cautions that fully online courses often are attended by full-time resident students at the institution. Because the

Space Projection Model accounts for space devoted to teaching, research, offices, libraries, and support, THECB could isolate the effect of online education on the teaching category. **Figure 9** shows the estimated amount of teaching space required for different types of rooms. The report found that 44.0 percent of predicted teaching space includes classrooms and laboratories, which typically are not needed for fully online classes.

Among the recommendations in the 2016 report, THECB proposed that 50.0 percent of predicted square footage for teaching should be adjusted by the percentage of courses reported fully online. Hybrid courses would receive the full predicted space. THECB recommended that the adjustments should not decrease funds. Instead, the agency would reallocate funds across institutions to increase efficiency.

According to THECB, this adjustment would have the following benefits:

- consider the need for other types of teaching space being required or available, including when the course was fully online;
- remove the need for the actual classroom or class laboratory when the course was fully online;
- retain the need for the classrooms and laboratories when the course was a hybrid or other type of online course; and
- retain the need for library, research, office, and support space.

If this recommendation were implemented, institutions that have a higher percentage of online courses would see a decrease in the amount of predicted teaching space calculated for the Space Projection Model. The Eighty-fifth Legislature, Regular Session, 2017, did not adopt the recommendations in the 2016 report.

EVALUATING COST OF ONLINE HIGHER EDUCATION IN OTHER STATES

Other states also have explored methodologies for determining online course costs. In Wyoming, the state's community colleges developed a common accounting system to ensure that course costs could be compared and evaluated. Administrators used this information to calculate the cost of delivering online education at community colleges. The evaluation of one college with a large percentage of online classes found that these courses cost 23.2 percent less than on-campus courses. In 2016, Wyoming Legislature

**FIGURE 9
PREDICTED TEACHING SPACE FROM THE TEXAS HIGHER
EDUCATION COORDINATING BOARD SPACE PROJECTION
MODEL, CALENDAR YEAR 2016**

ROOM TYPE	SQUARE FEET PER FULL-TIME-STUDENT EQUIVALENT
Classroom	11.0
Class laboratory	8.0
Special class laboratory	3.0
Self-study laboratory	3.0
Physical education, demonstration, audiovisual, etc.	10.0
Assembly, lounge, meeting rooms, etc.	5.0
Service space	5.0
Total	45.0

SOURCE: Texas Higher Education Coordinating Board.

subsequently redefined funding for community colleges by the level and type of course, allocating distance education courses 80.0 percent of the funding that on-campus courses receive. The legislation resulted in lower levels of funding for institutions with more online classes; however, one community college reported that decreased funding has not prevented the college from offering online courses and meeting students' needs.

Similarly, Florida has evaluated its online higher education system and adjusted its online degree programs and expenditure tracking. During calendar year 2013, Florida established UF Online, which offers courses exclusively online and is required to charge students a lower price. The University of Florida awards all UF Online degrees, and online degrees do not differ from degrees earned through on-campus courses. Tuition for online courses and programs may not exceed 75.0 percent of the regulated in-state tuition rate, and tuition must cover costs associated with instruction, materials, and enrollment, excluding the costs of textbooks and physical laboratory supplies. UF Online students are not charged fees for activity and services, health, transportation, and athletics. The Florida Legislature later added an option for online students to pay the fee package for access to on-campus services. During 2014, one school official estimated that online students would pay about 36.0 percent less than residential students. For school year 2018–19, tuition and fees for UF Online are estimated to be \$3,876, nearly half the standard \$6,380 cost of on-campus attendance.

During calendar year 2016, the Florida Board of Governors developed a methodology for calculating the cost of delivering online education. The methodology included the following four categories of common and unique costs for institutions: online course and faculty development, technology and infrastructure, support services, and administrative services. An Affordability Workgroup developed the following three tasks for determining the cost of online education:

- (1) determine and define the elements that should be captured for the cost model and obtain data from institutions;
- (2) develop models to achieve cost savings and cost avoidances in the development and delivery of online education; and
- (3) optimize the use of the distance education course fee to enhance the design, development, and delivery of online education.

The report found that the average cost of learning can change as institutions become more experienced in offering distance education. In addition, 42.0 percent of incremental costs across the State University System of Florida funded the development of online courses. These costs can include developing content, accessibility captioning, faculty and staff training, instructional designers, and programming. The remaining costs covered the delivery of high-quality online education to students, such as library resources and student services. The report also noted how the Florida Legislature and institutions work to decrease costs. Florida public institutions have access to shared services, including student-focused support, professional development, and a statewide learning management system. Furthermore, the study found that the increase in fully online students who typically would have received classroom instruction could enable institutions to avoid spending \$184.3 million to build new classroom space during a five-year period.

It is unclear whether costs for delivering online education are lower than those for on-campus courses. One recent report on distance education stated that online classes were intended to increase access to education, not necessarily to control costs. Texas institutions have reported that offering more online and hybrid courses and using an online learning management system can result in cost efficiencies. However, institutions also reported that the start-up, maintenance, and replacement of needed technology can be costly. Faculty, students, and staff also may require additional training to effectively use many of these technologies. Because

institutions do not report the cost of distance education expenditures separately, it is difficult to draw conclusions based on estimated expenditures and revenue.

In North Carolina, the Program Evaluation Division of the General Assembly found that distance education courses cost more to develop, but cost about the same to deliver as those taught on campus. The report reviewed the start-up and ongoing costs of distance education throughout the University of North Carolina System. The increased cost was due to staff support needed to develop or convert courses for distance education. Faculty reported that distance courses require more upfront preparation during the conversion process and throughout the course, because faculty must measure student participation and engagement. According to the report, which was similar to THECB's findings, technology has changed the delivery of instruction across multiple settings, with no clear distinction between online and on-campus instruction.

In Georgia, a recently completed audit of online education within 29 University System of Georgia institutions found that the primary purpose of online education was to increase access to educational opportunities, not necessarily to reduce cost. As a result, the report focused on the price of online education for students. The state regulates tuition for on-campus courses, and institutions can set online tuition rates. These separate processes resulted in online tuition rates that tended to be higher than rates for classroom courses. When determining tuition for online courses, universities individually considered the online education market, classroom tuition rates, and the cost of technological components.

Following the Georgia system's audit, the Board of Regents now approves online tuition rates. Georgia also has an online initiative called eCore, which offers online general education classes at a set rate of \$159 per credit hour. Program administrators use historical cost data to determine the tuition needed to fund the program. Additionally, the report found that students at several institutions saved money by enrolling in the eCore courses instead of online courses offered by their institutions.

These inconclusive findings highlight the diverse nature of delivering higher education and the difficulty making comparisons across institutions and systems. The effects of regulation, state support, student characteristics, accounting processes, and administrative structure all can influence the

cost of delivering online education and the tuition paid by students.

FISCAL IMPACT OF THE OPTION

Option 1 would require THECB to develop an accounting method that could be used by general academic institutions and public community and technical colleges to standardize and separate the reporting of expenditures and revenue related to delivering education online and on-campus. THECB has indicated that they do not have the expertise to develop a collection tool for identifying online education costs, and would need to hire a consultant at a cost of \$200,000. THECB would be required to report to the Legislature regarding the costs associated with implementing the accounting method. THECB estimates transactional costs and an administrative burden associated with any standardized methodology for allocating costs by mode of instruction, but the amount is unknown at this time.

Of the institutions that allocate costs differently, two had to develop specific accounting codes and have more centralized structures. They described this practice as a regular part of their business operations. If the Legislature chose to require institutions to implement the standardized method, it is unknown whether the information identified would show online education to be more or less costly to deliver than traditional modes of instruction, and how this could influence funding decisions.

The introduced 2020–21 General Appropriations Bill does not include any adjustments as a result of this option.

APPENDIX A

FIGURE A-1
PROPORTION OF SEMESTER CREDIT HOURS THAT ARE PRIMARILY ONLINE COURSES AT TEXAS PUBLIC UNIVERSITIES
FALL 2017

INSTITUTION	PROPORTION OF OVERALL DISTANCE EDUCATION SEMESTER CREDIT HOURS THAT ARE FULLY DISTANCE EDUCATION (1)	PROPORTION OF TOTAL SEMESTER CREDIT HOURS THAT ARE FULLY DISTANCE EDUCATION
Angelo State University	94.5%	13.6%
Lamar University	96.0%	37.1%
Midwestern State University	95.0%	16.9%
Prairie View A&M University	56.0%	6.1%
Sam Houston State University	96.1%	23.0%
Stephen F. Austin State University	84.7%	14.7%
Sul Ross State University, Rio Grande College	55.1%	44.4%
Sul Ross State University	86.7%	21.2%
Tarleton State University	67.9%	17.9%
Texas A&M International University	88.0%	12.6%
Texas A&M University	84.3%	9.3%
Texas A&M University at Galveston	16.2%	3.2%
Texas A&M University – Central Texas	92.6%	42.9%
Texas A&M University – Commerce	76.6%	39.5%
Texas A&M University – Corpus Christi	86.0%	11.8%
Texas A&M University – Kingsville	47.5%	7.3%
Texas A&M University – San Antonio	20.4%	6.3%
Texas A&M University – Texarkana	78.9%	35.5%
Texas Southern University	0.0%	0.0%
Texas State University	39.6%	4.1%
Texas Tech University	76.2%	13.8%
Texas Woman's University	73.8%	26.3%
University of North Texas	91.0%	15.3%
University of North Texas at Dallas	56.3%	28.6%
University of Texas at Arlington	93.7%	22.4%
University of Texas at Austin	49.8%	3.4%
University of Texas at Dallas	75.1%	4.6%
University of Texas at El Paso	61.1%	9.3%
University of Texas at Tyler	70.1%	32.7%
University of Texas Rio Grande Valley	74.4%	19.2%
University of Texas at San Antonio	77.5%	8.4%
University of Texas of the Permian Basin	98.2%	49.4%
University of Houston	62.7%	13.9%
University of Houston – Clear Lake	71.8%	18.7%
University of Houston – Downtown	64.4%	29.8%
University of Houston – Victoria	75.3%	52.6%
West Texas A&M University	100.0%	29.5%

FIGURE A-1 (CONTINUED)
PROPORTION OF SEMESTER CREDIT HOURS THAT ARE PRIMARILY ONLINE COURSES AT TEXAS PUBLIC UNIVERSITIES
FALL 2017

INSTITUTION	PROPORTION OF OVERALL DISTANCE EDUCATION SEMESTER CREDIT HOURS THAT ARE FULLY DISTANCE EDUCATION (1)	PROPORTION OF TOTAL SEMESTER CREDIT HOURS THAT ARE FULLY DISTANCE EDUCATION
Total	74.7%	14.2%

NOTE: (1) Fully distance education refers to courses that cannot exceed 15.0 percent of mandatory on-campus attendance. Overall distance education includes multiple modes of instruction, such as study abroad and dual credit, which might not be online.

SOURCE: Texas Higher Education Coordinating Board.

**FIGURE A-2
PROPORTION OF SEMESTER CREDIT HOURS THAT ARE PRIMARILY ONLINE AT TEXAS STATE, COMMUNITY, AND TECHNICAL COLLEGES, FALL 2017**

INSTITUTION	PROPORTION OF OVERALL DISTANCE EDUCATION SEMESTER CREDIT HOURS THAT ARE FULLY DISTANCE EDUCATION (1)	PROPORTION OF TOTAL SEMESTER CREDIT HOURS THAT ARE FULLY DISTANCE EDUCATION
Alamo CCD Northeast Lakeview College (2)	89.2%	15.1%
Alamo CCD Northwest Vista College (2)	44.8%	13.7%
Alamo CCD Palo Alto College (2)	89.9%	24.0%
Alamo CCD San Antonio College (2)	74.2%	20.7%
Alamo CCD St. Philips College (2)	57.6%	26.3%
Alvin Community College	25.8%	11.5%
Amarillo College	60.9%	22.7%
Angelina College	40.8%	18.9%
Austin Community College	55.8%	11.1%
Blinn College District	13.4%	11.5%
Brazosport College	59.4%	17.9%
Central Texas College	63.1%	35.5%
Cisco College	37.2%	30.7%
Clarendon College	47.7%	27.8%
Coastal Bend College	35.8%	27.3%
College of the Mainland	52.9%	17.5%
Collin County Community College	59.1%	14.7%
DCCCD Brookhaven College (2)	93.9%	21.4%
DCCCD Cedar Valley College (2)	72.8%	36.8%
DCCCD Eastfield College (2)	71.7%	29.3%
DCCCD El Centro College (2)	84.3%	26.8%
DCCCD Mountain View College (2)	82.1%	22.6%
DCCCD North Lake College (2)	82.6%	21.0%
DCCCD Richland College (2)	95.2%	19.5%
Del Mar College	79.2%	15.8%
El Paso Community College	53.5%	13.2%
Frank Phillips College	61.4%	27.6%
Galveston College	55.6%	19.9%
Grayson College	82.4%	29.9%
Hill College	38.9%	32.3%
Houston Community College	39.6%	17.8%
Howard College	38.6%	30.2%
Kilgore College	39.1%	16.5%
Lamar Institute of Technology	72.2%	15.2%
Lamar State College, Orange	81.2%	27.6%
Lamar State College, Port Arthur	2.0%	0.4%
Laredo Community College	49.4%	12.7%
Lee College	23.3%	10.1%

FIGURE A-2 (CONTINUED)
PROPORTION OF SEMESTER CREDIT HOURS THAT ARE PRIMARILY ONLINE AT TEXAS STATE, COMMUNITY, AND TECHNICAL COLLEGES, FALL 2017

INSTITUTION	PROPORTION OF OVERALL DISTANCE EDUCATION SEMESTER CREDIT HOURS THAT ARE FULLY DISTANCE EDUCATION (1)	PROPORTION OF TOTAL SEMESTER CREDIT HOURS THAT ARE FULLY DISTANCE EDUCATION
Lone Star College – CyFair	47.6%	14.0%
Lone Star College – Kingwood	0.0%	0.0%
Lone Star College – Montgomery	43.8%	14.3%
Lone Star College – North Harris	67.8%	21.7%
Lone Star College – Tomball	55.5%	23.4%
Lone Star College – University Park	60.4%	20.0%
McLennan Community College	98.5%	26.3%
Midland College	54.3%	19.7%
Navarro College	34.0%	22.7%
North Central Texas College	30.8%	26.3%
Northeast Texas Community College	66.7%	31.1%
Odessa College	81.6%	35.8%
Panola College	73.9%	40.5%
Paris Junior College	41.6%	32.0%
Ranger College	35.7%	27.0%
San Jacinto College Central Campus	66.9%	9.8%
San Jacinto College North Campus	87.7%	16.3%
San Jacinto College South Campus	76.6%	17.1%
South Plains College	34.3%	18.9%
South Texas College	81.9%	13.7%
Southwest Collegiate Institute	8.3%	0.8%
Southwest Texas Junior College	14.5%	11.9%
Tarrant County Connect Campus	96.0%	96.0%
Tarrant County Northeast Campus	23.6%	2.0%
Tarrant County Northwest Campus	30.6%	3.9%
Tarrant County South Campus	23.5%	1.6%
Tarrant County Southeast Campus	3.5%	0.4%
Tarrant County Trinity River Campus	29.1%	1.4%
Temple College	60.4%	27.0%
Texarkana College	46.2%	19.3%
Texas Southmost College	9.6%	2.4%
Texas State Technical College – Fort Bend	100.0%	44.2%
Texas State Technical College – Harlingen	72.9%	7.2%
Texas State Technical College – Marshall	92.0%	26.7%
Texas State Technical College – North Texas	86.0%	86.0%
Texas State Technical College – Waco	66.4%	9.7%
Texas State Technical College – West Texas	61.7%	40.8%
Trinity Valley Community College	66.0%	31.3%

FIGURE A-2 (CONTINUED)
PROPORTION OF SEMESTER CREDIT HOURS THAT ARE PRIMARILY ONLINE AT TEXAS STATE, COMMUNITY, AND TECHNICAL COLLEGES, FALL 2017

INSTITUTION	PROPORTION OF OVERALL DISTANCE EDUCATION SEMESTER CREDIT HOURS THAT ARE FULLY DISTANCE EDUCATION (1)	PROPORTION OF TOTAL SEMESTER CREDIT HOURS THAT ARE FULLY DISTANCE EDUCATION
Tyler Junior College	66.0%	20.1%
Vernon College	22.6%	18.9%
Victoria College	66.8%	21.2%
Weatherford College	45.1%	19.5%
Western Texas College	72.1%	40.2%
Wharton County Junior College	14.9%	11.2%
Total	49.9%	18.3%

NOTES:

(1) Fully distance education refers to courses that cannot exceed 15.0 percent of mandatory on-campus attendance. Overall distance education includes multiple modes of instruction, such as study abroad and dual credit, which might not be online.

(2) CCD=Community College District, DCCCD=Dallas Community College District.

SOURCE: Texas Higher Education Coordinating Board.

FIGURE A-3
TEXAS INSTITUTIONS OF HIGHER EDUCATION THAT RESPONDED TO A LEGISLATIVE BUDGET BOARD SURVEY REGARDING ONLINE EDUCATION, SEPTEMBER 2018

INSTITUTION	TYPE
Angelo State University	Public University
Midwestern State University	Public University
Prairie View A&M University	Public University
Sam Houston State University	Public University
Stephen F. Austin State University	Public University
Sul Ross State University (1)	Public University
Tarleton State University	Public University
Texas A&M International University	Public University
Texas A&M University	Public University
Texas A&M University – Central Texas	Public University
Texas A&M University – Commerce	Public University
Texas A&M University – Corpus Christi	Public University
Texas A&M University – Kingsville	Public University
Texas A&M University – San Antonio	Public University
Texas A&M University – Texarkana	Public University
Texas A&M University at Galveston	Public University
Texas Southern University	Public University
Texas State University	Public University
Texas Tech University	Public University
Texas Woman's University	Public University
University of Houston	Public University
University of Houston – Clear Lake	Public University
University of Houston – Downtown	Public University
University of Houston – Victoria	Public University
University of North Texas	Public University
University of North Texas at Dallas	Public University
University of Texas at Arlington	Public University
University of Texas at Austin	Public University
University of Texas at Dallas	Public University
University of Texas at El Paso	Public University
University of Texas at San Antonio	Public University
University of Texas at Tyler	Public University
University of Texas Rio Grande Valley	Public University
University of Texas of the Permian Basin	Public University
West Texas A&M University	Public University
Alvin Community College	Community College
Amarillo College	Community College
Angelina College	Community College
Blinn College	Community College

FIGURE A-3 (CONTINUED)
TEXAS INSTITUTIONS OF HIGHER EDUCATION THAT RESPONDED TO A LEGISLATIVE BUDGET BOARD SURVEY REGARDING ONLINE EDUCATION, SEPTEMBER 2018

INSTITUTION	TYPE
Brazosport College	Community College
Central Texas College	Community College
Cisco Junior College	Community College
College of the Mainland	Community College
Dallas County Community College – Brookhaven	Community College
Dallas County Community College – Cedar Valley	Community College
Dallas County Community College – Eastfield	Community College
Dallas County Community College – El Centro	Community College
Dallas County Community College – Mountain View	Community College
Dallas County Community College – North Lake	Community College
Dallas County Community College – Richland	Community College
El Paso Community College	Community College
Frank Phillips College	Community College
Grayson County College	Community College
Houston Community College (2)	Community College
Howard College	Community College
Laredo Community College	Community College
Lone Star Community College System	Community College
McLennan Community College	Community College
Navarro College	Community College
North Central Texas College	Community College
Northeast Texas Community College	Community College
Odessa College	Community College
Panola College	Community College
Paris Junior College	Community College
San Jacinto College (2)	Community College
South Plains College	Community College
South Texas College	Community College
Tarrant County College (2)	Community College
Temple College	Community College
Texarkana College	Community College
Trinity Valley Community College	Community College
Vernon College	Community College
Victoria College	Community College
Western Texas College	Community College
Wharton County Junior College	Community College
Lamar Institute of Technology	State College
Lamar State College, Orange	State College
Lamar State College, Port Arthur	State College

FIGURE A-3 (CONTINUED)
TEXAS INSTITUTIONS OF HIGHER EDUCATION THAT RESPONDED TO A LEGISLATIVE BUDGET BOARD SURVEY REGARDING ONLINE EDUCATION, SEPTEMBER 2018

INSTITUTION	TYPE
Texas State Technical College (2)	Technical College

NOTES:

(1) Responded for Sul Ross State University and Sul Ross State University, Rio Grande College.

(2) Responded as system.

SOURCE: Legislative Budget Board.

IMPROVE ACCESS TO ACCOUNTABILITY AND TECHNICAL INFORMATION FOR THE VIRTUAL SCHOOL NETWORK ONLINE SCHOOLS PROGRAM

Internet courses and online learning have been a part of the U.S. educational system since the 1990s, and all 50 states and the District of Columbia adopted some form of online learning by 2011. The Texas Virtual School Network consists of two components: a statewide catalog of supplemental online courses for credit toward high school graduation and an Online Schools program offering full-time virtual instruction for eligible public school students in grades three to 12.

Although virtual schools have maintained steady enrollment, accountability information that is available to students and parents for full-time online schools lacks consistency and accessibility. The Texas Education Agency provides annual accountability reports for each district, campus, and open-enrollment charter school. For each electronic course, informed-choice reports are required to provide information regarding enrollment, technical specifications, and course requirements. However, accountability information and informed-choice reports for virtual schools are difficult for parents and students to access, and lack consistency between the Online Course Catalog and Online Schools programs. Ensuring streamlined access to informed-choice reports and accountability reports will increase accessibility and consistency of information available to parents and students that are considering enrollment in the Online Schools program.

FACTS AND FINDINGS

- ◆ Enrollment in the Texas Virtual School Network's seven online schools totaled 13,766 students for school year 2016–17, an increase of 12.8 percent from school year 2015–16.
- ◆ During school year 2016–17, two of the state's largest virtual schools received an Improvement Required rating. These two schools collectively represent 68.0 percent of total Texas Virtual School Network enrollment.
- ◆ The Online Schools program website provides an informational video for students and parents, directions to access accountability reports on another website, and contact information for the available online schools.

CONCERNS

- ◆ Parents and students must navigate multiple website pages to access an online school's accountability information, which may hinder parents seeking to learn more about online school performance and make decisions regarding their children's learning needs.
- ◆ The Texas Education Code provides general reporting requirements for informed-choice reports attached to electronic courses, but the statute makes no reference to program-specific requirements. The Texas Administrative Code outlines informed-choice reporting requirements for all virtual school courses, but it is unclear how those reporting requirements apply to full-time online schools.

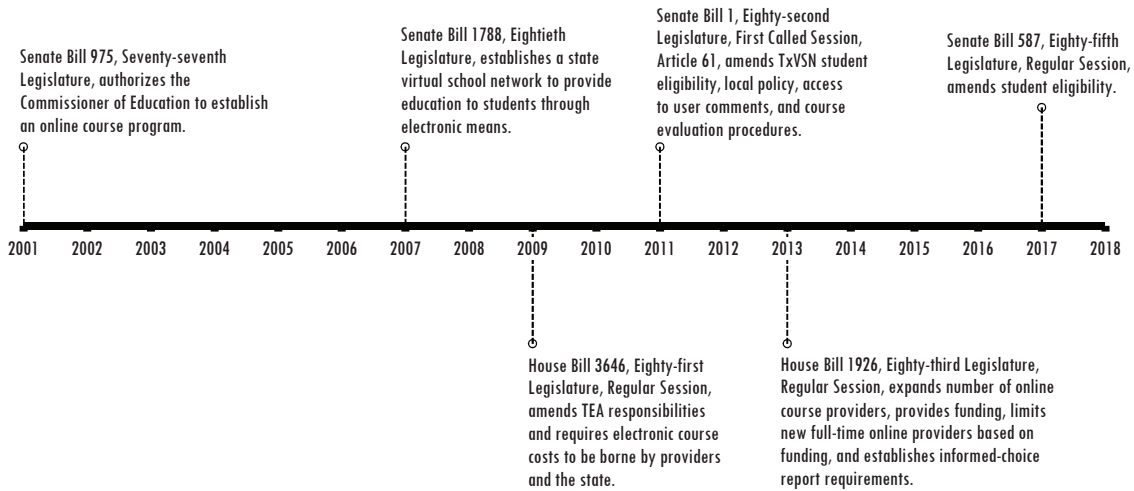
OPTIONS

- ◆ **Option 1:** Amend statute to require the Texas Education Agency to ensure that accountability rating information for the Online School programs is posted directly on the Texas Virtual School Network website and on the website of each full-time online school.
- ◆ **Option 2:** Amend statute to require the publication of informed-choice reports for each course offered in a full-time online school on the Texas Virtual School Network website, each online school's website, and the school district's or open-enrollment charter school's website, for all grade levels eligible to enroll in a course or full-time online school.

DISCUSSION

Online learning and distance learning are common educational tools used across the U.S. Florida, Hawaii, and Utah first established virtual schools during the late 1990s. By 2011, all 50 states and the District of Columbia offered full-time and supplemental online learning programs. Students in grades three to 12 in Texas have the option to attend online school full-time through the Online Schools (OLS) program operated by the Texas Virtual School Network (TxVSN). Students also may supplement the traditional classroom setting with online courses offered through the TxVSN's statewide Online Course Catalog system. However, users' access to accountability ratings and

**FIGURE 1
LEGISLATION GOVERNING THE TEXAS VIRTUAL SCHOOL NETWORK
FISCAL YEARS 2001 TO 2017**



NOTE: TxVSN=Texas Virtual School Network; TEA=Texas Education Agency.
SOURCE: Legislative Budget Board.

other informative materials for the OLS program is lacking in consistency and accessibility.

EVOLUTION OF THE VIRTUAL SCHOOL NETWORK

By calendar year 2004, 91.0 percent of U.S. public schools had Internet access in one or more classrooms, and 22 states had established virtual schools. The Seventy-seventh Legislature, 2001, established online learning programs, and subsequent bills addressed the framework for full-time and supplemental online learning. Changes in statute have included distinguishing between individual online courses and OLS, reporting requirements relating to accountability and attendance, and fee authority and funding methodology. **Figure 1** shows significant legislation related to the development of the TxVSN.

ORGANIZATION OF ONLINE PROGRAMS IN TEXAS

The TxVSN offers two programs, the Online Course Catalog and the OLS program. The course catalog offers supplemental courses for students enrolled at physical school campuses. Course catalog offerings include options for dual credit, advanced placement, and credit recovery. Courses are open to middle school and high school students with approval from their school district or charter school.

The Texas Administrative Code, Title 19, Part 2, Section 70.1001, defines a “TxVSN receiver district” as any district that has students enrolled in one or more online courses

through the statewide course catalog. The OLS program offers full-time virtual learning for students in grades three to 12. Students enrolled in an OLS school receive instruction remotely through the Internet, in lieu of physical attendance at physical school campus.

Figure 2 shows the seven OLS schools currently operating in Texas as of school year 2017–18. All online schools are operated through public school districts or charter schools and must meet the following eligibility requirements set in the Texas Administrative Code, Title 19, Part 2, Section 70.1009:

- be currently accredited, have an acceptable academic accountability rating, and meet financial accountability standards;
- meet all reporting requirements with satisfactory performance;
- be in good standing with programs and projects administered through the Texas Education Agency (TEA); and
- have been approved to operate a TxVSN online school as of January 1, 2013.

Nonprofit entities, private entities, and corporations may not serve as course providers in OLS program. However, they may serve as course providers in the Online Course Catalog program with approval from the Commissioner of Education.

**FIGURE 2
TEXAS VIRTUAL SCHOOL NETWORK ONLINE SCHOOLS, SCHOOL YEAR 2017–18**

ONLINE SCHOOL	HOST DISTRICT OR CHARTER	GRADES
iUniversity Prep	Grapevine-Colleyville Independent School District (ISD)	4 to 12
Texas Connections Academy	Houston ISD	3 to 12
Texas Online Preparatory Schools (1)	Huntsville ISD	3 to 12
Texas Virtual Academy at Hallsville	Hallsville ISD	3 to 12
Responsive Education Virtual Learning	Texas College Preparatory Academies (charter holder: Responsive Education Solutions)	3 to 8
Texas Virtual Academy	Premier High Schools (charter holder: Responsive Education Solutions)	3 to 12

NOTE: (1) Texas Online Preparatory Schools have separate campus numbers for elementary, middle, and high schools.
SOURCE: Texas Education Agency.

The Texas Education Code, Section 30A.001(7), defines a course provider as any school district or charter school, nonprofit entity, private entity, or public or private institution of higher education that provides a course through TxVSN.

Much like traditional school campuses, each OLS school functions as a part of its respective school district or charter school. OLS student demographic information, accountability information, and other performance metrics are reflected in the overall performance report for the host district or charter school. For example, Grapevine-Colleyville Independent School District’s annual performance report reflects data on students attending iUniversity Prep – including information such as standardized test results and dropout rates – regardless of where in Texas those students reside. All OLS schools are subject to the same accreditation and financial accountability standards as brick-and-mortar schools within a school district or charter school.

STUDENT ELIGIBILITY

A student is eligible to enroll full-time in an OLS school if the student:

- is age 20 or younger on September 1 of the school year or is age 25 or younger and entitled to the benefits of the Foundation School Program;
- has not graduated from high school;
- is otherwise eligible to enroll in a Texas public school; and
- was enrolled in a Texas public school during the previous school year, is a dependent of a member of the U.S. military who has been deployed or transferred to Texas and was enrolled in a publicly funded school outside of Texas during the previous

school year, or has been placed in substitute care within Texas regardless of enrollment during the previous school year.

Figures 3 and 4 show changes in enrollment for each campus within the OLS program throughout its history. Figure 3 shows online schools with enrollments of 1,000 or greater, and Figure 4 shows smaller online schools. Enrollment has increased since the program was established. However, online schools have opened and closed during this period, and some schools have been reclassified for accountability purposes.

Recent legislation limits state funding for new online schools. House Bill 1926, Eighty-third Legislature, Regular Session, 2013, limits a district’s or charter school’s formula funding to no more than three year-long electronic courses, but that requirement does not affect students enrolled in full-time online schools that were operating as of January 1, 2013. A district or charter school that is not subject to this provision that opens a new, full-time, online school after January 1, 2013, is entitled to formula funding for up to three electronic courses during a school year.

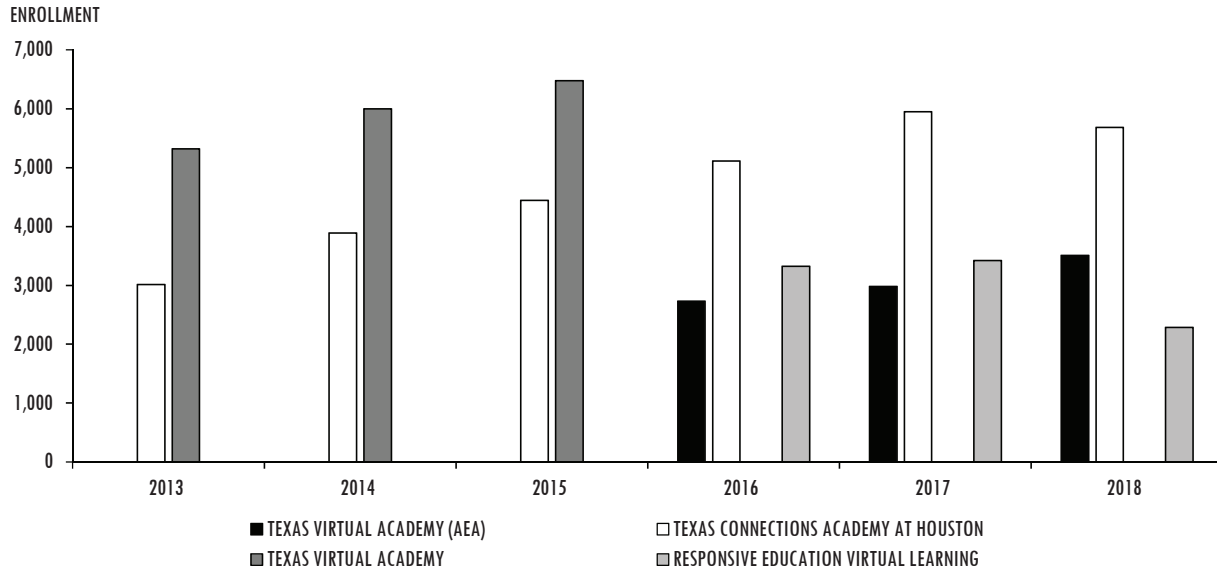
GUIDANCE, ACCOUNTABILITY, AND INFORMED-CHOICE REPORTS

To inform parents and students about school performance, TEA produces annual reports for all schools highlighting various metrics for performance and accountability standards. Informed-choice reports are another form of information sharing for all TxVSN courses and provide information specific to course requirements.

GUIDANCE AND ACCOUNTABILITY

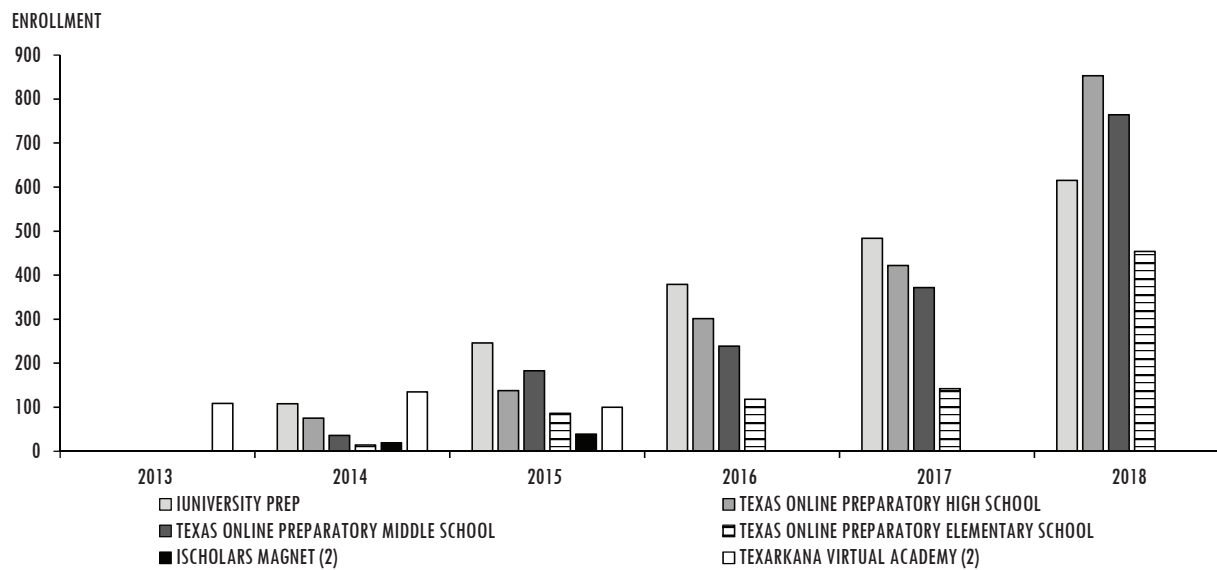
The Texas Administrative Code, Title 19, Part 2, Section 70.1035 requires that, when a school district or charter school informs students and parents about courses offered in the

FIGURE 3
TEXAS VIRTUAL SCHOOL NETWORK FULL-TIME ONLINE SCHOOLS WITH ANNUAL ENROLLMENT OF 1,000 OR GREATER
FISCAL YEARS 2013 TO 2018



NOTE: Texas Virtual Academy was designated an alternative education campus for school year 2015–16 and has been rated in accordance with Alternative Education Accountability (AEA) standards.
 SOURCE: Texas Education Agency.

FIGURE 4
TEXAS VIRTUAL SCHOOL NETWORK FULL-TIME ONLINE SCHOOLS WITH ANNUAL ENROLLMENT LESS THAN 1,000
FISCAL YEARS 2013 TO 2018



NOTES:
 (1) Schools approved to operate as of January 2013 might not have enrollment shown for school year 2012–13 (fiscal year 2013).
 (2) iScholars Magnet and Texarkana Virtual Academy closed after school year 2014–15.
 SOURCE: Texas Education Agency.

traditional classroom setting, the district or charters also must provide information about online school offerings and the opportunity to enroll in electronic courses. TEA's website provides a video overview of the TxVSN OLS program and a free orientation course for online learning. Pursuant to the Texas Administrative Code, Title 19, Part 2, Section 70.1008, each TxVSN host district must have qualified staff to serve as the TxVSN coordinator. This statute specifically affects the Online Course Catalog system, because a student enrolling in a catalog course also would attend a traditional physical school campus whose staff would assist the student in course selection. The TxVSN OLS website provides email and telephone contact information for representatives of each online school. It is the parent's or student's responsibility to contact either the virtual school provider or the host district to obtain information and guidance for enrolling in virtual schools.

According to TEA, schools are responsible for providing guidance to students enrolled in a full-time online program. Virtual schools are not authorized to provide equipment or items of value to students or parents as an inducement to enroll in a full-time online school. Virtual schools provide guidance and academic and emotional support services to students in various ways. Due to the nature of virtual schooling, some full-time online schools offer in-person events where students and parents can meet with staff and faculty. Current students may access guidance services through phone calls, email, and web conferencing or video services. Guidance and counseling services also are available to prospective students to facilitate placement and course selection and to identify general questions or concerns.

The Texas Annual Performance Report (TAPR) provides information on annual school performance. OLS student demographic information, performance metrics, and graduation information, if available, are included in the host district or charter school's performance report. TAPR contains different and more detailed information than the accountability ratings and reports.

The accountability rating system, introduced in 1993, is another measure of annual district and campus performance. Ratings are released every fall to document performance for the previous school year. Beginning in school year 2012–13, the majority of any school's or district's rating is based on student progress or overall scores on the State of Texas Assessments of Academic Readiness (STAAR) examinations. The performance of host districts and open-enrollment charter schools is affected by the performance of their OLS partner campuses and is reflected in districts' accountability

ratings. The accountability system was updated during fiscal year 2015 to include expanded measurements of post-secondary readiness. TEA is piloting a new accountability system for school year 2018–19. All full-time online schools operating within TxVSN are subject to the same accountability rating system as traditional physical school campuses. These state accountability ratings are determined using formulas described in the TEA's *2017 Accountability Manual*, which include the following four indices:

- (1) student achievement across all subjects for all students;
- (2) year-to-year student progress by student demographic categories;
- (3) closing performance gaps by measuring academic achievement of economically disadvantaged students and the two lowest-performing racial or ethnic groups; and
- (4) postsecondary readiness as measured by graduation or dropout rate, graduation diploma plan, college and career readiness, and STAAR performance at the Meets Grade Level category.

Figure 5 shows the past five years of accountability ratings for each full-time online school.

ACCESS TO FULL-TIME ONLINE SCHOOL ACCOUNTABILITY INFORMATION

The TxVSN website provides visitors with general information, such as contact information for schools and student eligibility information. However, OLS accountability information does not appear directly on the TxVSN website. Instead, a user is required to navigate to TEA's website to access detailed accountability measurement information. Instructions for how to access these accountability reports exist on the TxVSN website, but they are difficult to follow. The overall process for locating and viewing accountability reports and TAPRs is difficult and could hinder parents seeking to learn more about an online school's performance and making decisions regarding their child's learning needs. For example, to see how specific groups of students performed on STAAR examinations, or to see specific percent of students showing academic growth, one would have to access the TAPRs using specific campus numbers or district information through the TEA website.

Option 1 would improve transparency by amending the Texas Education Code, Chapter 30A, to require TEA to ensure that accountability rating information for the Online School programs is posted directly on the TxVSN website

FIGURE 5
TEXAS ONLINE SCHOOL PROGRAM ACCOUNTABILITY RATINGS, SCHOOL YEARS 2012–13 TO 2016–17

SCHOOL	2012–13	2013–14	2014–15	2015–16	2016–17
Texas Connections Academy	Met Standard	Met Standard	Improvement Required	Improvement Required	Improvement Required (2)
Responsive Virtual Learning	Improvement Required	Improvement Required	Met Standard	Improvement Required	Improvement Required
Texarkana Virtual Academy	Improvement Required	Met Standard	Met Standard	(closed)	N/A
iUniversity Prep	(opened 2013)	Met Standard	Met Standard	Met Standard	Met Standard
Texas Online Prep Elementary	(opened 2013)	Met Standard	Met Standard	Met Standard	Met Standard
Texas Online Prep Middle School	(opened 2013)	Improvement Required	Met Standard	Met Standard	Met Standard
Texas Online Prep High School	(opened 2013)	Met Standard	Met Standard	Met Standard	Met Standard
iScholars Magnet Academy	Improvement Required	Met Standard	(closed)	N/A	N/A
Texas Virtual Academy	N/A	N/A	N/A	(opened 2015)	Acceptable (1)

NOTES:

(1) School is rated on the Alternative Education Accountability scale.

(2) Texas independent school districts (ISD) with a campus that receives an Improvement Required rating for three consecutive years are required to submit a campus turnaround plan to the Texas Education Agency, pursuant to House Bill 1842, Eighty-fourth Legislature, 2015.

SOURCE: Texas Education Agency

and on the website of each full-time online school. Ensuring access to this information for all OLS schools would provide parents and students that are considering enrollment with more complete information about performance.

INFORMED-CHOICE REPORTS

Statute requires each course associated with the Online Course Catalog to include an informed-choice report. This report is intended to inform parents of the quality, rigor, and technological requirements associated with each course. The Texas Administrative Code, Title 19, Part 2, Section 70.1031, sets the following publication requirements for informed-choice reports:

- student course completion data, including withdrawal rate, completion rate, and successful completion rate;
- aggregate student performance on an assessment instrument administered pursuant to the Texas Education Code, Section 39.023, for students who completed the associated course;
- aggregate student performance on all assessment instruments administered to students who completed the course provider’s courses;
- a description of the instructional program;

- the name, title, and contact information for the school district or charter school staff responsible for overseeing the daily operations of each TxVSN online school;
- all required materials provided by the receiver district or course provider outside the learning management system and all materials required to be obtained by the student;
- technical system requirements, minimum bandwidth, video player, and plug-in requirements; and
- software and browser compatibility needed to complete the course.

Informed-choice reports are different than accountability rating reports, which provide information regarding a school’s ability to meet TEA’s accountability standards. Informed-choice reports provide information about requirements and expectations for the course. They include the statutorily required information to help parents and students make an informed decision when enrolling in online courses or full-time online schools. TEA’s administrative rules require school districts and charter schools that host TxVSN online schools to publish prominently on the online school’s website a link to the informed-choice report that includes all of the components required in statute.

The Online Course Catalog section within the TxVSN website offers direct links to informed-choice reports for each course. However, the informed-choice reports provided for OLS schools lack the same information and organization. Course information for grades three to eight is not available on the TxVSN website. School survey information is available in one area of the TxVSN website, but it requires several website redirections for a user attempting to access the information. The information available for OLS schools differs from the course catalog in both type of information available and its location. For example, the TxVSN website includes direct links to parent and student survey responses but no direct link to course completion rates or student-to-teacher ratio per class. The information and data are available, but retrieval requires a significant amount of redirecting and searching on the website.

Option 2 would amend the Texas Education Code, Chapter 30A, to require the publication of informed-choice reports for each course offered in a full-time online school on the TxVSN website, each online school's website, and the school district's or open-enrollment charter school's website, for all grade levels eligible to enroll in a course or full-time online school. The Texas Education Code, Section 30A.108, requires TEA to maintain on the TxVSN website an informed-choice report for "each electronic course offered through the state virtual school network." However, the statute does not require specifically that each full-time online school must have an informed-choice report. This option would clarify the requirements for informed-choice report availability and information for the Online Course Catalog and OLS programs.

FISCAL IMPACT OF THE OPTIONS

It is assumed that Option 1 and Option 2 would not have significant fiscal impacts and could be implemented within the administering authority's existing resources.

The introduced 2020–21 General Appropriations Bill does not include any adjustments as a result of these options.

IMPROVE OPERATION OF THE STAR KIDS PROGRAM

The Eighty-third Legislature, Regular Session, 2013, directed the Health and Human Services Commission to establish a Medicaid managed-care program for children with disabilities intended to improve coordination and access to care while achieving cost containment. The new program, called STAR Kids, provided services to approximately 160,000 children during fiscal year 2018 at a cost of \$3.3 billion in All Funds.

Through STAR Kids, the Health and Human Services Commission contracts with managed care organizations to provide medical services and coordinate care.

Before contracting with managed care organizations, the state contracted directly with providers and a third-party claims administrator that conducted prior authorizations on behalf of the state. In the current model, the Health and Human Services Commission monitors 10 managed care organizations that provide care throughout the state, each of which has different policies and procedures.

The Health and Human Services Commission is developing a methodology for monitoring and evaluating the performance of STAR Kids managed care organizations. The agency also has taken actions in response to several concerns. These concerns include appropriate access to care, uneven distributions of high-cost members among different managed care organizations, flaws identified in the agency's procurement process, and the adequacy of its oversight mechanisms and activities. However, the agency and the children enrolled in STAR Kids would benefit from legislative direction and resources to enable key oversight activities and changes to the program.

FACTS AND FINDINGS

- ◆ Studies conducted before fiscal year 2013 suggest that most Medicaid managed-care members in Texas were able to access routine primary care in a timely manner. Most members also were either satisfied or very satisfied with the health plans they chose in surveys conducted by the state's external quality review organization. Reviews of access to long-term services and supports such as those in STAR Kids, however, have generated concern.

CONCERNS

- ◆ The successful operation of STAR Kids depends on selecting high-performing vendors to promote competition based on quality and efficiency. However, according to a State Auditor's Office report published in July 2018, the agency made significant evaluation scoring errors in selecting vendors in the 2014 procurement. The agency also lacked appropriate documentation, and, as a result, the State Auditor's Office could not determine whether the evaluation scores supported the award recommendations. A number of the vendors selected had histories of performance issues.
- ◆ According to an external quality review organization for Texas Medicaid, differences in provider networks can result in some managed care organizations attracting higher-cost populations than others. When the Health and Human Services Commission set capitation rates for the first year of STAR Kids, it made no adjustments for differences in members' health status. During the first two years of the program, managed care organizations that attracted and retained children with more intensive needs spent more on medical expenses than the state provided in capitation payments. By contrast, plans with healthier children have spent less of their premiums on medical costs and have reported net profits. The uneven distribution of high-needs members continued to affect the financial performance and viability of health plans during the second year of the program.
- ◆ Service coordinators work directly for managed care organizations and are the primary source of information used to determine Medicaid eligibility for a number of the highest-need children in STAR Kids.
- ◆ Service coordinators in STAR Kids assess need and coordinate services, particularly long-term services and supports. The staff tasked with this responsibility may have large caseloads that limit the extent to which they can coordinate care.
- ◆ To date, the performance of some managed care organizations in STAR Kids regularly has not met contract standards. Service planning and

care coordination activities vary considerably among plans. Data show substantial variations in service denial rates by managed care organizations and decreases in utilization of critical services. Furthermore, the percentage of out-of-network claims for some plans exceeds the state's standards, indicating potentially inadequate networks. Despite recent efforts to improve oversight, gaps in the Health and Human Services Commission's oversight of the program remain. For example, the agency has not conducted utilization reviews for high-needs children to ensure appropriate service planning and access to care. Although the agency plans to add this utilization review for fiscal year 2020, it reports lacking the resources to conduct these reviews for each managed care organization.

- ◆ The Health and Human Services Commission has established a formal overall strategy for monitoring and improving quality in Medicaid consistent with state and federal requirements. However, as of September 2018, the agency was developing performance measures and monitoring for the STAR Kids program.

OPTIONS

- ◆ **Option 1:** Direct the Health and Human Services Commission to reprocur STAR Kids services as soon as possible to ensure that the state uses an effective and consistent process for awarding contracts to promote competition based on quality and efficiency.
- ◆ **Option 2:** Direct the Health and Human Services Commission to evaluate risk-adjustment methods used for STAR Kids to improve the relationship between capitation rates and distributions of high-cost members.
- ◆ **Option 3:** Amend statute to provide access to case management independent of the STAR Kids managed care organization at a member's family's request. This would provide members with an option to receive service coordination and case management services from an entity independent of their managed care organization.
- ◆ **Option 4:** Amend statute to require the Health and Human Services Commission to establish caseload guidelines for service coordinators with the goal of improving the ability of STAR Kids managed care organizations to meet assessment and service coordination requirements consistently.

- ◆ **Option 5:** Amend statute to require the Health and Human Services Commission to monitor access to care in the STAR Kids program through utilization reviews and service plan monitoring.

- ◆ **Option 6:** Amend statute to delay adding new populations with special healthcare needs into capitated managed care until outcomes from STAR Kids can be measured more fully.

DISCUSSION

The Eighty-third Legislature, Regular Session, 2013, passed legislation that required the Health and Human Services Commission (HHSC) to implement a capitated managed-care program for children with disabilities. HHSC transitioned children from Medicaid fee-for-service (FFS) into the new STAR Kids program statewide on November 1, 2016. During fiscal year 2018, STAR Kids provided services to approximately 160,000 children at a cost of \$3.3 billion in All Funds.

Figure 1 shows the goals of STAR Kids, which are to improve health outcomes and achieve cost containment. Participation in the capitated managed-care program is mandatory for certain children and young adults age 20 and younger that have disabilities and receive Supplemental Security Income (SSI) and those eligible for services from a long-term care facility. However, the Texas Government Code, Section 533.0025(b), authorizes HHSC to implement alternative models, including a traditional FFS arrangement, if the agency determines that the alternative would be more cost-effective or efficient.

Children enrolled in STAR Kids have access to multiple Medicaid benefits. These benefits include acute care, such as primary care and other short-term medical care, pharmacy, behavioral health, and long-term services and supports (LTSS) through the managed care organization's (MCO) provider network. LTSS includes personal care services, private-duty nursing, and day activity health services. Some children enrolled in additional programs for children with intellectual or development disabilities access LTSS outside of the MCO network.

Children with the greatest healthcare needs may have access to additional services, subject to eligibility and resource availability. The Medically Dependent Children Program (MDCP) is a subprogram for the highest-need children within STAR Kids. Its goal is to support families caring for children and young adults age 20 and younger to prevent institutionalization of those who otherwise would reside in

FIGURE 1
STATUTORY GOALS FOR STAR KIDS PROGRAM, EFFECTIVE SEPTEMBER 2013

- provide benefits tailored to meet members' healthcare needs;
- better coordinate and improve access to care;
- improve health outcomes;
- achieve cost containment and cost efficiency;
- reduce administrative complexity of delivering care;
- reduce incidence of unnecessary institutionalization and potentially preventable events by ensuring availability of appropriate services and care management;
- require a health home; and
- improve coordination with long-term care providers, for members receiving long-term services and supports outside of the managed care organization

SOURCE: The Texas Government Code, Section 533.00253(b).

nursing facilities. For many families, enrollment in MDCP is critical for ensuring that they can afford to keep their children in the community. Enrollment is subject to a cap established by HHSC and the Legislature through the appropriation of slots. The primary additional service in this program used by members' families is respite care, which is care delivered temporarily to relieve the primary caregiver.

TRANSITION FROM FEE-FOR-SERVICE PROGRAM TO STAR KIDS

HHSC transitioned all eligible children in the state from Medicaid fee-for-service into STAR Kids on November 1, 2016. In October 2016, the STAR Kids Managed Care Oversight Committee had recommended delaying implementation for children with complex medical conditions, such as those in MDCP and other waiver programs. The Committee was created by the program's enabling legislation and includes representatives from families, providers, and MCOs. Because children in MDCP would otherwise be eligible for admission to a nursing facility and experienced the largest change in how their services were delivered with the creation of STAR Kids, they are generally considered to be most at risk of harmful disruptions in care within STAR Kids. HHSC did not accept the committee's recommendation that the agency refine the program and make it fully operational before adding the highest-risk populations.

This approach to adding LTSS populations to managed care differs from that in five other states studied by Mathematica Policy Research. In a March 2016 study conducted for the U.S. Medicaid and CHIP Payment and Access Commission, they found that Arizona, Florida, Illinois, New York, and Wisconsin used gradual regional expansions to implement their new models of expanded managed LTSS.

VENDOR RESPONSES AND SELECTION

To implement STAR Kids successfully, selecting high-performing vendors is important to promoting competition in the provision of high-quality care. However, according to a July 2018 report from the State Auditor's Office (SAO), HHSC made significant evaluation scoring errors in selecting vendors during the 2014 STAR Kids procurement. The agency also lacked documentation of the evaluation process. As a result, SAO was unable to determine whether the evaluation scores supported the award recommendations. HHSC's criteria for selecting STAR Kids vendors included "the extent to which MCO's goods and services met the needs of HHSC and members" and "positive indicators of probable MCO performance." To assess probable performance, HHSC required each MCO to describe any actions, sanctions, or fines issued by a regulatory entity against the MCO or its affiliates from calendar years 2011 to 2014. Legislative Budget Board (LBB) staff reviewed portions of the evaluation tool and the MCOs' responses to understand how HHSC considered prior performance and how MCOs' corporate backgrounds relate to current performance.

Scoring for this criterion across HHSC reviewers was inconsistent. **Figure 2** shows the number of actions each MCO included in its response. Some companies with more sanctions received high scores from some reviewers. Among MCOs with relatively lower numbers of sanctions, some reviewers expressed concerns based on the nature of the sanctions.

MCOs did not include clear descriptions consistently for many sanctions. Some of the descriptions, for example, simply state that the MCO failed to meet a contract requirement. One MCO received a \$2.4 million penalty that it described as "disincentives for seven measures."

MCOs described regulatory actions, sanctions, and fines that included issues pertaining to the following topics:

- inaccurate provider directories;
- failing to accurately describe benefits and coverage to members;
- failing to respond to member appeals of benefit denials in a timely manner;
- inadequate networks;
- failing to meet minimum standards for access to care;
- improper care management;
- failing to use appropriate criteria when making coverage determinations;
- failing to provide medically necessary services;
- deceptive marketing practices;
- failing to pay providers in a timely manner; and
- submitting inaccurate information to government agencies.

Many of the sanctions pertained to Medicaid contracts, including some within Texas, and were relevant to the types of complex care provided in STAR Kids. HHSC reviewers sometimes described the sanctions listed by MCOs as concerning and potentially disqualifying. With one exception, every company that provided a response was awarded a contract.

In addition to problems with HHSC’s scoring methodology, the procurement process was affected by a limited number of vendors from which the agency had to choose. Federal rules require HHSC to provide at least two plans per region, unless granted an exception. In two of 13 STAR Kids regions, two health plans responded to the request for proposal. Both plans reported sanctions and regulatory actions taken against them during the three years before the STAR Kids procurement.

Current contracts are effective through August 31, 2019. The terms of the contracts give HHSC the option to renew the contracts for up to eight additional years. Option 1 would direct HHSC to reprocur STAR Kids services as soon as possible to ensure that HHSC uses an effective and consistent process for awarding contracts to promote competition based on quality and efficiency.

**FIGURE 2
REGULATORY ACTIONS FROM CALENDAR YEARS
2011 TO 2014 REPORTED BY STAR KIDS MANAGED
CARE ORGANIZATIONS IN REQUEST FOR PROPOSAL
RESPONSE, 2014**

ACTIONS (1)	MANAGED CARE ORGANIZATION
0	Children’s Medical Center Dallas
Less than 100	Blue Cross Blue Shield, Community First, Cook Children’s, Superior, Texas Children’s
300 to 500	Aetna, Amerigroup, Molina (2)
More than 1,000	United

NOTES:
 (1) Plans may have counted multiple regulation actions taken on the same day as a single action.
 (2) Molina was not awarded a contract.
 SOURCES: Legislative Budget Board; Health and Human Services Commission.

In reprocurring services for STAR Kids, HHSC should ensure that there are an adequate number of vendors with a history of consistently meeting contract standards to promote this type of competition. Statute authorizes HHSC to implement alternative models or arrangements, including a traditional FFS arrangement, if the agency determines that the alternative would be more cost-effective or efficient. If the agency is unable to attract an adequate number of qualified, high-performing vendors, it may be necessary for HHSC to use an alternative model in regions that lack adequate competition.

CAPITATION RATE-SETTING ASSUMPTIONS

MANAGED CARE EFFICIENCY ASSUMPTION

Statute requires HHSC to pay MCOs using a capitated rate in STAR Kids. Capitated rates are set for a group of people based on their expected health costs in a year. In STAR Kids, HHSC pays each MCO a certain amount per person enrolled with the company. If the total amount determined at the beginning of the year is not sufficient to pay for all the services needed by those people, the MCO experiences a financial loss.

Historically, HHSC actuaries have noted that the additional administrative cost of using MCOs requires offsetting decreases in medical expenditures to maintain cost neutrality. For STAR Kids, during fiscal year 2017, the actuaries decreased the base of FFS claims used to set managed care premiums by 3.9 percent based on a managed-care efficiency assumption. For fiscal year 2018, the decrease was 7.5 percent. According to HHSC, actuaries anticipate increasing this efficiency assumption to 8.4 percent in the future.

However, according to the actuaries, adequate utilization data relevant to these assumptions, such as inpatient days, outpatient visits, and office visits were not available in a credible format during the rate development process.

RISK ADJUSTMENT

Acuity describes the health status of members. Member acuity is not distributed equally across MCOs in STAR Kids, and according to the external quality review organization (EQRO) for the Texas Medicaid program, differences in provider networks among MCOs can predispose certain plans to attracting higher-cost populations. Additionally, some regions may include populations whose cost are higher than other regions. To account for these differences in managed care, actuaries typically adjust the capitation rates to account for differences in health status that are related to cost. The goal of these risk adjustments, according to the EQRO, is to ensure that premiums meet the following standards:

- equitably adjust capitation rates to account for differences in the average member health status at each MCO;
- minimize the incentive for health plans and providers to enroll healthy members selectively; and
- provide adequate reimbursement to MCOs whose providers treat sicker-than-average populations.

However, when HHSC set capitation rates for the first year of STAR Kids, from November 2016 to August 2017, it did not adjust for differences in members' health status between MCOs. One reason was because HHSC could not predict the enrollment choices of families. Members select a health plan when they enroll in STAR Kids. Some families choose plans for their children that contract with preferred specialty providers. If the family does not select a health plan, HHSC automatically assigns the member one based on the MCO with which its primary care physician contracts and other considerations, including market share by MCO.

HHSC made the first risk adjustment to the STAR Kids capitation rates effective September 1, 2017. The categories used by HHSC to set risk adjustments for STAR Kids are based on Medicaid managed care spending on clients nationally. However, data used to develop these categories do not include significant amounts of LTSS commonly used by children in STAR Kids. These populations typically have not been enrolled in managed-care programs elsewhere. There is also typically a lag to incorporate new data. Therefore, LTSS costs may not be accounted for adequately in the model that

HHSC uses to set risk adjustments. LTSS costs are a significant expense for health plans in STAR Kids. During fiscal year 2017, for example, 37.5 percent of medical expenses at STAR Kids MCOs were for LTSS.

According to federal rules for Medicaid managed care, states should seek to set capitation rates, including the risk adjustment, so that MCOs spend at least 85 percent of their premiums on medical expenses. The relationship between medical expenses and premiums is called the medical loss ratio (MLR). A ratio of at least 85 percent ensures that no more than 15 percent of premiums is expended on administrative costs and profits. Activities intended to improve quality, such as care coordination, are considered medical expenses.

Although CMS does not set a maximum MLR, the ratio should provide MCOs with a reasonable portion of the premium to pay administrative costs. The rate-setting process also should protect against an MLR that is too high. According to CMS, if an MLR is too high, "there is a possibility that the capitation rates were set too low, which raises concerns about enrollees' access to services, the quality of care, provider participation, and the continued viability of the Medicaid managed care plans in that market." CMS considers an MLR of greater than 100 percent to be extremely high. As shown in **Figure 3**, from November 2016 to April 2018, six of the 10 STAR Kids health plans had MLRs greater than 100 percent. MCOs collectively reported spending 95.4 percent of premiums on medical expenses during this period.

In addition to the risk adjustment, HHSC made other changes to the rates effective September 1, 2017, such as increasing the cost-savings assumption across MCOs. **Figure 4** shows the MLR for all STAR Kids MCOs combined before and after the rate changes.

Since this rate adjustment took effect, preliminary data indicate that MCOs collectively have spent 96.8 percent of their premium revenues for medical expenses through April 2018. Aetna reported an MLR of 81.4 percent, Amerigroup reported 83.4 percent. Superior reported an MLR of 89.9 percent, Cook reported 94.6 percent, and Texas Children's reported an MLR of 97.2 percent. The remaining five MCOs reported MLRs of greater than 100.0 percent.

Figure 5 shows the MLR and acuity scores for every STAR Kids region and MCO. The acuity index is the sum of the acuity scores; plot points further to the right reflect health plans with higher-need children. Fiscal year 2017 shows a

**FIGURE 3
STAR KIDS PROGRAM MANAGED CARE ORGANIZATIONS' REVENUES AND EXPENDITURES
NOVEMBER 2016 TO APRIL 2018**

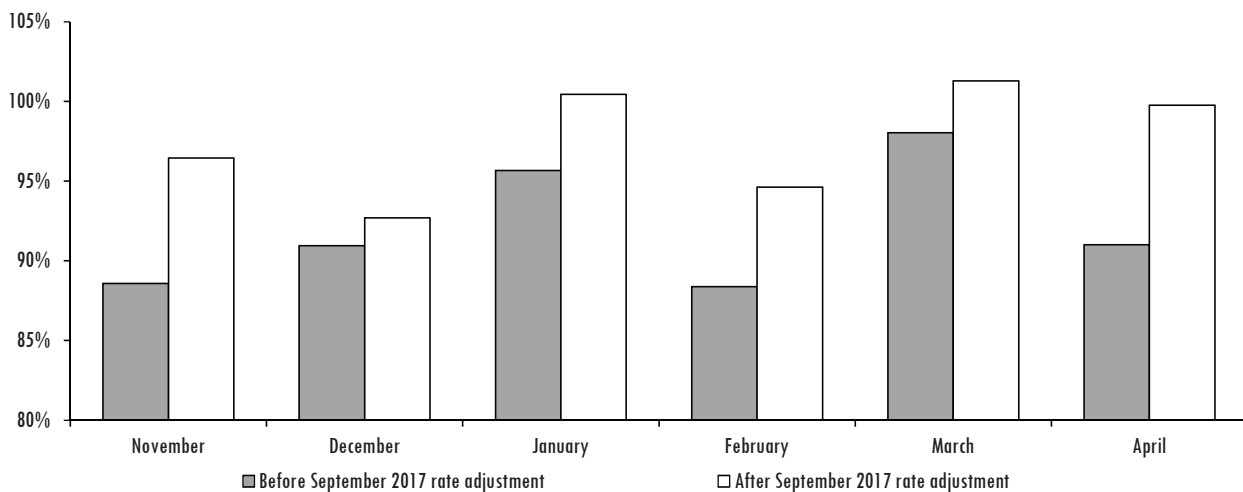
(\$ IN MILLIONS)							
MANAGED CARE ORGANIZATION	ENROLLMENT (1)	PREMIUM REVENUES AFTER TAXES	MEDICAL EXPENSES	QUALITY IMPROVEMENT (2)	ADMINISTRATIVE COSTS	MEDICAL LOSS RATIO (3)	NET PRETAX INCOME (4)
United	30,946	\$802.2	\$804.6	\$42.6	\$47.2	100.3%	(\$49.5)
Superior	28,869	\$782.7	\$701.2	\$43.4	\$44.9	89.6%	\$36.6
Amerigroup	27,638	\$714.0	\$560.6	\$22.3	\$35.9	78.5%	\$117.5
Texas Children's	26,161	\$806.1	\$821.1	\$40.8	\$49.4	101.9%	(\$64.4)
Driscoll	10,427	\$246.9	\$221.4	\$21.8	\$15.8	89.7%	\$9.7
Children's Medical Center Dallas	9,444	\$363.8	\$415.6	\$17.3	\$26.4	114.2%	(\$78.2)
Cook	9,365	\$296.8	\$298.6	\$24.3	\$17.6	100.6%	(\$19.4)
Community First	7,965	\$261.3	\$268.3	\$9.1	\$17.5	102.7%	(\$24.5)
Blue Cross Blue Shield	7,869	\$216.8	\$219.2	\$6.3	\$34.7	101.1%	(\$37.1)
Aetna (5)	4,911	\$111.6	\$80.9	\$4.7	\$7.8	72.5%	(\$23.0)
Total	163,595	\$4,602.3	\$4,391.4	\$232.7	\$297.1	95.4%	(\$86.2)

NOTES:

- (1) Not reported in millions. Enrollment is based on managed care organization (MCO) reported enrollment in February 2018.
- (2) Quality improvement is a subset of medical expenses.
- (3) Medical loss ratio equals medical expenses divided into premium revenues after taxes. Consistent with federal guidance, medical expenses used for the medical loss ratio include quality improvement expenses at the MCO, including care coordination.
- (4) Net income before taxes equals premium revenues after taxes minus medical and administrative expenses.
- (5) March 2018 and April 2018 data were not available for Aetna.
- (6) Financial data does not represent any experience rebate collections. MCOs with profits will share some of these profits with the Health and Human Services Commission.

SOURCES: Legislative Budget Board; Health and Human Services Commission.

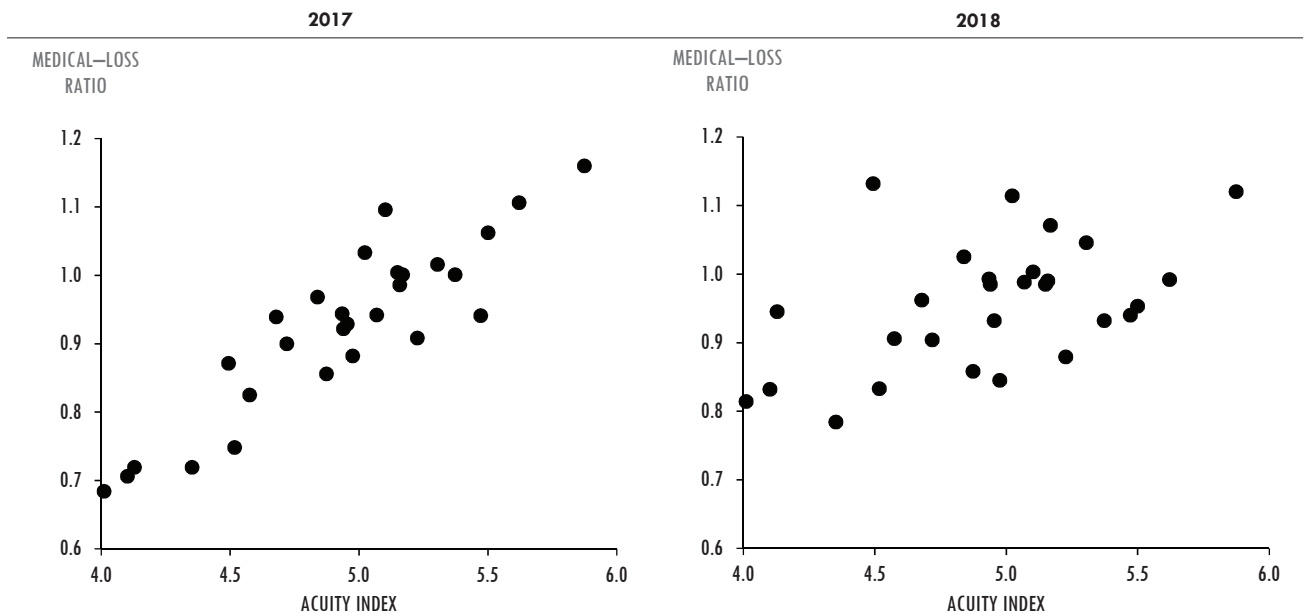
**FIGURE 4
MEDICAL LOSS RATIO FOR ALL MANAGED CARE ORGANIZATIONS IN STAR KIDS PROGRAM
NOVEMBER 2016 TO APRIL 2017 AND NOVEMBER 2017 TO APRIL 2018**



NOTE: March 2018 and April 2018 data were not available for Aetna. Aetna represented approximately 3.0 percent of program revenues during the previous period.

SOURCES: Legislative Budget Board; Health and Human Services Commission.

**FIGURE 5
MEDICAL LOSS RATIO AND ACUITY SCORES BY REGION AND MANAGED CARE ORGANIZATIONS
FISCAL YEARS 2017 AND 2018 THROUGH APRIL 2018**



NOTE: The acuity index is the sum of acuity scores for risk groups estimated by the external quality review organization for fiscal year 2017 for five categories. The five scores were summed to establish a proxy for the acuity of members at each health plan. This index is not weighted for the enrollment size of each group and is, therefore, an approximation. A higher acuity score indicates greater healthcare needs. Financial data for March 2018 and April 2018 data were not available for Aetna.

SOURCES: Legislative Budget Board; Health and Human Services Commission.

strong relationship between an MCO’s financial performance and the acuity of its members.

After the first rate adjustments, there was still a relationship between the health status of a plan’s members in the first year and their financial performance in the second year. This indicates that the uneven distribution of high-needs members continued to affect the financial performance and viability of health plans during the second year of the program.

According to the Texas Association of Health Plans, which represents the STAR Kids MCOs, the risk-score adjustment needs improvement. According to the CEO of a STAR Kids MCO, without improvements to the risk-score adjustment, health plans may need to discourage the enrollment of high-cost members to be financially viable.

Option 2 would direct HHSC to evaluate risk-adjustment methods for the STAR Kids program to improve the relationship between capitation rates and distributions of high-cost members. HHSC could consider multiple options to improve risk adjustment, such as adjusting the weights used for risk scoring to incorporate LTSS cost data. The agency also could consider establishing cost-sharing among MCOs for

members whose costs exceed a certain threshold, to reduce the impact of unevenly distributed catastrophic cases.

MCO PERFORMANCE AND CONTRACT STANDARDS

Evidence suggests that some MCOs in STAR Kids have not regularly met performance standards established in the contracts. Service planning and care coordination outcomes vary considerably among MCOs. Data show substantial variations in service denial rates by MCOs and declines in utilization of services critical for STAR Kids clients. Furthermore, the percentage of out-of-network claims for some MCOs exceeds standards, which indicates networks that may be inadequate.

SERVICE PLANNING AND CARE COORDINATION

Historically, some caregivers for children reported difficulty accessing services when they were enrolled in FFS Medicaid, and some caregivers expressed interest in receiving help coordinating care. The EQRO for the Texas Medicaid program identified access to care coordination as an issue to monitor and improve in STAR Kids.

The Policy Council for Children and Families is an advisory committee tasked by the Legislature with making recommendations to HHSC about STAR Kids. More than 60.0 percent of the voting members are parents of children with disabilities. In March 2014, the council made the following statement in its recommendation against giving assessment and service coordination responsibilities to MCOs:

Because managed care organizations receive flat, all-inclusive monthly payments for services rendered, they have an inherent incentive to limit the range and intensity of services to plan enrollees. For this reason, service coordination should be provided by an independent entity not affiliated with the MCO.

HHSC assigned responsibility for STAR Kids eligibility assessments and service coordination to MCOs. MCOs can delegate this responsibility to a provider-led health home. However, delegation is not common. As outlined in HHSC's contracts, assessments conducted by MCO service coordinators should identify the needs of STAR Kids members. MCOs also must ensure that members have service plans. Service plan development is intended to be a member-centered planning process directed by members and representing their goals.

Option 3 would amend statute to provide access to independent case management for families in STAR Kids. Stakeholders, including the Policy Council for Children and Families, have advocated for independent service coordination outside of MCOs. Authorizing members to choose independent service coordinators would decrease possible conflicts of interest that might influence needs assessments and eligibility determinations. To minimize complexity and ensure coverage in every STAR Kids region, a single state agency could perform this function. The Department of State Health Services could expand its current case management responsibilities for children and pregnant women to include assessments and coordination for STAR Kids families that select this option.

ASSESSMENTS AND SCREENINGS FREQUENCY

Evidence suggests that MCOs have not met standards consistently for the frequency of assessments and screenings of STAR Kids members. The EQRO has recognized high caseloads in other managed-care programs as a key barrier to effective care coordination. During vendor selection, some HHSC staff expressed uncertainty regarding the care coordinator caseloads that MCOs proposed as part of the contract proposals. Data subsequently provided by HHSC

show that after program implementation, some service coordinators whose caseloads included MDCP children had caseloads in excess of 300 children. At another MCO, service coordinators had caseloads averaging more than 250 children, excluding MDCP and other high-needs children.

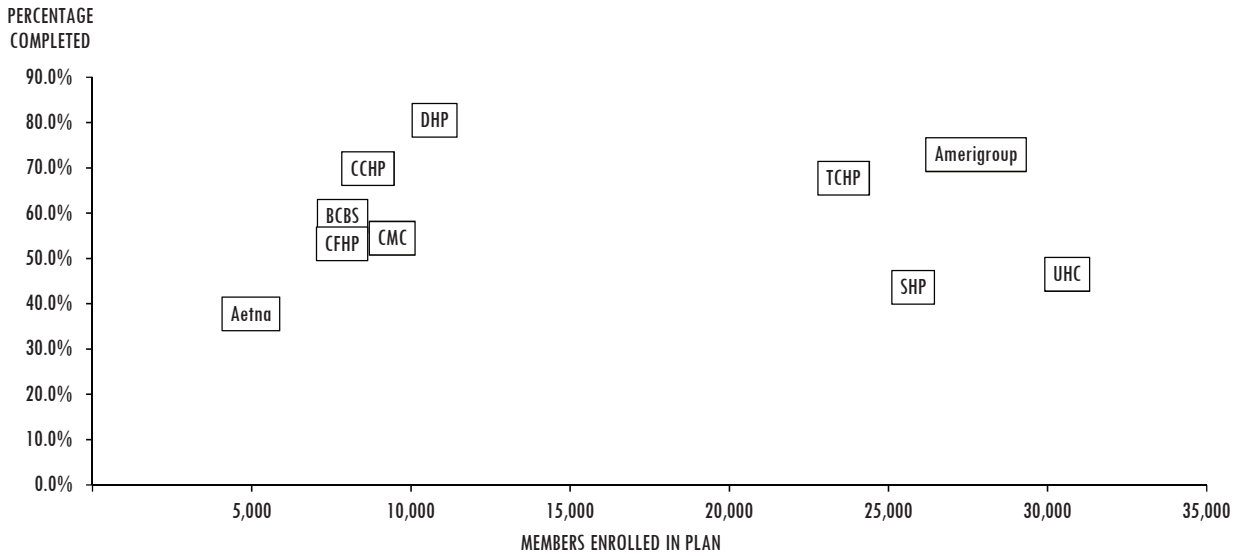
Federal rules and guidance require that MCOs must make "a best effort" to conduct an initial screening for all new members within 90 days to determine their healthcare needs. During the program launch, HHSC provided MCOs six months to conduct assessments. If a member requested immediate services, the deadline was seven business days. In either case, the MCO had to honor prior service plans until it conducted a new assessment.

Four months after implementation, HHSC reported to the STAR Kids Managed Care Advisory Committee that MCOs had completed 34.6 percent of the 77,209 assessments requested by families. In July 2018, HHSC reported that MCOs had completed 58.8 percent of members' comprehensive assessments, which falls short of contractual requirements. This percentage was based on MCO-provided information for assessments completed by February 2018 for members enrolled since at least November 2017. As shown in **Figure 6**, assessment completion percentages among MCOs differed greatly.

According to HHSC data, approximately 1.9 percent of members declined an assessment. MCOs reported the inability to locate or to schedule assessments with 24.9 percent of members. Another 14.4 percent of members did not have an assessment completed for other, unidentified reasons. As shown in **Figure 7**, the HHSC data indicates large variations in MCOs' reported inability to locate members.

Data indicate that some MCOs are not meeting requirements for frequency of in-person or telephone contacts. HHSC requires MCOs to meet in person at least 4.0 times per year with each of its highest-needs children. This membership includes children enrolled in MDCP, children at risk of institutionalization, and others with complex medical needs. As shown in **Figure 8**, MCOs' average annual in-person contacts ranged from 0.60 at Aetna to 5.49 at Driscoll. The contract also requires at least 12 telephone contacts per year. United and Aetna spoke to members on the phone fewer than 3.0 times per year on average from February 2017 to May 2018, and Driscoll averaged 4.4 phone contacts during that period. All the other MCOs reported averages greater than 11.0, and Blue Cross Blue Shield reported the most at 25.9 contacts per person.

**FIGURE 6
PERCENTAGE OF MEMBERS ENROLLED BY NOVEMBER 2017 WITH COMPLETED COMPREHENSIVE ASSESSMENTS BY MANAGED CARE ORGANIZATION, FEBRUARY 2018**

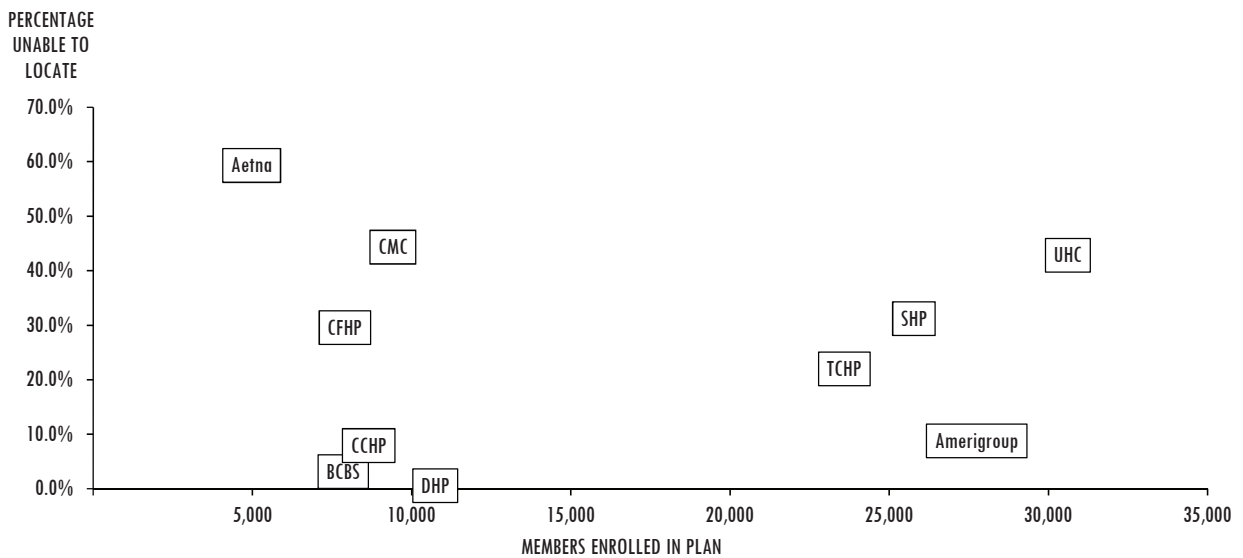


NOTES:

- (1) Percentages represent assessments completed by February 28, 2018. Superior noted completing approximately 22.5 percent of assessments after this date, primarily for individuals enrolled in November 2017. Data was self-reported by managed care organizations and has not been audited by Legislative Budget Board staff.
- (2) BCBS=Blue Cross Blue Shield; CMC=Children’s Medical Center Dallas; CFHP=Community First Health Plan; CCHP=Cook Children’s Health Plan; DHP=Driscoll Health Plan; TCHP=Texas Children’s Health Plan; SHP=Superior Health Plan; UHC=United Health Care.

SOURCES: Legislative Budget Board; Health and Human Services Commission.

**FIGURE 7
PERCENTAGE OF MEMBERS ENROLLED BY NOVEMBER 2017 THAT THE MANAGED CARE ORGANIZATION WAS UNABLE TO LOCATE, FEBRUARY 2018**



NOTES:

- (1) Data were self-reported by managed care organizations and has not been audited by Legislative Budget Board staff.
- (2) BCBS=Blue Cross Blue Shield; CMC=Children’s Medical Center Dallas; CFHP=Community First Health Plan; CCHP=Cooks Children’s Health Plan; DHP=Driscoll Health Plan; TCHP=Texas Children’s Health Plan; SHP=Superior Health Plan; UHC=United Health Care.

SOURCES: Legislative Budget Board; Health and Human Services Commission.

FIGURE 8
IN-PERSON ANNUAL CONTACT RATES FOR HIGH-NEEDS CHILDREN BY MANAGED CARE ORGANIZATION
FEBRUARY 2017 TO MAY 2018

MANAGED CARE ORGANIZATION	MAY 2017 ENROLLMENT	MEMBERS ENROLLED IN LEVEL OF CARE 1 WITH A COMPLETED ASSESSMENT (1)	AVERAGE NUMBER OF ANNUAL IN-PERSON CONTACTS (1)	PERCENTAGE OF MEMBERS WHO RECEIVED AT LEAST 4.0 IN-PERSON CONTACTS (2)
Aetna	5,215	58	0.60	5.2%
United	30,331	1,291	0.86	13.8%
Superior	29,448	590	2.03	2.4%
Amerigroup	28,150	349	2.19	42.7%
Blue Cross Blue Shield	7,881	190	2.34	24.2%
Cook	8,909	504	3.48	49.0%
Texas Children's	25,583	1,674	3.87	53.7%
Community First	8,038	159	3.92	98.1%
Children's Medical Center Dallas	9,694	411	3.94	53.5%
Driscoll	10,670	99	5.49	85.9%

NOTES:

- (1) Includes members whose comprehensive assessments were completed from February 2017 to May 2017 and still were enrolled on April 30, 2018. Contacts are reported through April 30, 2018, for these members.
- (2) The contract between the Health and Human Services Commission and managed care organizations requires at least 4.0 contacts per year for members in Level of Care 1, the highest-need group of children enrolled in STAR Kids. Data was self-reported by managed care organizations and has not been audited by Legislative Budget Board staff.

SOURCES: Legislative Budget Board; Health and Human Services Commission.

State and federal guidelines require the assessment and planning processes to be collaborative between providers and driven by members' families. Evidence indicates gaps between these guidelines and actual practice. For example, members of the STAR Kids Managed Care Advisory Committee have reported instances of MCOs not contacting members and not providing members services for which they qualified. The Policy Council for Children and Families requested that HHSC ensure that MCOs are sending families and providers copies of their service plans, and recommended establishing an Internet portal for this purpose that is accessible by families and their providers. Stakeholders in focus groups conducted by Texas A&M University reported that lack of care coordination is a major concern.

Option 4 would amend statute to require HHSC to establish caseload guidelines for MCO service coordinators with the goal of improving the ability of MCOs to meet assessment and service coordination requirements consistently.

HHSC OVERSIGHT OF STAR KIDS MCOS

Since the implementation of managed care for state health programs in Texas, audits have documented problems with HHSC's oversight of managed-care programs similar to STAR Kids that use capitated rates and MCOs. In November 2003,

the SAO found that HHSC had not monitored or enforced key MCO contract provisions effectively in Texas Medicaid and Children's Health Insurance Program. In December 2015, internal auditors at HHSC found that STAR Medicaid program and contract staff did not notify MCOs consistently regarding known performance problems. When notification occurred, the agency did not track implementation of corrective action plans consistently. Similarly, in an October 2016 report, SAO found that HHSC did not have a documented process to determine when a corrective action plan should be issued in response to a performance audit in the state's Medicaid managed-care program.

To ensure access to appropriate care, HHSC's monitoring of STAR Kids MCOs' adherence to contract standards should examine performance in the following areas: denials and appeals, utilization trends, network adequacy, and eligibility assessments.

DENIALS AND APPEALS

MCOs manage care through case management and utilization management, including prior authorization. Case management includes the assessment of needs, development of a service plan, and monitoring of the implementation of a care plan. Utilization management can include preadmission screenings and prior authorization of certain medical services,

FIGURE 9
PERCENTAGE OF SERVICE REQUESTS DENIED OR REDUCED BY SERVICE TYPE AND MANAGED CARE ORGANIZATION
MARCH 2017 TO FEBRUARY 2018

MANAGED CARE ORGANIZATION	THERAPY SERVICES (1)	DURABLE MEDICAL EQUIPMENT	PRIVATE DUTY NURSING	PERSONAL CARE SERVICES	MDCP RESPITE (2)	COMMUNITY FIRST CHOICE	ALL SERVICES (3)
Superior (4)	23.3%	5.4%	23.6%	15.4%	0.5%	6.8%	17.1%
Driscoll	32.4%	4.8%	2.5%	2.7%	0.0%	0.0%	15.8%
Blue Cross Blue Shield	16.4%	6.6%	1.9%	1.8%	0.0%	0.5%	9.5%
Amerigroup (5)	7.6%	3.7%	19.3%	6.7%	2.0%	1.5%	7.3%
Texas Children's	5.8%	4.1%	9.6%	8.1%	2.6%	4.4%	5.7%
United	4.0%	12.8%	1.1%	0.0%	0.1%	0.2%	4.7%
Children's Medical Center Dallas	0.1%	1.9%	17.5%	1.6%	0.8%	0.2%	3.1%
Aetna	3.2%	1.8%	1.0%	0.0%	0.0%	0.0%	2.4%
Cook	4.3%	0.8%	3.4%	1.9%	0.0%	0.0%	2.4%
Community First	2.4%	2.9%	0.3%	0.3%	0.0%	0.0%	1.8%
All MCOs	10.5%	5.1%	10.8%	6.3%	0.8%	1.7%	8.3%

NOTES:

- (1) Therapy services include occupational, speech, and physical therapy services.
 - (2) MDCP=Medically Dependent Children Program.
 - (3) The All Services category represents the total percentage of services denied or reduced for all of the services shown.
 - (4) A managed care organization (MCO) also may have taken adverse actions and categorized them as a terminated service. Including terminations would increase the percentage of service requests with an adverse determination for all services at Superior to 27.9 percent. This practice was an anomaly among MCOs for the impact of including terminations. According to Superior, this data includes some services authorizations that expired.
 - (5) Services are ordered based on the most commonly approved services across MCOs. MCOs counted only the final status of a request for service. If a service was requested, initially denied, and then later approved, this instance would count as one approval. Amerigroup counted both the initial denials and final approvals. United did not provide counts of service reductions.
 - (6) Data was self-reported by health plans and has not been audited by Legislative Budget Board staff.
- SOURCES: Legislative Budget Board; Health and Human Services Commission.

retrospective reviews, and general monitoring to evaluate the appropriateness of services.

MCOs may establish their own procedures for reviewing and approving care. State and federal policies, however, require children to have access to similar levels of service across MCOs, each of which must provide at least the services specified in the state plan. Additionally, most children enrolled in Medicaid are entitled by federal law to all medically necessary services, regardless of whether the service is covered in the state plan.

Some STAR Kids families and other stakeholders have reported regular challenges in obtaining approval for services, which they say has affected families negatively and put members at risk. Stakeholders also reported inconsistent criteria and burdensome procedures for the authorization of services. Denials of requests for medical services can result in administrative burdens for families and may prevent children from accessing care prescribed by their physicians.

Broad variations in denial rates could indicate problematic differences in medical necessity criteria and access to care. **Figure 9** shows the percentage of service requests denied or reduced by MCO and service type.

Some variation may be expected based on reasonable differences of interpretation among medical personnel working with different populations at each MCO. In addition, other factors may affect denial rates, such as the percentage of members who also have commercial insurance that must be the primary payer. However, wide variation may indicate the use of problematic criteria to make authorization decisions. In response to concerns from stakeholders, HHSC has issued guidance several times to MCOs regarding authorization policies. Families, other stakeholders, and some providers have continued to raise concerns about access to care and MCO policies after receiving this guidance from HHSC.

HHSC has identified some uses of inappropriate authorization criteria at MCOs. In a June 2018 written

FIGURE 10
STAR KIDS MEMBERS' COMPLAINTS AND APPEALS BY MANAGED CARE ORGANIZATION, MARCH 2017 TO MAY 2017 (1)

MANAGED CARE ORGANIZATION	MEMBER APPEALS	MEMBER COMPLAINTS	PROVIDER COMPLAINTS	SHARE OF MEMBER APPEALS	SHARE OF ENROLLMENT (2)
Superior	406	97	41	63.7%	18.0%
Texas Children's	70	58	18	11.0%	15.6%
United	41	44	14	6.4%	18.5%
Amerigroup	33	37	15	5.2%	17.2%
Driscoll	32	12	21	5.0%	6.5%
Aetna	19	18	11	3.0%	3.2%
Blue Cross Blue Shield	17	26	31	2.7%	4.8%
Children's Medical Center Dallas	14	19	13	2.2%	5.9%
Community First	4	11	3	0.6%	4.9%
Cook	1	18	3	0.2%	5.4%

NOTES:

(1) Complaints and appeals include those filed with either a managed care organization or the Health and Human Services Commission.

(2) The share of enrollment is based on May 2017 enrollment. In the Texas Medicaid program, member appeals typically involve the appeal of a denial or limitation of a benefit, dissatisfaction with plan administration, or untimely responses to authorization requests. Member complaints to plans commonly involve dissatisfaction with the quality of care provided by a treating physician or other provider, difficulties with accessibility or availability of services, and prior authorization denials. Providers also can file complaints related to utilization review; plan administration; and claims processing, billing, or denials.

SOURCES: Legislative Budget Board; Health and Human Services Commission.

statement, HHSC said that therapy policies at Driscoll were in conflict with contract requirements regarding utilization management. As shown in **Figure 9**, Driscoll denied or reduced the second-highest percentage of requests overall. This rate was driven by the MCO's denial or reduction of therapy requests.

Members that are denied services can appeal with the MCO within 10 days of notification. Members also can file complaints that may not be specific to a denial or other adverse action taken by the MCO. Finally, members can file complaints and appeals with HHSC, but only after appealing first to the MCO.

Similarly to denial rates, some variation may be expected in rates of appeals and complaints. However, variation or rates disproportionate with market share may indicate issues that need improvement and should be evaluated by HHSC.

According to some MCOs, many of the STAR Kids member complaints relate to issues with coordination of benefits for clients who have both commercial and Medicaid coverage. In these situations, MCOs report that they initially may issue a denial because they need documentation to show that the commercial plan will not cover the service. Without guidance from the state, however, MCOs are concerned about being

sanctioned by the HHSC Office of Inspector General for not adequately enforcing primary coverage payment requirements.

Figure 10 shows complaints and appeals by MCO from March 2017 to May 2017.

UTILIZATION TRENDS

In addition to rates of denials and appeals, utilization of services before and after the implementation of STAR Kids may show how MCOs are interpreting and applying the state's medical necessity requirements compared to the vendor that previously conducted prior authorizations for members in FFS Medicaid.

According to HHSC, utilization of five services, including therapy personal care and private duty nursing, decreased for members after the transition to STAR Kids. After children moved to STAR Kids, their prior authorizations under the FFS model remained valid through late spring 2017. According to HHSC analysis, the percentage of STAR Kids members receiving speech therapy decreased by 12.0 percent from June 2017 to September 2017. Physical and occupational therapy utilization rates decreased 13.0 percent, where they have remained since. By contrast, the utilization rates for children enrolled in the STAR and STAR Health Medicaid programs remained stable during the same period. In December 2018, HHSC said that, based on the timing of

these decreases, the agency “is exploring the possibility of increased service denials correlating with the observed service trends.” To examine this possibility further, HHSC has requested therapy prior authorization data from the MCOs.

NETWORK ADEQUACY

MCOs are required to maintain adequate networks to provide members with needed care. The Texas Medicaid program uses 13 service delivery areas. In STAR Kids, members typically are required to find in-network providers for certain services within these regions, unless granted exceptions. Regional networks can result in difficulties in accessing care because children with disabilities often see subspecialists at pediatric hospitals that may be located outside of their regions. The majority of MCOs in states with mandatory managed care for children in SSI operate statewide networks.

HHSC monitors network adequacy through measures that focus primarily on network breadth. These measures include mileage and time standards and caps on the volume of expenditures that can be made outside of the network. HHSC sets these caps, which limit out-of-network expenditures for inpatient admissions to 15.0 percent, emergency room visits to 20.0 percent, and other services to 20.0 percent.

From March 2017 to May 2017, every MCO except for Cook Children’s and Community First exceeded at least one standard for out-of-network expenditures. For outpatient services, more than 74.0 percent of claims were out-of-network for Driscoll members. Amerigroup reported 31.0 percent of claims outside of the network in the Harris region, and Aetna and Blue Cross Blue Shield reported rates from 20.0 percent to 30.0 percent.

In January 2018, the Policy Council for Children and Families expressed concerns about the adequacy of networks for personal-care attendants, habilitation providers, and therapists. The group also expressed concern that plans were using inappropriate preferred provider agreements to restrict access to durable medical equipment. By July 2018, every MCO except Aetna was on a network adequacy-related corrective action plan with HHSC.

ELIGIBILITY ASSESSMENTS

In calendar year 2013, CMS issued the following guidance regarding best practices for managed LTSS programs: “MCOs may not be involved in any eligibility determination or functional assessment processes for a potential participant

prior to that participant enrolling in the MCO.” This guidance is intended to mitigate risks that an MCO would seek to enroll members with fewer medical needs selectively. According to the U.S. Governmental Accountability Office (GAO), CMS does not always require states to follow this guidance. CMS expects that when states do not follow its 2013 guidance, they will provide oversight related to conflicts of interest. However, GAO found that CMS does not require states to provide any evidence of oversight when plans are involved in eligibility determinations. As a result, GAO expressed concern that states may not develop adequate precautions or oversight. Even when MCOs are not involved in eligibility determinations, CMS has stated that Medicaid agencies “should monitor to ensure that identified participant needs and preferences are incorporated into service plans, and must provide enhanced monitoring of any service reductions (should there be any) during the transition to managed care.”

For STAR Kids, MCOs collect the information used to make the determination using a standardized assessment tool, although a third party reviews the information to make the final eligibility determination. As part of this framework, HHSC reported to CMS that the agency’s staff would conduct utilization reviews of this assessment process following the methodology that the Department of Aging and Disability Services staff used to conduct these reviews in FFS Medicaid. Using such a methodology, HHSC staff would have met with families, enabling the agency to compare members’ needs to the corresponding MCO assessments and service plans to ensure the appropriateness of both and the receipt of services. However, when HHSC implemented STAR Kids in November 2016, the agency determined that it lacked adequate staff to conduct these reviews. As a result, the state stopped conducting the reviews after MCOs took responsibility for MDCP as part of STAR Kids.

In January 2018, the Office of the Governor expressed concerns about the adequacy of HHSC’s oversight of MCOs in a letter to the HHSC Commissioner. In response, the agency said that it would consider establishing a utilization review process for STAR Kids. On June 1, 2018, HHSC received approval from the LBB and the Office of the Governor to reallocate funding for additional staff to conduct utilization reviews across managed-care programs, including STAR Kids. According to HHSC, utilization review staff will conduct a full program sample of reviews during fiscal year 2020.

Option 5 would amend statute to require HHSC to monitor access to care through service plan monitoring and utilization

reviews, which would compare authorized services to actual paid services to identify when members experience gaps in care. Fourteen states require this type of reporting. The STAR Kids Managed Care Advisory Committee has asked for similar information, and HHSC has identified that this request is an opportunity to improve oversight.

HHSC could leverage existing reporting requirements for electronic visit verification and claims data to identify when members do not receive services included in their service plans. This verification could help the agency practice more immediate monitoring, particularly for the highest-risk members, such as those enrolled in MDCP. HHSC also would be required to conduct utilization reviews on a statistically valid sample for each entity that conducts assessments to ensure that service coordinators conduct appropriate assessments and are ensuring access to medically necessary care. HHSC has been appropriated additional staff to conduct utilization reviews for STAR Kids. However, the agency has reported that more staff would be necessary to conduct statistically valid samples by MCO. Without such a sample, the agency is limited in taking action when it identifies problems.

QUALITY MEASURES FOR LTSS POPULATIONS

HHSC has established a formal overall strategy for monitoring and improving quality in Medicaid consistent with requirements in state and federal rules. CMS approves and periodically updates the strategy. Many of the initiatives rely on quantitative and systematic measures constructed from member surveys and medical claims. These measures are used for a performance indicator report, report cards sent to members selecting health plans, and a financial incentive program known as pay-for-quality.

As of September 2018, the performance measures for the STAR Kids program were being developed and none had been implemented. **Figure 11** shows HHSC’s estimated implementation timeline.

Because STAR Kids includes LTSS, monitoring the performance of MCOs should include measures relevant to these services. According to the U.S. Medicaid and CHIP Payment and Access Commission:

... quality measures focusing on beneficiary outcomes such as improvements in health status and function are not sufficient for monitoring LTSS programs. More appropriate LTSS quality measures include improvement in quality of life, community integration,

**FIGURE 11
ESTIMATED IMPLEMENTATION OF STAR KIDS QUALITY MONITORING ACTIVITIES, SEPTEMBER 2018**

ACTIVITY	DATE
Measures Feasibility Study	October 2018
Pre/Post Implementation Member Survey Executive Summary	December 2018
Appointment Availability Study	Fall 2018
Managed Care Organization Report Cards	Early 2019
Administrative Measure Findings	February 2019
Performance Indicator Dashboard Standards	2019
Comprehensive Report on Survey Results and Administrative Measures	May 2019
Pay-for-Quality	January 2020

SOURCE: Health and Human Services Commission.

avoidance or delay of institutionalization, and other outcomes that do not assume improvement in health and functional status.

HHSC shared draft measures with the STAR Kids Managed Care Advisory Committee in a public meeting in September 2018. Of more than 50 proposed measures, one related to LTSS. The agency is working with the EQRO to refine the quality measures for STAR Kids and expected a feasibility report by October 2018. The agency will collect data for a year before establishing standards for performance in fiscal year 2019.

The EQRO also is comparing member experiences before and after implementation. During fiscal year 2016, the EQRO surveyed members before they transitioned into STAR Kids. During fiscal year 2018, the EQRO conducted a second set of surveys with the same families to compare their experiences. Topics included access to care, experiences with providers, care coordination, and overall satisfaction with care. According to HHSC, results from these surveys were available in December 2018.

Option 6 would amend statute to delay adding new populations into capitated managed care until outcomes from STAR Kids can be measured more fully. Starting on September 1, 2020, current law requires HHSC to transition additional individuals with intellectual and developmental disabilities (IDD) into managed care. When the Legislature established this timeline in statute, it also established the HHSC IDD System Redesign Advisory Committee to advise the agency regarding the development and implementation of these changes. The committee recommends delaying implementation

of these transitions due to concerns about whether HHSC has prepared adequately to transition these members into a capitated model. The committee indicated that “HHSC should evaluate lessons learned from the STAR Kids IDD acute care carve-in ... to improve the system prior to carving in additional IDD waivers into Medicaid managed care.”

FISCAL IMPACT OF THE OPTIONS

Option 1 would direct HHSC to repro cure STAR Kids services as soon as possible to ensure that contracts are awarded to the most qualified vendors. This option is not anticipated to have a significant fiscal impact because it could be implemented with existing resources. However, depending on other procurement needs, it is possible that HHSC would require additional full-time-equivalent (FTE) positions to conduct this repro curement. MCOs historically have not provided bids with prices for this contract; however, changing the MCOs providing services could have impacts on capitation rates in the long term.

Option 2 would direct HHSC to evaluate risk-adjustment methods for STAR Kids and would have no significant fiscal impact.

Option 3 would require HHSC to provide an option for independent case management services. HHSC could use staff at the Department of State Health Services (DSHS) to provide these services, which are eligible for Medicaid funding. Approximately 667 service coordinators across MCOs provide services to 15,148 of the highest-need children enrolled in STAR Kids. Assuming that HHSC uses a gradual phase-in for these members first and that 20.0 percent of families elect for case management from DSHS rather than their health plans, the agency would need to hire approximately 121.0 FTE positions to provide services for 3,030 members. These positions would cost approximately \$13.0 million per year, and 50.0 percent would be reimbursed through Federal Funds. If this option were expanded to include members in the second

tier of need, HHSC would require 288.0 positions by fiscal year 2023 at a total cost of \$30.8 million per fiscal year. The fiscal impact of this model is shown in **Figure 12**. The fiscal impact could decrease if HHSC actuaries decrease the amount of funding provided to MCOs for individuals receiving case management from DSHS.

However, other models could be used to provide independent case management services. Therefore, the net cost of this provision cannot be determined at this time.

Option 4 would amend statute to require HHSC to establish caseload guidelines for service coordinators. If the agency set standards that require substantial increases in MCO staff, the result likely would be an additional cost to the state, depending on how actuaries set the rates for MCOs. Subsequent decreased caseloads could require additional appropriations from the Legislature.

Option 5 would amend statute to require HHSC to monitor access to care through utilization reviews and service plan monitoring. HHSC lacks adequate staff to conduct utilization reviews by MCO. According to HHSC, the agency would require an additional 25.0 FTE positions at a cost of \$2.5 million per year, and 50.0 percent would be reimbursed through Federal Funds. HHSC also may incur costs for information technology to develop gaps-in-access monitoring. **Figure 12** shows the fiscal impact of this option.

Option 6 would amend statute to delay implementation of moving additional populations with special healthcare needs into capitated managed care. The fiscal impact cannot be determined at this time.

The introduced 2020–21 General Appropriations Bill does not include any adjustments as a result of these options.

**FIGURE 12
FIVE-YEAR FISCAL IMPACT OF OPTIONS 3 AND 5, FISCAL YEARS 2020 TO 2024**

YEAR	PROBABLE SAVINGS/(COST) IN GENERAL REVENUE FUNDS	PROBABLE REVENUE GAIN IN FEDERAL FUNDS	PROBABLE SAVINGS/(COST) IN FEDERAL FUNDS	PROBABLE ADDITION/(REDUCTION) OF FULL-TIME-EQUIVALENT POSITIONS
2020	(\$2,856,273)	\$2,856,273	(\$2,856,273)	55.0
2021	(\$7,742,270)	\$7,742,270	(\$7,742,270)	146.0
2022	(\$12,110,163)	\$12,110,163	(\$12,110,163)	229.6
2023	(\$16,639,830)	\$16,639,830	(\$16,639,830)	313.1
2024	(\$16,639,830)	\$16,639,830	(\$16,639,830)	313.1

SOURCE: Legislative Budget Board.

IMPROVE THE TEXAS NEWBORN SCREENING PROGRAM

State law requires that every baby born in Texas receives testing through the Texas Newborn Screening Program unless a parent or guardian refuses screening for a child due to a conflict with religious tenets or practices. Newborn screening identifies infants who may have serious medical conditions for which treatments are available. The screening includes testing for several conditions that can lead to disabilities or death if they are not identified and treated early. For example, newborns with untreated galactosemia develop life-threatening complications within a few days after initiating milk feedings because they cannot metabolize milk sugar. Galactosemia can be fatal without prompt treatment and careful management. Screening tests are available for more than 60 disorders. More than 900 infants in Texas and 5,000 infants nationally are identified each year with a condition included in newborn screening panels.

The Department of State Health Services administers the Texas Newborn Screening Program, which includes testing, follow-up, and clinical care coordination. Limitations in how the fees for the Texas Newborn Screening Program are determined and updated result in these fees not fully covering program costs, which can affect the state's ability to identify and refer for care children who may have serious medical conditions. For example, failure in the newborn screening fee methodology to include the initial costs associated with adding conditions to the program affects how quickly the state can add federally recommended conditions. Failure to add conditions in a timely manner can hamper the early detection of disorders, which may harm children and their families, including leading to severe disabilities and death. In addition, the amount appropriated for newborn screening for Medicaid clients yields a per-screen amount that is less than the estimated newborn screening cost. Furthermore, the state does not meet performance targets related to the timeliness of newborn screening processes. To maximize the ability of the Texas Newborn Screening Program to identify children with serious medical conditions and refer them for appropriate care, the state should improve the methodology and process used to establish program fees, increase appropriations for newborn screening for Medicaid clients and for strategies to improve timeliness, and provide a method to fund the addition of new conditions to the program.

FACTS AND FINDINGS

- ◆ The Texas Newborn Screening Program includes screening for 55 conditions. Two of the conditions, hearing impairment and critical congenital heart disease, are detected through point-of-care screening, and the remaining 53 conditions are detected through screening performed on blood samples, also known as blood spot-based newborn screening.
- ◆ The Department of State Health Services provides newborn screening specimen collection kits for the blood spot-based testing at no cost to providers for patients covered by Medicaid or the Children's Health Insurance Program and for charity-care newborns. A charity-care newborn is a patient who is not insured or otherwise is unable to pay and is not eligible for coverage of newborn screening services by Medicaid, the Children's Health Insurance Program, or any other government program.
- ◆ Healthcare providers purchase newborn screening specimen collection kits from the Department of State Health Services to screen patients who have private insurance or those who self-pay. Statute authorizes the Health and Human Services Commission Executive Commissioner to set the fee amount collected by the Department of State Health Services for these kits. The Department of State Health Services has a methodology for determining the proposed fee amount. As of October 2018, the fee for the specimen collection kit for patients with private insurance or who self-pay is \$55.24. These fee amounts are deposited into the General Revenue–Dedicated Account No. 524, Public Health Service Fees. The cost of screening for charity-care newborns contributes to the overall cost and is included in the kit fee for self-pay and privately insured patients.
- ◆ The state uses the Medicare rate for newborn screening set by the federal Centers for Medicare and Medicaid Services to determine the amount of state and federal Medicaid funds generated as a result of newborn screening for Texas Medicaid clients. The current rate is \$211.51 per screen. The state uses General Revenue Funds to draw down Federal Funds that together

reimburse the state for screening Medicaid clients. These Medicaid funds are deposited into the Public Health Medicaid Reimbursements Fund, and total an estimated \$241.8 million for the 2018–19 biennium.

- ◆ The Legislature appropriated \$40.6 million from the Public Health Medicaid Reimbursements Fund to the Department of State Health Services for laboratory services for the 2018–19 biennium. Of this amount, the Department of State Health Services is spending an estimated \$32.3 million for newborn screening for Medicaid clients. The Legislature appropriated the remaining amounts in the fund to mental health state hospitals, mental health community hospitals, nonlaboratory items at the Department of State Health Services, and other items at the Health and Human Services Commission.

CONCERNS

- ◆ The Department of State Health Services' methodology to determine the proposed fee for newborn screening specimen collection kits for self-pay and privately insured patients does not include all costs associated with operating the Texas Newborn Screening Program. These costs include certain staffing costs, initial costs associated with adding conditions to the program, and the cost of efforts to improve the timeliness of newborn screening processes.
- ◆ The Department of State Health Services does not evaluate the fee for newborn screening specimen collection kits regularly to address changes to screening costs, and the Health and Human Services Commission does not regularly update fee amounts. The Health and Human Services Commission last increased the kit fee for self-pay and privately insured patients in October 2016 from \$33.60 to \$55.24. Screening costs have increased since and exceed the revenue generated from this fee.
- ◆ According to the Department of State Health Services, the amounts allocated from the Public Health Medicaid Reimbursements Fund for newborn screening of Medicaid clients for the 2016–17 and 2018–19 biennia equate to a per-screen amount that is less than the 2016-estimated newborn screening cost of \$55.24.
- ◆ The state does not meet performance targets for the timeliness of newborn screening processes. For

example, during fiscal year 2017, the Department of State Health Services laboratory received 25.2 percent of initial-screen specimens and 12.3 percent of second-screen specimens within the targeted timeframe of one day after collection. The time that passes from specimen collection to reporting can affect the health outcomes of infants who have screened medical conditions. These conditions may manifest with acute symptoms during the first days of life and require immediate treatment to decrease the risk of morbidity and mortality.

- ◆ The state lacks a permanent funding mechanism to cover the initial costs associated with adding conditions to the Texas Newborn Screening Program. This lack of funding has delayed the addition of federally recommended conditions to the program. Failure to add conditions in a timely manner can prevent early detection of disorders, resulting in severe disabilities and death for some infants.

OPTIONS

- ◆ **Option 1:** Amend statute to require the Department of State Health Services to revise its methodology used to determine the proposed fee for newborn screening specimen collection kits to include all costs associated with operating the Texas Newborn Screening Program. The amended statute could require that the new methodology include the initial costs associated with adding conditions to the program and the cost of strategies to improve timeliness of newborn screening processes.
- ◆ **Option 2:** Amend statute to require the Department of State Health Services to evaluate annually the fee amount for newborn screening specimen collection kits and, if needed, to require the Health and Human Services Commission to consider updating the amount to ensure that the fee matches the program cost.
- ◆ **Option 3:** Increase appropriations in the 2020–21 General Appropriations Bill in Other Funds by \$10.1 million from the Public Health Medicaid Reimbursements Fund to the Department of State Health Services in Strategy A.4.1, Laboratory Services, for newborn screening of Medicaid clients. The decrease of a like amount from the fund would be made in appropriations to the Health and Human Services Commission for other purposes, and an

increase in General Revenue Funds would restore the decrease. Amend Special Provisions Relating to All Health and Human Services Agencies in the 2020–21 General Appropriations Bill to specify the increased appropriations to the Department of State Health Services.

- ◆ **Option 4:** Increase appropriations in the 2020–21 General Appropriations Bill in Other Funds by \$3.95 million from the Public Health Medicaid Reimbursements Fund to the Department of State Health Services in Strategy A.4.1, Laboratory Services to improve the timeliness of newborn screening processes, including expanding state-funded overnight courier service and provider education. The decrease of a like amount from the fund would be made in appropriations to the Health and Human Services Commission for other purposes, and an increase in General Revenue Funds would restore the decrease. Amend Special Provisions Relating to All Health and Human Services Agencies in the 2020–21 General Appropriations Bill to specify the increased appropriations to the Department of State Health Services.
- ◆ **Option 5:** Amend a rider in the 2020–21 General Appropriations Bill directing the Department of State Health Services to request from the Legislative Budget Board additional funds from the Public Health Medicaid Reimbursements Fund to pay for the initial costs associated with adding conditions to the Texas Newborn Screening Program if new conditions are identified outside of the biennial appropriations process. These funds would be in addition to the amounts appropriated to the Department of State Health Services for laboratory services from the Public Health Medicaid Reimbursements Fund in the 2020–21 General Appropriations Act and would result in a reduction in appropriations from the fund to other strategies at the Health and Human Services Commission.

DISCUSSION

Newborn screening, performed soon after birth, identifies infants who may have serious medical conditions. The screening includes testing for several conditions that can cause infants to develop mental and physical disabilities or die. Some untreated conditions may cause life-threatening complications within the first week of life. For example,

untreated newborns with galactosemia develop life-threatening complications within a few days after initiating milk feedings because they cannot metabolize milk sugar. Galactosemia can be fatal without prompt treatment and careful management. A screening test does not confirm or rule out a particular condition, but screening identifies individuals who may have the condition so that definitive follow-up testing and treatment can occur.

Screening tests are available for more than 60 disorders. Each year, newborn screening identifies more than 5,000 infants in the U.S. with a condition included in the screening panels. Each state administers its own newborn screening program and may screen for a slightly different list of conditions. Parents also may choose to have their child screened for other conditions through newborn screening tests provided by private entities.

OVERVIEW OF THE TEXAS NEWBORN SCREENING PROGRAM

State law requires every infant born in Texas to receive testing through the Texas Newborn Screening Program (NSP) unless the child's parent or guardian objects on religious grounds. The Department of State Health Services (DSHS) administers the NSP, which includes testing, follow-up, and clinical care coordination.

Although newborn screening programs vary by state, national recommendations guide and support the development of state programs. The Recommended Uniform Screening Panel (RUSP) is a list of conditions recommended by the Secretary of the U.S. Department of Health and Human Services (DHHS) for states to include in their newborn screening programs. Ultimately, DHHS decides whether to add a condition to the RUSP, although the Advisory Committee on Heritable Disorders in Newborns and Children (ACHDNC) advises DHHS on which conditions to include. Disorders that are included on the RUSP are chosen based on evidence of potential net benefit of screening, the ability of states to screen for the disorder, and the availability of effective treatments.

DHHS recommends screening every newborn for all disorders on the RUSP, which includes 61 conditions, 35 core conditions and 26 secondary conditions, as of July 2018. Of the 35 core conditions on the RUSP, 33 are screened through blood testing and two are point-of-care screenings. Secondary conditions are detected during screening for core conditions. A condition on the newborn

FIGURE 1
CONDITIONS ON TEXAS NEWBORN SCREENING PANEL COMPARED TO FEDERAL PANEL, FISCAL YEAR 2018

PANEL	CORE CONDITIONS	SECONDARY CONDITIONS	TOTAL
Recommended Uniform Screening Panel	35	26	61
Texas Newborn Screening Program	31	24	55

NOTE: The Recommended Uniform Screening Panel is a list of conditions recommended by the Secretary of the U.S. Department of Health and Human Services for states to include in their newborn screening programs.
 SOURCE: Legislative Budget Board.

screening panel is classified as a core condition if it meets the following requirements:

- a specific and sensitive test is available to detect it;
- the health outcomes of the condition are well-understood;
- an effective treatment is available; and
- identification of the condition could affect the family’s future reproductive decisions.

To the extent that funding is available, Texas law requires that DSHS includes in the NSP the screenings for core and secondary conditions listed in the RUSP. State law excludes two RUSP conditions, galactose epimerase and galactokinase, from this requirement. As shown in **Figure 1**, the NSP does not include all conditions on the RUSP. As of November 2018, the NSP includes screening for 31 core conditions and 24 secondary conditions. Two of these 55 conditions, a hearing screen and a critical congenital heart disease screen, are detected through point-of-care screening. The remaining 53 conditions are detected through screening performed on blood samples, also known as blood spot-based newborn screening. Similarly to Texas’ requirements, most states screen for the majority of disorders on the RUSP. Some states screen for additional disorders.

TEXAS NEWBORN SCREENING SPECIMEN COLLECTION AND PROCESSING

This report focuses on blood spot-based newborn screening, whereby the healthcare provider collects a child’s blood sample and sends it to the DSHS public health laboratory in Austin for testing. The NSP’s blood spot-based screening includes the following steps:

- specimen collection;
- transit of the specimen from the collection site to the DSHS laboratory;
- laboratory testing of the specimen; and

- reporting results to the healthcare provider.

During specimen collection, the healthcare provider collects the blood sample by taking a small amount of blood from the child’s heel within 24 hours to 48 hours after birth and before leaving the birthing facility. A second sample is collected one week to two weeks later, usually at the child’s first pediatric exam. In some cases, the first sample may not identify all abnormal screens, and a disorder may be detected only through the second screen. In both cases, the provider sends the specimen to the DSHS public health laboratory for testing. When testing is complete, the lab notifies providers of the results. If screening tests are abnormal for any disorder, DSHS clinical care coordination staff contact the healthcare provider and work with the provider and parents to ensure that the child receives recommended follow-up screens, confirmatory testing, and treatment, if needed. Infants who have an abnormal screening result or a confirmed diagnosis of a disorder on the panel and who meet other eligibility criteria may receive confirmatory testing and benefits, such as medications and follow-up care, at no cost or reduced cost through the NSP if funds are available. **Figure 2** shows the timeline from receipt of the specimen at the DSHS laboratory through reporting results to providers.

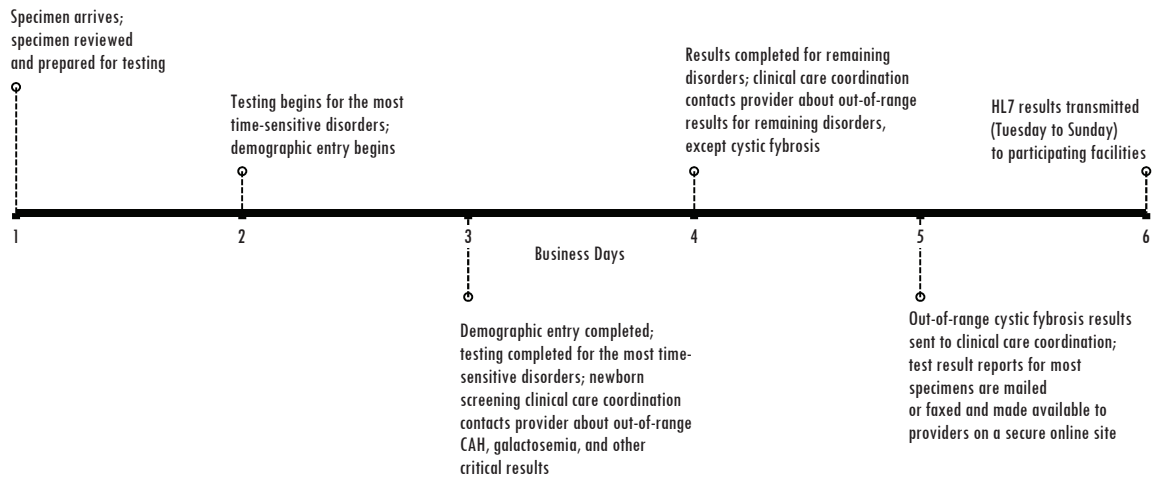
The DSHS public health laboratory receives approximately 800,000 newborn screening blood samples each year, or two samples for each of the approximately 400,000 Texas births. Of the approximately 20,000 abnormal screening results, about 900 core disorders are diagnosed each year.

METHODS OF FUNDING FOR THE TEXAS NEWBORN SCREENING PROGRAM

As shown in **Figure 3**, DSHS reports that the total cost to operate the NSP during the 2016–17 biennium was \$85.9 million. This data does not include the cost to conduct the two point-of-care screenings.

NSP funding includes the following main sources:

**FIGURE 2
TEXAS NEWBORN SCREENING SPECIMEN TIMELINE IN THE STATE LABORATORY, FISCAL YEAR 2018**



NOTE: CAH=congenital adrenal hyperplasia; HL7=Health Level 7 standards for transfer of clinical data.
SOURCE: Department of State Health Services.

**FIGURE 3
TEXAS NEWBORN SCREENING PROGRAM COSTS, 2016–17 BIENNIUM**

CATEGORY	BLOOD-SPOT LABORATORY TESTING			CLINICAL CARE CASE MANAGEMENT CLIENTS	TOTAL
	SELF-PAY, PRIVATELY INSURED, AND CHARITY CARE	MEDICAID	CHIP (1)		
Cost (2)	\$33.9	\$41.6	\$0.009	\$10.4	\$85.9

NOTES:
(1) Due to data limitations, Children’s Health Insurance Program (CHIP) data is available only for fiscal year 2017.
(2) Amounts shown do not include the cost to provide state-funded overnight courier service to transport specimens from the collecting provider to the Department of State Health Services laboratory.

SOURCE: Department of State Health Services.

- a fee charged to healthcare providers who purchase newborn screening specimen collection kits from DSHS to screen patients that have private insurance or who self-pay;
- Medicaid funding appropriated to DSHS from the Public Health Medicaid Reimbursements Fund to screen newborns; and
- funds from CHIP, General Revenue Funds, and other Federal Funds.

Healthcare providers purchase newborn screening specimen collection kits from DSHS to screen privately insured patients or those who self-pay. The specimen-collection kit fee is \$55.24, which includes \$48.67 for laboratory testing and \$6.57 for clinical care coordination. These amounts are deposited into the General Revenue–Dedicated Account No. 524, Public Health Service Fees (Account No. 524).

According to DSHS, all the funds generated from newborn screening specimen collection kits are appropriated to DSHS for NSP costs. Providers then may bill private insurers to receive reimbursement for the cost of the kits. Each month, DSHS bills providers for the number of kits shipped to them in the previous month. DSHS requests that providers submit payment within 90 days, which is intended to give providers time to receive insurance payments for the cost of the kits before submitting payment to DSHS.

DSHS provides newborn screening specimen collection kits at no cost to providers for patients covered by Medicaid or CHIP and charity-care newborns. A charity-care newborn is one who is not insured or does not self-pay, and is not eligible for newborn screening service coverage by Medicaid, CHIP, or any other government program. Each quarter, DSHS analyzes data to determine if a patient tested with a no-cost kit is eligible for Medicaid. DSHS sends a voucher to HHSC

to request payment for those clients identified as Medicaid-eligible. HHSC then transfers Medicaid reimbursement funds for these clients to DSHS. The quarterly billing process is intended to ensure the most accurate identification of Medicaid-eligible clients, but it results in delayed Medicaid reimbursement to DSHS for the increased costs of adding new conditions to the NSP.

Texas uses the Medicare rate for newborn screening set by the federal Centers for Medicare and Medicaid Services to determine the amount of state and federal Medicaid funds generated as a result of newborn screening for Texas Medicaid clients. As of November 2018, the Medicare rate for a newborn screening specimen collection kit is \$211.51 per screen. This rate is effective for specimens collected from April 1, 2018 through March 31, 2019. General Revenue Funds are used to draw down Federal Funds that together reimburse the state for screening Medicaid clients. Medicaid funds generated as a result of newborn screening are deposited into the Public Health Medicaid Reimbursements Fund, which totaled \$180.8 million for the 2016–17 biennium. The Legislature appropriated some of these funds to DSHS to cover part of the newborn screening costs for Medicaid clients. The Legislature appropriated the remaining amounts in the fund to HHSC, mental health state hospitals, mental health community hospitals, and nonlaboratory items at DSHS.

Other funds used by DSHS for the NSP include CHIP, General Revenue Funds Match for Medicaid Administration, the federal Maternal and Child Health Block Grant, and General Revenue Funds Maintenance of Effort for the Maternal and Child Health Block Grant.

IMPROVE THE TEXAS NEWBORN SCREENING PROGRAM

DSHS' methodology to determine the proposed fee for newborn screening specimen collection kits for self-pay and privately insured patients does not include all costs associated with operating the NSP. These costs include certain staffing costs, the initial costs associated with adding conditions to the NSP, and the cost of efforts to improve the timeliness of newborn screening processes. The cost allocation methodology that DSHS uses to determine the NSP fee for newborn screening specimen collection kits for self-pay and privately insured patients has limitations. The methodology does not include all costs associated with operating the NSP, such as costs for staff who process the blood-spot cards.

After DHHS adds a condition to the RUSP, a state may require time to set up funding and lab infrastructure before

screening begins. Costs for the addition include start-up costs, such as purchasing new testing equipment and supplies, and initial laboratory testing and clinical care coordination costs. When DSHS adds a condition to the NSP, the newborn screening fees paid by healthcare providers are increased. The fee is calculated to cover the laboratory testing and clinical care coordination costs associated with newborn screening. However, collection of fee revenue is delayed due to billing and data-matching considerations. This delay results in a period in which revenue is not yet available to cover the increased costs of testing for a new condition.

The agency must receive new funding during the biennial legislative appropriations process to cover start-up and initial-screening costs for adding a new condition to the NSP, which extends the amount of time required to add federally recommended conditions to the program. For example, DHHS added screening for X-ALD, a disease called adrenoleukodystrophy that is linked to the X chromosome, to the RUSP in February 2016. The Eighty-fifth Legislature, Regular Session, 2017, appropriated \$1.2 million in Other Funds from the Economic Stabilization Fund to DSHS for fiscal year 2018 for onetime start-up costs to implement X-ALD testing 18 months after the condition was added to the RUSP. The estimated date for starting to screen for this condition in Texas is September 1, 2019. DSHS has requested \$7.9 million in General Revenue Funds for the 2020–21 biennium for initial-screening costs for X-ALD.

Texas does not meet performance targets related to the timeliness of blood-spot specimen processing. For example, during fiscal year 2017, the DSHS laboratory received 25.2 percent of initial-screen specimens and 12.3 percent of second-screen specimens within the targeted timeframe of one day after collection. The cost of strategies that DSHS might consider implementing to improve the timeliness of NSP processes, such as expansion of state-funded overnight courier service, are not included in the methodology used to determine the fee for newborn screening specimen collection kits.

Option 1 would amend the Texas Health and Safety Code, Chapter 33, to require DSHS to revise its methodology used to determine the proposed fee for newborn screening specimen collection kits to include all costs associated with operating the NSP. The amended statute could require that the new methodology includes the initial costs associated with adding conditions to the NSP and the cost of strategies to improve timeliness of newborn screening processes. Chapter 33 authorizes the HHSC Executive Commissioner

to adopt fees for NSP. The Texas Health and Safety Code, Chapter 12 requires that the fee amount collected for a public health service must not exceed the cost to DSHS of providing it. According to DSHS, this provision prevents the state from adopting a fee for newborn screening that includes the costs associated with adding conditions to the NSP. The amended Chapter 33 could clarify that HHSC should set a fee for newborn screening specimen collection kits that includes the costs associated with adding conditions to the NSP, including start-up and initial laboratory testing costs. DSHS should be authorized to carry over these dedicated newborn screening funds into the following fiscal year. Sixteen states, including Alabama, Florida, Georgia, and Mississippi, charge fees for newborn screening specimen collection kits that support the initial cost of adding new conditions to their newborn screening panels. Option 5 would provide a method to fund the initial costs of adding new conditions to the NSP for Medicaid clients or until the fee amount for newborn screening specimen collection kits is revised to include these costs.

Neither DSHS nor HHSC regularly evaluates and updates the fee for newborn screening specimen collection kits to address changes to screening costs. DSHS is responsible for evaluating the fee, and HHSC is responsible for adopting it. The fee for newborn screening specimen collection kits for self-pay and privately insured patients was last increased in October 2016 from \$33.60 to \$55.24. Prior to the last fee change, the fee was last reviewed in 2011. Since the fee was last increased, screening costs have increased and exceed the revenue generated from this fee. For example, failure to update the fee amount regularly has resulted in fee revenue that does not fully cover costs associated with providing newborn screening to charity-care newborns, the cost of which is added to the cost of screening and included in the fee amount for self-pay and privately insured patients. Of the current \$55.24 fee, \$2.36 represents the amount intended to cover the cost of screening for charity-care newborns. Since the fee last was set, the percentage of screenings that are for charity-care newborns has increased. Option 2 would amend the Texas Health and Safety Code, Chapter 33, to require DSHS to evaluate annually the fee amount for newborn screening specimen collection kits and, if needed, to require HHSC to consider updating the amount to ensure that the fee matches the program cost.

According to DSHS, the amount allocated from the Public Health Medicaid Reimbursements Fund for newborn screening of Medicaid clients for the 2016–17 and 2018–19

biennia equates to a per-screen amount that is less than the 2016-estimated newborn screening cost of \$55.24. From the \$180.8 million that was deposited into the Public Health Medicaid Reimbursements Fund, the Legislature appropriated \$96.6 million to DSHS for laboratory services for the 2016–17 biennium, but required a transfer of \$57.4 million from DSHS' strategy in the General Appropriations Act to HHSC, resulting in \$39.2 million remaining available for DSHS laboratory services. Of that amount, DSHS allocated \$31.0 million for newborn screening for Medicaid clients for the 2016–17 biennium. According to DSHS, the \$31.0 million amounts to \$34.26 per screen, which is less than the 2016-estimated newborn screening cost of \$55.24. The Legislature appropriated the remaining amounts in the fund to mental health state hospitals, mental health community hospitals, and nonlaboratory items at DSHS.

Medicaid funds that are generated as a result of newborn screening and are deposited into the Public Health Medicaid Reimbursements Fund are estimated to total \$241.8 million for the 2018–19 biennium. The Legislature appropriated \$40.5 million from the fund to DSHS for laboratory services. Of this amount, DSHS is estimated to use \$32.3 million for newborn screening of Medicaid clients and \$8.2 million for other laboratory operations. These operations include funding for Texas Health Steps testing, laboratory courier service for the NSP, influenza testing, foodborne outbreak testing, and special projects. Similarly to amounts for the 2016–17 biennium, according to DSHS, the \$32.3 million is estimated to result in a per-screen amount of \$36.91, which is less than the 2016-estimated newborn screening cost of \$55.24. The Legislature appropriated the remaining amounts in the fund to nonlaboratory items at DSHS, mental health state hospitals, mental health community hospitals, and other items at HHSC.

During the 2016–17 and 2018–19 biennia, DSHS has used HIV rebates primarily to cover the difference between the cost and the amount available from the Public Health Medicaid Reimbursements for newborn screening of Medicaid clients. According to DSHS, use of HIV rebates will not be available for the 2020–21 biennium to fund newborn screening due to federal guidance that prohibits their use for this purpose. The amount of HIV rebates projected to be unavailable for the NSP for the 2020–21 biennium is \$10.1 million.

Option 3 would increase appropriations in the 2020–21 General Appropriations Bill in Other Funds by \$10.1 million from the Public Health Medicaid Reimbursements Fund to

**FIGURE 4
TIMELINESS OF BLOOD-SPOT SPECIMEN PROCESSING IN THE TEXAS NEWBORN SCREENING PROGRAM
CALENDAR YEAR 2017**

SCREEN TYPE	AGE AT COLLECTION	COLLECTION TO LAB RECEIPT	TIME-CRITICAL CONDITIONS		TIME-SENSITIVE CONDITIONS	
			LAB RECEIPT TO REPORTING	AGE AT REPORTING	LAB RECEIPT TO REPORTING	AGE AT REPORTING
Initial Screen						
Performance Target	1 to 2 days	1 day or less	1 day or less	5 days or less	3 days or less	7 days or less
Percentage of Specimens Compliant	88.6%	25.2%	69.2%	71.1%	84.6%	85.9%
Second Screen						
Performance Target	7 to 14 days	1 day or less	4 days or less	None	4 days or less	None
Percentage of Specimens Compliant	49.9%	12.3%	99.2%	N/A	92.6%	N/A

NOTE: Performance targets are based on statutory requirements, the federal Advisory Committee on Heritable Disorders in Newborns and Children recommendations, and the College of American Pathologists requirements. Timeframes shown are for the reporting of presumptive positive results. Collection of specimens before infants are 24 hours old could result in incorrect screening results because some disorders require 24 hours for detection. A day in this figure refers to a calendar day.
SOURCE: Department of State Health Services.

the Department of State Health Services in Strategy A.4.1, Laboratory Services, for newborn screening of Medicaid clients to cover the loss of HIV rebate funds. The decrease of a like amount from the Public Health Medicaid Reimbursements Fund would be made in appropriations to HHSC for other purposes, and an increase in General Revenue Funds would restore the decrease. Special Provisions Relating to All Health and Human Services Agencies in the 2020–21 General Appropriations Bill would be amended to specify the increased appropriations to DSHS. The appropriated amount is based on the current fee of \$55.24 for newborn screening specimen collection kits set by HHSC.

As discussed for Option 1, the state does not meet performance targets related to the timeliness of blood-spot specimen processing, which can affect the health outcomes of infants who have screened medical conditions. According to the U.S. DHHS, evidence suggests a need for expedited screening, particularly for time-critical conditions. These conditions may manifest with acute symptoms in the first days of life and require immediate treatment to decrease the risk of morbidity and mortality. **Figure 4** shows how the timeliness of NSP processes compared to performance target times for calendar year 2017. One part of the process is transit time between specimen collection and delivery to the laboratory. The ACHDNC recommends the delivery of specimens to the laboratory within 24 hours of collection. During fiscal year 2017, the DSHS laboratory received 25.2 percent of initial-screen specimens and 12.3 percent of

second-screen specimens within the targeted one-day timeframe. According to DSHS, the lack of statewide state-funded overnight courier service and certain hospital processes contribute to these shipping delays.

DSHS has taken steps to improve the timeliness of NSP processes. Currently, DSHS contracts with courier companies for next-day delivery of specimens from hospitals and clinics to the DSHS laboratory. However, the DSHS laboratory is closed and does not accept deliveries on Sunday. During calendar year 2017, 721 providers submitted 79.8 percent of newborn screening specimens using state-funded overnight courier service. The percent of specimens submitted to the DSHS laboratory within one day of collection is almost three times greater for specimens shipped using state-funded overnight courier service compared to specimens not shipped in this manner.

Approximately 1,500 newborn screening program submitters do not use state-funded overnight courier service due to funding limitations. Most of these providers pay the U.S. Postal Service to ship the small number of specimens they submit. According to DSHS, the annual cost to expand the existing six-day-per-week state-funded overnight courier service to all submitters is \$1.1 million in All Funds. Including the annual \$2.5 million in All Funds cost for the existing courier service, the total annual cost to provide this service to all submitters is \$3.6 million in All Funds.

Despite the delivery of most newborn screening specimens overnight, the percentage of specimens received by the

DSHS laboratory within one day of collection remains low. According to DSHS, some providers who participate in state-funded overnight courier service do not fully use the service. For example, these providers may not request Saturday delivery, and some continue to pay the U.S. Postal Service to ship specimens. To address issues with timely transit of specimens, DSHS staffed a Transit Time Workgroup from fiscal years 2014 to 2016. The workgroup developed and implemented interventions to improve transit times, including the following activities:

- coordinated with providers that had high rates of delayed specimens to assess process workflows and provide targeted assistance;
- contacted providers to initiate the use of state-funded overnight courier service;
- recognized providers who met transit time and quality measures;
- developed and shared best-practice workflow based on processes used by providers with short transit times; and
- added courier service pick-up on Sundays.

DSHS discontinued the workgroup due to lack of resources. According to DSHS, the annual cost to reinstate the Transit Time Workgroup activities is \$1.4 million in All Funds, in addition to some existing staff resources.

Option 4 would increase appropriations in the 2020–21 General Appropriations Bill in Other Funds by \$3.95 million from the Public Health Medicaid Reimbursements Fund to DSHS in Strategy A.4.1, Laboratory Services, to improve the timeliness of newborn screening processes, including expanding state-funded overnight courier service and provider education. The decrease of a like amount in Other Funds from the Public Health Medicaid Reimbursements Fund would be made in appropriations to HHSC for other purposes, and an increase in General Revenue Funds would restore the decrease. Special Provisions Relating to All Health and Human Services Agencies in the 2020–21 General Appropriations Bill would be amended to specify the increased appropriations to DSHS.

As discussed previously for Option 1, Texas lacks a permanent funding mechanism to cover the initial costs associated with adding conditions to the NSP. Option 5 would amend a rider in the 2020–21 General Appropriations Bill directing DSHS to request from the Legislative Budget Board

additional funds from the Public Health Medicaid Reimbursements Fund to pay for the initial costs associated with adding conditions to the NSP during the period outside of the biennial appropriations process. These funds would be in addition to the amounts appropriated to DSHS for laboratory services from the fund in the 2020–21 General Appropriations Bill and would result in a reduction in appropriations from the Public Health Medicaid Reimbursements Fund to other strategies at HHSC. If DSHS changes the fee methodology for specimen collection kits to include the initial costs associated with adding conditions to the NSP and HHSC adopts a revised fee as part of Option 1, DSHS' request for funding from the fund would be decreased.

FISCAL IMPACT OF THE OPTIONS

Options 1 to 5 would result in a net cost of \$14.05 million in General Revenue Funds for the 2020–21 biennium to replace the use of Other Funds from the Public Health Medicaid Reimbursements Fund for non-NSP items. The options direct DSHS and HHSC to take steps to maximize the NSP's ability to identify children who may have a serious medical condition and refer them for appropriate care. These options would direct DSHS to revise the methodology used to determine the fee amount for newborn screening specimen collection kits, direct DSHS to annually evaluate and HHSC to update the fee amount, increase appropriations from the Public Health Medicaid Reimbursements Fund for newborn screening for Medicaid clients and for strategies to improve timeliness, and provide a method to fund adding new conditions to the NSP.

Options 1 and 2 could result in increased revenue to the General Revenue–Dedicated Account No. 524 if changes to the methodology and process used to establish fees result in higher fee amounts. This revenue gain likely would be offset by an identical cost for use of that fee revenue to operate the NSP. These amounts cannot be estimated at this time.

Option 3 would increase appropriations by \$10.1 million in Other Funds for the 2020–21 biennium from the Public Health Medicaid Reimbursements Fund for newborn screening of Medicaid clients. It is assumed that a cost to General Revenue Funds in the same amount would result to replace the use of Other Funds for non-NSP items.

Option 4 would increase appropriations by \$3.95 million in Other Funds for the 2020–21 biennium from the Public Health Medicaid Reimbursements Fund to improve the timeliness of newborn screening processes, including

expansion of state-funded overnight courier service and provider education. It is assumed that a cost to General Revenue Funds in the same amount would result to replace the use of Other Funds for non-NSP items.

Option 5 would not result in a net cost increase if amounts from the Public Health Medicaid Reimbursements Fund were used to pay the initial costs associated with adding conditions to the NSP. The potential amount cannot be estimated at this time. The funds used for this purpose would be greater than the amounts appropriated to DSHS for laboratory services from the fund in the 2020–21 General Appropriations Bill and would result in a reduction in appropriations from the fund to other strategies at HHSC.

The introduced 2020–21 General Appropriations Bill does not include any adjustments as a result of these options.

OVERVIEW OF COMMUNITY MENTAL HEALTH NEEDS AND SERVICES

Texas operates 39 local mental health authorities to provide specialized outpatient community mental health services. Based primarily on rules established by the Health and Human Services Commission, local mental health authorities serve the highest-need individuals suffering from serious mental illness. In addition to crisis services, local mental health authorities provide adults and children with medication, counseling, case management, treatment, and supports.

Local mental health authorities have more contact with clients discharged from state hospitals than when the authorities were established in the 1960s. With the exception of two centers, local mental health authorities make face-to-face contact within seven days with a majority of clients discharged from state-funded psychiatric stays. This increased focus on the smallest but neediest population groups has resulted in a case mix that serves primarily adults with bipolar disorder, schizophrenia, or major depression with psychosis.

FACTS AND FINDINGS

- ◆ Individuals with serious and persistent mental illness will typically experience symptoms, often debilitating, throughout their lives. Most of these individuals need access to long-term treatment. Due to the persistence of symptoms, even with treatment, many of these individuals require assistance and supports for daily living.
- ◆ During fiscal year 2017, an estimated 532,295 Texas adults had serious and persistent mental illness. Local mental health authorities provided mental health services, including short-term crisis services, to approximately 226,913 adults that year.
- ◆ Since fiscal year 2012, the number of adults served by local mental health authorities has increased. However, the challenge remains to serve individuals that attempt to access services adequately. During fiscal year 2017, approximately one in 10 interactions between these authorities and eligible adults resulted in the individual being underserved.
- ◆ During fiscal year 2017, 9,049 adults who completed comprehensive assessments at local mental health authorities in seven metropolitan regions either were

homeless or were at imminent risk of being homeless. Among these adults, 27.1 percent received help with housing from these authorities. Among adults who completed a comprehensive assessment and were unemployed, 15.2 percent received employment-related services from authorities.

DISCUSSION

Local mental health authorities (LMHA), also known as community centers or local behavioral health authorities, are political subdivisions of the state. The responsibilities of Texas' 39 LMHAs, as established in state law, are twofold: planning and coordinating mental health policy and resources; and serving as a provider of last resort for community mental health services in their regions. LMHAs contract with providers and coordinate with multiple entities, including schools, federally qualified health centers, and law enforcement. Based primarily on rules established by the Health and Human Services Commission (HHSC), LMHAs serve the highest-need individuals with serious mental illness. In addition to crisis services, LMHAs provide adults and children with medication, counseling, case management, treatment, and supports.

Individuals may come into contact with an LMHA through a crisis hotline, walk-in visits, or through a referral from a community partner, such as a local jail or school. Individuals are screened using standard assessment tools to determine the most appropriate level of care. In addition to diagnosis-related eligibility criteria, HHSC sets requirements for the minimum level of functional impairment needed for adults to be eligible for services. Clients that meet these criteria and who lack insurance are provided services at no cost to the client or on a sliding-fee schedule, as determined by a financial assessment. Many clients are enrolled in the Texas Medicaid program, in which case LMHAs are reimbursed as network providers.

Although LMHAs have been important providers of mental health services, their role has changed significantly since they were established. Understanding the needs of Texans with mental illness and the evolving role of LMHAs helps explain the constraints and opportunities for improving equitable access to mental health services in Texas.

INDIVIDUALS WITH MENTAL HEALTH CONDITIONS IN TEXAS

Data suggest that the prevalence of diagnosable mental illness during a 12-month period has generally been stable during the past five decades in the U.S. Between 10.0 percent and 30.0 percent of the U.S. adult population has a diagnosable mental illness; between 5.0 percent and 6.0 percent of the adult population experiences a serious mental illness with significant functional impairment; and approximately 2.0 percent to 3.0 percent of U.S. adults has a severe and persistent mental illness (SPMI) such as schizophrenia, bipolar disorder, or major depression with psychosis.

These three conditions constitute the majority of adult diagnoses treated at LMHAs in Texas. Other conditions included in the federal definition of SPMI include panic disorders and obsessive-compulsive disorders. A broader set of conditions based on a mental health diagnosis and significant functional impairment are referred to in this report as serious mental illness (SMI), which can include serious anxiety, non-bipolar mood disorders, and other disorders.

Individuals with SPMI typically experience symptoms, which often are debilitating, throughout their lives. Each year, one or two individuals per 100 that are diagnosed with schizophrenia will have recovered clinically and socially for at least two years with no more than mild symptoms. During a 10-year period, 14.0 percent of diagnosed individuals will meet this criterion. For bipolar disorder, persistent depression and relapse are the most common outcomes for individuals.

Most individuals that have an SPMI experience difficulties at work and in maintaining social relationships. Their impairments can lead to substance abuse, dangerous and reckless behaviors, repeated hospitalizations, and poor self-care. They are at significant risk of homelessness, incarceration, and victimization. Although each individual's medical complexity and acuity varies and symptoms can change, most individuals that have SPMI need access to long-term treatment, and many require assistance and supports for daily living.

SERVICES AND SUPPORTS FOR MENTAL HEALTH CONDITIONS

Individuals that experience significant impairment and symptoms from mental illness often require specialized services and supports from mental health professionals, especially when symptoms are severe. As the severity of conditions decreases, individuals may benefit to a greater

extent from mental healthcare that is integrated into their primary care sources. For clients with SPMI, the severity and persistence of their symptoms, even after treatment, typically requires intensive and specialized care that exceeds what typical practitioners provide. **Figure 1** shows a continuum of care necessary for individuals with mental health issues. Clients that have SPMI and SMI often need services within Strategies 3 and 4.

In Texas, community mental health services and treatment are provided based on clinical assessment and need. **Figures 2 and 3** show the standard LMHA treatment packages for adults and children in Texas, respectively, and the number of individuals enrolled in each. Treatments are categorized by the needs of the target population. Services customized to individual needs also are available. Cost-reporting data indicate that the intensity of services provided within a level of care can vary. Individuals authorized into a lower level of care may receive high-intensity services, depending on clinical events and need. Clients also may be placed in a lower-than-recommended level of care due to client refusal or LMHA resource limitations.

CHANGING ROLE OF LOCAL MENTAL HEALTH AUTHORITIES

Figure 4 shows major community health events affecting Texans, beginning with the formation of LMHAs.

The U.S. Community Mental Health Act of 1963 established clinics, referred to in this report as local mental health authorities. These clinics were expected to help prevent hospital admissions. Treatment at these clinics focused on early intervention and treatment to prevent individuals from developing more serious mental illnesses. Clinics also were encouraged to find clients who could pay for services.

Over time, the U.S. Medicaid program became the primary payer of services for LMHAs. During the first two decades after Medicaid's enactment in 1965, community centers did not serve most individuals after they were discharged from state hospitals. As late as 1986, state hospitals discharged 86 percent of people in Texas with a discharge status of no more services, rather than reassignment to community-based care. Evidence also indicates that LMHAs did not divert clients significantly from state hospitals.

State hospitals continued to treat people with SPMI, but on a shorter admissions basis. As a result, many clients with an SPMI or SMI no longer had access to a dedicated source of

**FIGURE 1
BEST PRACTICE CONTINUUM OF SERVICES FOR BEHAVIORAL HEALTHCARE, AS OF SEPTEMBER 2018**



System Capabilities

- Maximized Use of Technology
- Leveraged Funding
- Coordinated Care

System Characteristics and Shared Values

- Best Practices
- Person-centered care
- Cultural and Linguistic Competence
- Accountability
- Multiple Access Points
- Trauma-informed

SOURCES: Texas Council of Community Centers; Travis County Plan for Children’s Mental Health.

care for housing, other daily needs, and ongoing medical treatment.

Starting in the 1990s, the state attempted to increase the focus of the community mental health system on individuals with SPMI. This effort followed a national trend after courts started setting minimum standards for state hospitals. A precedent for minimum staffing ratios was established in the Fifth Circuit in 1974 (*Wyatt v. Stickney*). A case specific to Texas was filed that same year and later settled in 1981 (*R.A.J. v. Jones*). Like most states, Texas adopted a strategy to increase staffing ratios and manage rising costs by decreasing state hospital admissions.

The settlement in 1981 required improved linkages between state facility discharges and LMHA treatment. The state established a mental health diversion incentive program for LMHAs within which LMHAs received additional funding as state facility residential bed days decreased.

Expenditures increased as LMHAs served more people. In response, the Legislature established a committee to develop recommendations for allocating resources. In 1985, the committee recommended restructuring the community mental health system for “the smallest but most needful population groups” by awarding contracts “tied directly to the provision of services to priority populations.” Included in the recommendations was a set of 10 groups ordered by priority for treatment.

Previously, LMHAs had been awarded grants. The new structure reimbursed LMHAs through a contract if they provided services to the priority populations. The report noted that “Individuals’ needs change, causing them to move among the priority groups,” and that not providing services to lower-priority groups “may result in exacerbation of their situations, thus requiring more intensive intervention.”

House Bill 2292, Seventy-eighth Legislature, Regular Session, 2003, further narrowed the definition of the priority

**FIGURE 2
TEXAS COMMUNITY MENTAL HEALTH SERVICES FOR ADULTS, FISCAL YEAR 2017**

LEVEL OF CARE (LOC)	TARGET POPULATION	CLIENTS SERVED BY LMHAS (3)	CORE SERVICES	THERAPEUTIC HOURS PER MONTH FOR CORE SERVICES
Skills training and basic services (LOC-1S)	Individuals with severe and persistent mental illness (SPMI) (1) who present little risk of harm and have supports or individuals waiting for higher level of services	180,935	Medication and case management	1.3 to 2.25
Basic services with counseling (LOC-2)	Individuals with major depressive disorder	19,735	Medication and case management; individual cognitive behavioral therapy	3.25 to 5.5
Intensive services with team approach (LOC-3)	Individuals with SPMI and moderate to severe levels of need	37,130	Medication management, individual and group psychosocial rehabilitation, supported housing	5.87 to 20.35
Assertive community treatment (LOC-4)	Individuals with SPMI who have experienced multiple psychiatric hospital admissions	5,410	Medication management, individual and group psychosocial rehabilitation, supported housing; uses a mobile service delivery team to meet clients in their homes	10.0 to 26.65
Crisis Services (LOC-0)	Adults experiencing mental health-related crisis without a current level of care authorization	43,102	Varies	Varies

NOTES:

- (1) Severe and persistent mental illness includes schizophrenia, bipolar disorder, and major depression.
- (2) Excludes transitional services (LOC-5), which served 8,316 clients during fiscal year 2017; medication management (LOC-A1M), which served 254 clients that year, and early onset (LOC-AEO), which served 417 clients that year.
- (3) De-duplication was conducted at the local mental health authority (LMHA) and LOC levels. Individuals that received services in the same LOC from more than one LMHA during the year would be counted multiple times. Individuals may have been served in more than one LOC during a year and would be counted more than once across LOCs.

SOURCE: Health and Human Services Commission.

population. The legislation required LMHAs to prioritize treatment for individuals with the greatest needs, including individuals with schizophrenia, bipolar disorder, or major depression with psychosis, and children with serious emotional disturbance (SED). In conjunction with the narrowing of eligibility, the state decreased funding to mental health services.

House Bill 3793, Eighty-third Legislature, Regular Session, 2013, specified that LMHAs could provide services for any diagnosed mental health disorder “to the extent feasible.” However, LMHAs continue to provide services primarily for adults with schizophrenia, bipolar disorder, or major depression with psychosis. During fiscal year 2017, 95.0 percent of diagnoses for adult clients in ongoing treatment related to one of these diagnoses. The most common diagnoses among children, approximately 48.7 percent, were attention deficit disorder and major depression.

LMHAs now have contact with a higher percentage of clients that are discharged from state hospitals than when the authorities were established. With the exception of two centers, LMHAs establish in-person contact within seven days with a majority of clients discharged from state-funded psychiatric stays.

PREVALENCE OF MENTAL HEALTH CONDITIONS AND ACCESS TO CARE

To improve coordination among state agencies and to develop a strategic approach to providing behavioral health services, the Legislature established a statewide mental health coordinator in 2013. During fiscal year 2015, the Legislature directed 18 state agencies to develop a collaborative five-year behavioral health strategic plan and proposal of coordinated expenditures. The strategic plan states that funding has increased recently, and the state has made advancements in the mental health system. However, the behavioral health

FIGURE 3
TEXAS COMMUNITY MENTAL HEALTH SERVICES FOR CHILDREN, FISCAL YEAR 2017

LEVEL OF CARE (LOC)	TARGET POPULATION	CLIENTS SERVED BY LMHAS	CORE SERVICES	AVERAGE MONTHLY UTILIZATION OF SERVICES (IN HOURS)
Medication Management (LOC-1)	Stable youth whose only identified treatment need is for medication management	11,950	Medication management with an occasional need for routine case management	0.5
Targeted Services (LOC-2)	Youth that have behavioral or emotional needs	38,377	Routine case management, counseling, and skills training	3.0
Complex Services (LOC-3)	Youth that have complex behavioral and emotional needs	19,023	Routine case management, counseling, and skills training	5.0
Intensive Family Services (LOC-4)	Youth with severe risk behaviors, threatened community tenure, risk of juvenile justice involvement, expulsion from school, displacement from home, serious injury to self or others, or death; significant caregiver needs; and behavioral or emotional needs	934	Intensive case management, family partner, counseling, and skills training	7.5
Youth Empowerment Services (YES) Waiver (LOC-Y)	Children who otherwise would require institutional care or whose parents would seek state custody to obtain care	2,661	LMHA services; YES Waiver services	Varies
Young Children (LOC-YC)	Children ages 3 to 5	4,063	Routine case management, counseling, skills training	3.5
Crisis Services (LOC-0)	Youth in crisis situations without a current authorization for level of care	8,417	Crisis intervention services	3.75 per 7 days for intervention services; other services

NOTES:
 (1) Excludes transitional youth level of care, which served 31 clients during fiscal year 2017, and transitional care (LOC-5), which served 768 clients during fiscal year 2017.
 (2) De-duplication was conducted at the local mental health authority (LMHA) and LOC levels. Individuals that received services in the same LOC from more than one LMHA during the year would be counted multiple times. Individuals may have been served in more than one LOC during a year and would be counted more than once across LOCs.
 SOURCE: Health and Human Services Commission.

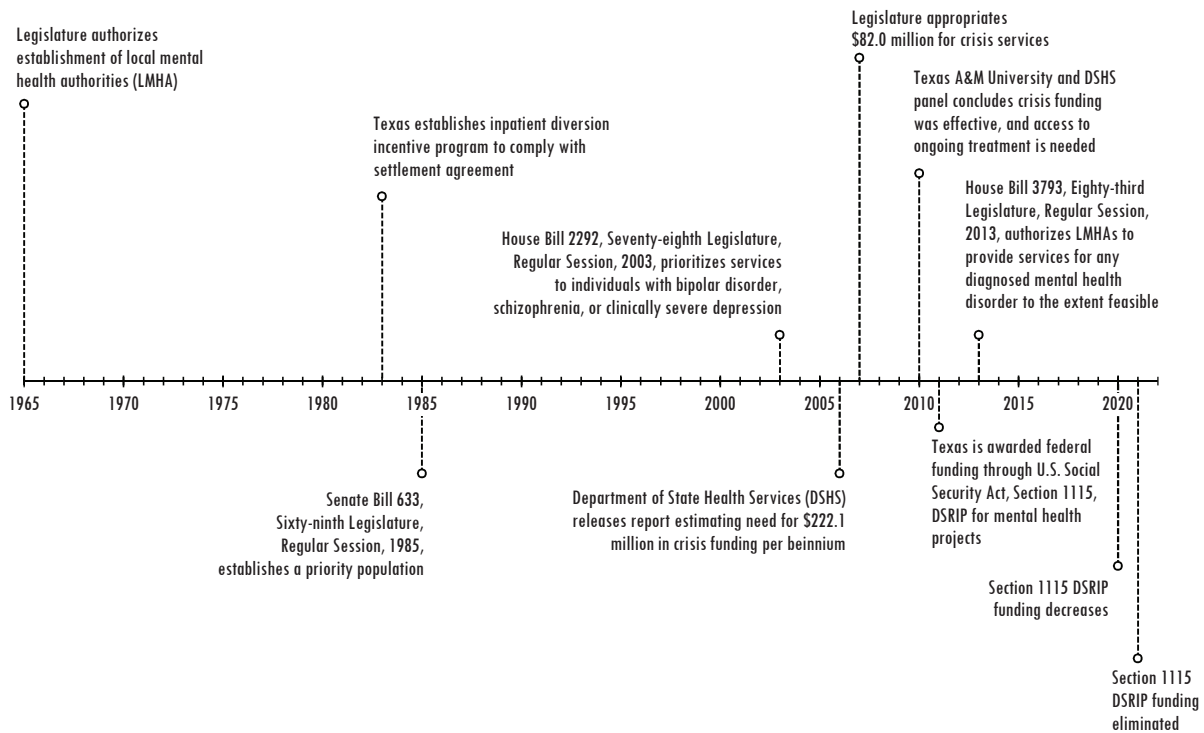
system continues to experience challenges addressing the behavioral health needs of Texans.

The strategic plan identified 15 gaps in the state’s mental health system, including access to care for individuals with SPMI and access to housing services. According to the Statewide Behavioral Health Coordinating Council, “an estimated 4,000 Texans develop an initial psychosis each year. Despite evidence suggesting that targeted interventions for this group are successful, these services are not widely available.”

Analysis from several sources suggests that most clients in the Medicaid program that have SPMI do not receive services from an LMHA. HHSC estimates that, during fiscal year 2017, 18.6 percent of individuals in Medicaid with certain mental health diagnoses received targeted case management or mental health rehabilitation services. Individuals diagnosed with bipolar disorder or schizophrenia automatically are eligible for targeted case management and mental health rehabilitation.

The Meadows Mental Health Policy Institute found similar results when examining the Harris County area from

**FIGURE 4
MAJOR EVENTS IN TEXAS COMMUNITY MENTAL HEALTH
1965 TO 2021**



NOTE: DSRIP=Delivery System Reform Incentive Payment Program, a part of the U.S. Social Security Act, Section 1115, waiver programs.
SOURCE: Legislative Budget Board.

approximately calendar years 2012 to 2015. Meadows estimated that 14.2 percent of Medicaid members with an SPMI received services from an LMHA. Previous research by The University of Texas School of Public Health found that 31.0 percent of Medicaid members diagnosed with bipolar disorder, schizophrenia, or major depression had no healthcare contacts for any medical services, including behavioral health services, in Medicare, Medicaid, or other state programs for individuals with disabilities.

Among uninsured individuals with SPMI, analysis indicates gaps in access to care. The Meadows report found that, among individuals living at less than 200 percent of the federal poverty level, 25.0 percent did not receive any services from an LMHA, a federally qualified health center, or Medicaid. Approximately 18.0 percent of clients received services from an LMHA. **Figure 5** shows estimated prevalence and health access for clients that have SMI or SED, based on information from fiscal year 2017.

The low utilization of services shown in **Figure 5** has a number of causes. Individuals that have mental illness may

not seek services because they, their families, or their clinicians are not aware that these services are available. Individuals also may not seek treatment due to stigma associated with mental health conditions.

The experiences of other states also indicates that LMHAs have opportunities to work with a large portion of the population with mental health needs. During federal fiscal year 2016, the percentage of the population accessing services in Texas was the thirty-ninth lowest in the U.S., based on reporting to the U.S. Substance Abuse and Mental Health Service Administration’s (SAMHSA) Uniform Reporting System. **Figure 6** shows the rates of utilization by state.

According to SAMHSA, states’ eligibility rules for access to federally funded or state-funded mental health services range from inclusive to restrictive. Texas is among a minority of states that restricts access to public mental health services to adults with serious mental illness and children with serious emotional disturbance. This restriction is stated in agency rule (25 Texas Administrative Code 411.303), not in statute. Fewer than 15 states, for example, apply similar access

**FIGURE 5
ESTIMATED PREVALENCE OF SERIOUS MENTAL ILLNESS OR EMOTIONAL DISTURBANCE AMONG TEXANS AND ACCESS TO TREATMENT AT LOCAL MENTAL HEALTH AUTHORITIES, FISCAL YEAR 2017**

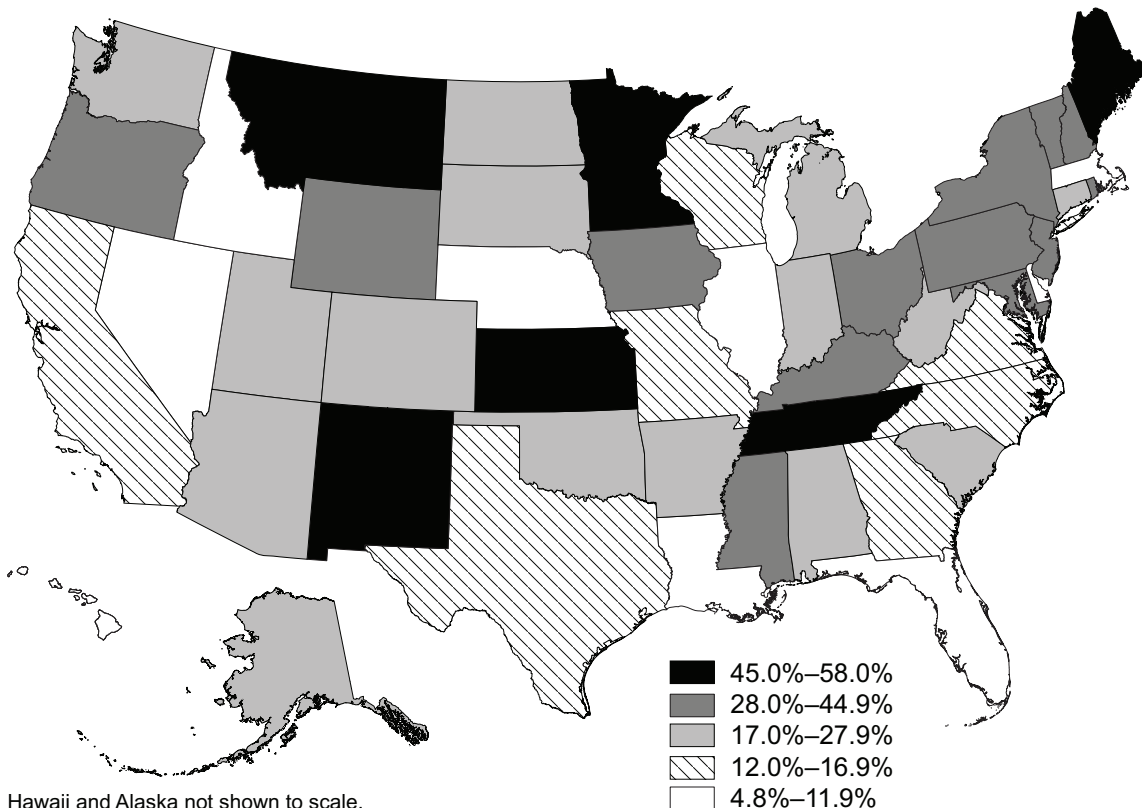
CATEGORY	ADULTS	CHILDREN
Individuals with SMI (1) or SED (2)	1,124,449	255,690
Individuals with SPMI (3)	532,295	N/A
Individuals with SPMI or SED living at less than 200% of the federal poverty level (4)	277,858	111,481
Individuals who received services in a full level of care from an LMHA (5)	193,625	60,289
Individuals that received crisis-only services from an LMHA	33,288	7,179

NOTES:

- (1) SMI=serious mental illness, including dementia, which is not a qualifying diagnosis, according to federal register definition. The definition of SMI does not include individuals with a substance use disorder. The SMI population for Texas is the midpoint estimate of 5.4 percent from the U.S. Substance Abuse and Mental Health Services Administration.
- (2) SED=serious emotional disturbance refers to children who have had a diagnosable mental, behavioral, or emotional disorder in the last year that resulted in functional impairment that substantially interferes with or limits the child's role in family, school, or community activities.
- (3) SPMI=serious and persistent mental illness, which is based on federal definitions and estimates used by the Health and Human Services Commission (HHSC), and includes individuals diagnosed with schizophrenia, bipolar, major depression, panic, and obsessive compulsive disorders. A national estimate of 2.6 percent is applied to the state population.
- (4) For calendar year 2015, 200 percent of the federal poverty level was an annual income of \$23,540 for a family of one or \$48,500 for a family of four. Individuals in Texas who met these criteria were eligible for indigent care services from the state.
- (5) HHSC defines a full level of care to include levels 1 to 4.
- (6) Clients served are unduplicated counts across local mental health authorities (LMHA) and levels of care, including NorthSTAR.

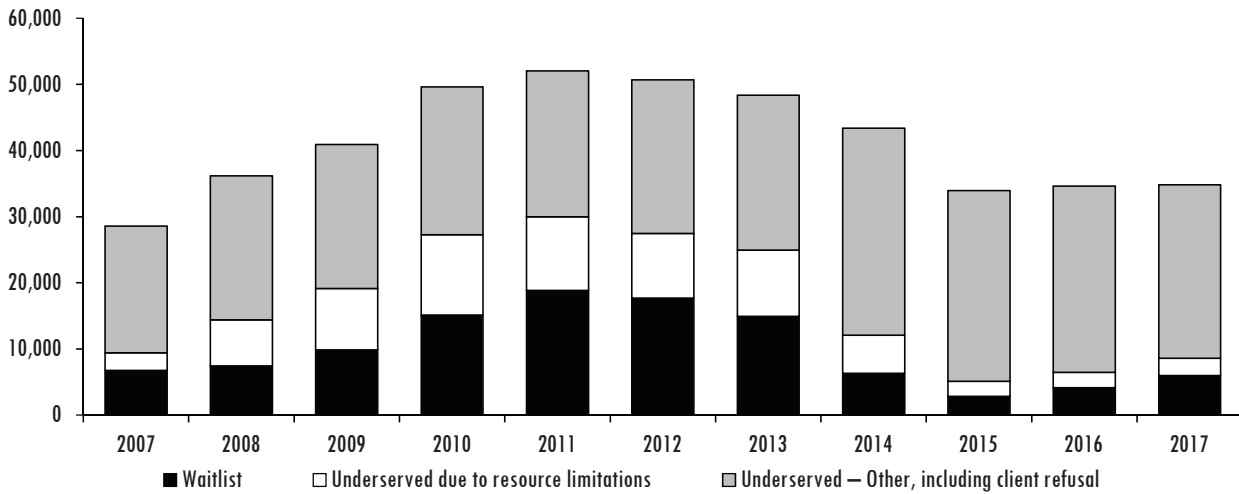
SOURCES: Legislative Budget Board; Health and Human Services Commission; U.S. Substance Abuse and Mental Health Services Administration; U.S. National Institute of Mental Health.

**FIGURE 6
STATES' COMMUNITY MENTAL HEALTH UTILIZATION RATES PER 1,000 PEOPLE
FISCAL YEAR 2016**



SOURCE: U.S. Substance Abuse and Mental Health Service Administration, Uniform Reporting System.

**FIGURE 7
TEXAS ADULT CLIENTS UNDERSERVED OR WAITLISTED BY LOCAL MENTAL HEALTH AUTHORITIES
FISCAL YEARS 2007 TO 2017**



NOTES:

- (1) An individual recommended for more than one level of care during the same year would be counted multiple times. This counting could occur after an individual's needs changed and a new assessment was conducted.
- (2) A client may be underserved due to the client's refusal to participate in a higher level of care. This refusal occurred 17,210 times during fiscal year 2017, representing the majority of the underserved - other category.

SOURCE: Health and Human Services Commission.

restrictions for public mental health services paid by Medicaid. In addition to Texas, 17 states restrict the use of state general revenue for public mental health services at community mental health centers to individuals with an SMI.

SERVICE TRENDS

LMHAs can manage demand for services through different strategies. One strategy, known as waitlisting, is to offer a comprehensive set of benefits to all clients; eligible clients wait for these services when the LMHA's resources are being used at capacity. Another strategy, which HHSC describes as underserving, is to increase capacity by offering less-intensive services to all clients. These LMHAs may have clients waiting to receive clinically appropriate and recommended services, but fewer clients are waiting for services overall.

Recently, the Legislature has prioritized funding to eliminate waitlists for clients who are unable to receive any services. In addition, local funding and federal funding have increased since 2013. As **Figure 7** shows, the number of clients has increased, and the number of underserved clients, including those waitlisted for any services, has decreased in conjunction with this increased funding.

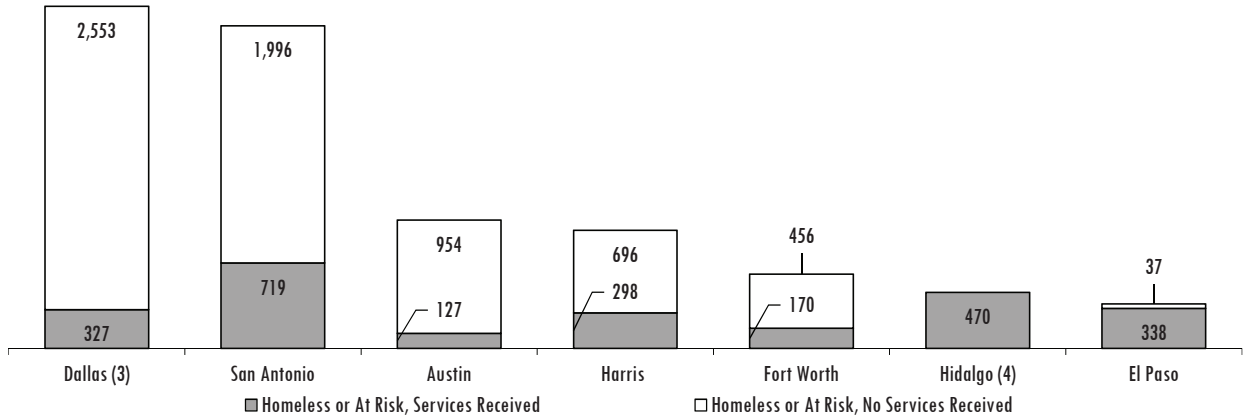
During fiscal year 2017, approximately one in 10 interactions with eligible adults after assessment resulted in an individual in need being waitlisted or underserved. That year, due to resource constraints, adults were placed into the most basic level of care (LOC-1) more than 1,000 times while they waited for higher levels of care. On average, each adult client waited three months to four months before receiving a higher level of care or withdrawing from treatment.

During fiscal year 2017, children were underserved 457 times due to fiscal constraints. Children were waitlisted for service 377 times. Children were underserved 10,515 times due to other indicated reasons, primarily client refusals.

HOUSING AND EMPLOYMENT SERVICES

LMHAs are required by Texas Health and Safety Code 534.053 to conduct community-based assessments and provide psychosocial rehabilitation services. These services must include social support activities, independent living skills, and vocational training. Based on HHSC contract requirements, LMHAs provide housing and vocational supports designed to help individuals find, secure, and maintain housing and employment. These supports can be provided as part of broader psychosocial rehabilitation services or as part of specific housing or employment services.

**FIGURE 8
ADULTS WHO WERE HOMELESS AND ASSESSED BY LOCAL MENTAL HEALTH AUTHORITIES THAT RECEIVED HOUSING SERVICES IN SELECT METROPOLITAN AREAS
FISCAL YEAR 2017**



NOTES:

- (1) Homeless is defined as unsheltered homeless, except for emergency shelter, or marginally homeless and at imminent risk of becoming homeless based on a uniform assessment conducted by a qualified mental health professional.
- (2) Some clients may have accessed services outside of the local mental health authorities.
- (3) Dallas area includes Dallas, Ellis, Hunt, Kaufman, Navarro, and Rockwall counties.
- (4) Hidalgo area includes Cameron, Hidalgo, and Willacy counties.

SOURCE: Texas Council of Community Centers.

Psychosocial rehabilitation services help individuals improve their social relationships, occupational or educational achievement, and independent living skills. For example, LMHAs may help individuals develop skills relating to personal hygiene, nutrition, food preparation, exercise, and money management to help them find and maintain independent housing.

In addition to rehabilitation services, LMHAs provide supported housing services, which often include helping people apply for federal housing assistance. In addition to staff providing skills training and assistance to individuals with mental illness, LMHAs can offer financial assistance with rent and utilities. This rental assistance may be provided only if clients are engaged in applying for external housing assistance.

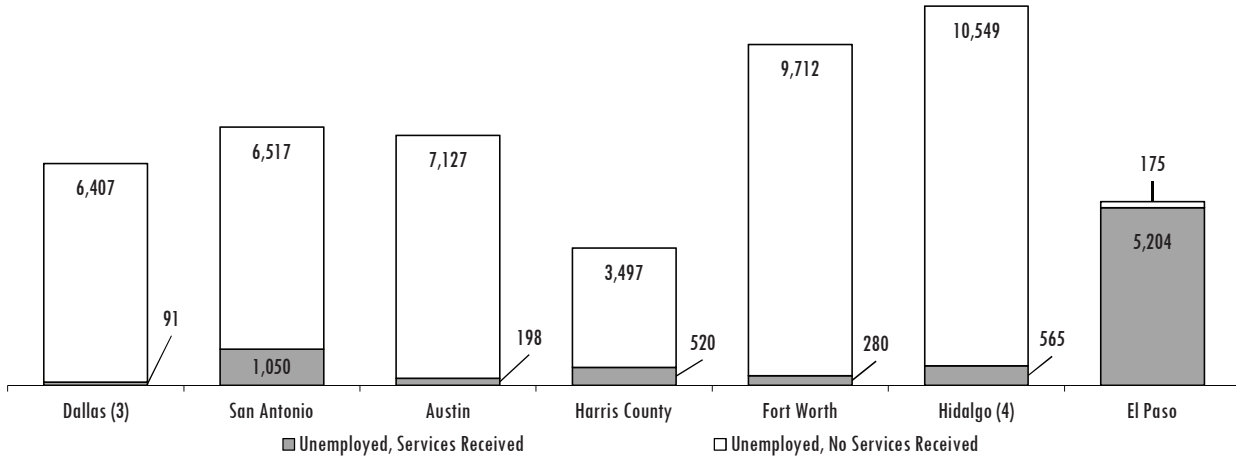
Several programs within and outside state and local agencies provide assistance with housing and employment. Most housing assistance for low-income families in Texas is provided through programs at the U.S. Department of Housing and Urban Development (HUD). Demand is greater than available funding for HUD-funded housing pursuant to the U.S. National Affordable Housing Act, Section 8, and individuals may wait years before they can apply. HHSC is collaborating with the Texas Department of

Housing and Community Affairs for a federally funded project pursuant to the U.S. National Affordable Housing Act, Section 811. The project targets individuals that have serious mental illness and certain other priority groups. In September 2018, HHSC reported receiving 1,200 referrals, housing 75 families, and a plan to increase capacity up to approximately 600 units. Individuals also may seek assistance from community non-profits for housing and employment needs.

Figure 8 shows the results of a housing analysis by the Texas Council of Community Centers relating to a subset of high-need individuals in select metropolitan areas. The analysis focused on individuals who completed a comprehensive assessment at an LMHA and were identified as needing housing services. Within these areas, 27.1 percent of the 9,049 adults who were homeless or at imminent risk of homelessness received housing services from LMHAs.

Supportive employment services assist individuals in finding and maintaining employment, which may include helping them complete job applications and helping adults learn job-specific skills. It also can include outreach by LMHA staff to employers to help find appropriate jobs and develop employment networks and resources for individuals with SMI.

**FIGURE 9
ADULTS THAT WERE UNEMPLOYED AND ASSESSED BY LOCAL MENTAL HEALTH AUTHORITIES THAT RECEIVED EMPLOYMENT SERVICES IN SELECT METROPOLITAN AREAS
FISCAL YEAR 2017**



NOTES:

- (1) Unemployed is defined as either (1) unemployed or (2) adults that are not in labor force and are unable to find or keep jobs, based on a uniform assessment conducted by a qualified mental health professional in consultation with clients.
- (2) Some clients may have accessed services outside of the local mental health authorities.
- (3) Dallas area includes Dallas, Ellis, Hunt, Kaufman, Navarro, and Rockwall counties.
- (4) Hidalgo area includes Cameron, Hidalgo, and Willacy counties.

SOURCE: Texas Council of Community Centers.

Figure 9 shows the results of an employment need and services analysis by the Texas Council of Community Centers. Within the seven metropolitan areas shown, 51,892 unemployed adults completed comprehensive assessments at LMHAs. LMHAs provided at least one service of supportive employment or psychosocial rehabilitation services related to employment to 15.2 percent of these individuals.

The provision of these services aligns with recommendations from the federal Interdepartmental Serious Mental Illness Coordinating Committee. According to this group of federal agencies and mental health experts, standards should include a comprehensive continuum of care for people with SMI, including supportive housing and employment.

IMPROVE OVERSIGHT OF MENTAL HEALTH TARGETED CASE MANAGEMENT AND REHABILITATIVE SERVICES IN THE TEXAS MEDICAID PROGRAM

Medicaid covers Mental Health Targeted Case Management and Mental Health Rehabilitative Services. These services are for clients with a serious mental illness or a serious emotional disturbance and provide assistance with gaining access to care and improving functioning. On September 1, 2014, these services were added into the capitation rate paid to managed care organizations that participate in the Texas Medicaid program. At that time, managed care organizations became responsible for the network development and payment for these services, but the organizations may subcontract part or all of this responsibility to a managed behavioral health organization.

Approximately 80 percent of Texas Medicaid program clients that have a mental health-related diagnosis indicative of a serious mental illness did not receive Mental Health Targeted Case Management or Mental Health Rehabilitative Services during fiscal year 2017. The Texas Health and Human Services Commission does not track data to determine why clients do not receive these services. Many of these clients are eligible for Mental Health Targeted Case Management and Mental Health Rehabilitative Services because they have schizophrenia or bipolar disorder. Clients with these diagnoses automatically are eligible for these services. Clients with major depressive disorder whose levels of functioning qualified them initially for Mental Health Targeted Case Management or Mental Health Rehabilitative Services are eligible automatically for continued services at reassessment.

Texas Medicaid program clients with a serious mental illness or serious emotional disturbance may experience negative outcomes if they fail to receive necessary services in a timely manner. Most individuals that have a serious mental illness or serious emotional disturbance can benefit from Mental Health Targeted Case Management and Mental Health Rehabilitative Services because these conditions typically are long-term and involve substantial functional impairment. These impairments can lead to an inability to work, poor social relations, substance abuse, repeated psychiatric hospitalizations, poor self-care, incarceration, homelessness, and suicide. Mental Health Targeted Case Management and Mental Health Rehabilitative Services are intended to improve or maintain a client's ability to remain fully functioning and integrated in the client's community.

To help ensure appropriate access to Mental Health Targeted Case Management and Mental Health Rehabilitative Services in the Texas Medicaid program, the Texas Health and Human Services Commission should monitor receipt of these services, improve prior authorization policies, strengthen agency oversight, and report feedback received regarding delivery of these services.

CONCERNS

- ◆ The percentage of Texas Medicaid clients that have a mental health-related diagnosis indicative of a serious mental illness who received Mental Health Targeted Case Management or Mental Health Rehabilitative Services during fiscal year 2017 was 18.6 percent. This rate means that a majority of clients are not receiving treatment for which they may be eligible. The Texas Health and Human Services Commission does not track data to determine why eligible clients do not receive these services.
- ◆ The process to authorize Mental Health Targeted Case Management and Mental Health Rehabilitative Services in the Texas Medicaid program results in unnecessary administrative cost for managed care organizations and providers due to duplication in effort among these entities. The state eventually incurs greater expense from an increase in these costs.
- ◆ State oversight of the delivery of Mental Health Targeted Case Management and Mental Health Rehabilitative Services in Texas Medicaid managed care does not include review of managed care organizations' activity specific to these services in several key areas. Some data is contained within broader behavioral health categories and is not reported separately for Mental Health Targeted Case Management or Mental Health Rehabilitative Services. As a result, it is not possible for the state to ensure that access to these services is adequate.
- ◆ Since the dissolution of the Behavioral Health Integration Advisory Committee, no formal reports have been submitted to the Texas Health and Human Services Commission by a collective group of consumers, providers, and managed care

organizations regarding integration of physical and behavioral health services into Texas Medicaid managed care. These services include Mental Health Targeted Case Management and Mental Health Rehabilitative Services. As a result, it is difficult for the Texas Legislature to monitor stakeholder feedback regarding the integration of these services.

OPTIONS

- ◆ **Option 1:** Include a rider in the introduced 2020–21 General Appropriations Bill to require the Texas Health and Human Services Commission to monitor regularly the extent to which Texas Medicaid clients are receiving Mental Health Targeted Case Management and Mental Health Rehabilitative Services for which they may be eligible. The rider also would require the agency to develop a strategy to ensure that clients receive the services for which they are eligible and desire, and to submit an annual report of the findings to the Legislative Budget Board and the Office of the Governor by December 1.
- ◆ **Option 2:** Amend statute to require the Texas Health and Human Services Commission to perform the following actions: (1) implement changes to prior authorization provisions for Mental Health Targeted Case Management and Mental Health Rehabilitative Services in the Texas Medicaid program to reduce any redundancy and unnecessary administrative cost for managed care organizations and providers; (2) modify managed care organization capitation payments to incorporate decreases in administrative costs; and (3) submit a report to the Legislative Budget Board and the Office of the Governor on actions taken by September 1, 2020.
- ◆ **Option 3:** Amend statute to require the Texas Health and Human Services Commission to ensure that its oversight of behavioral health service delivery in Texas Medicaid managed care includes the tracking and publishing of certain data. This data should include the areas of member complaints and appeals, provider complaints and appeals, network adequacy, claims processing, utilization management, customer satisfaction, and performance measures. The amended statute also would require the agency to ensure that data is reported separately for Mental Health Targeted Case Management and Mental Health Rehabilitative Services.

- ◆ **Option 4:** Include a rider in the introduced 2020–21 General Appropriations Bill to require the Texas Health and Human Services Commission to submit an annual report to the Legislative Budget Board and the Office of the Governor outlining feedback received from the Behavioral Health Advisory Committee regarding delivery of Mental Health Targeted Case Management and Mental Health Rehabilitative Services in the Texas Medicaid program by December 1.

DISCUSSION

Medicaid, financed with federal and state funds, is a healthcare program for low-income families, children, pregnant women, individuals age 65 and older, and individuals with disabilities. The Texas Health and Human Services Commission (HHSC) administers the Texas Medicaid program. Most Medicaid clients in Texas are enrolled in one of four comprehensive Medicaid managed care programs that operate statewide: the State of Texas Access Reform (STAR) program, STAR+PLUS, STAR Kids, and STAR Health. These programs serve distinct populations. As of fiscal year 2017, approximately 3.7 million of Texas' 4.1 million Medicaid clients are in managed care. **Figure 1** shows the types and numbers of members enrolled in each of these programs.

Within Texas Medicaid managed care, HHSC contracts with managed care organizations (MCO), also known as health plans, and pays them a monthly capitation payment for each enrolled member. This rate is based on an average projection of medical expenses for the typical patient. MCOs are responsible for providing a benefit package to members that includes all medically necessary services covered within the traditional fee-for-service Medicaid program, with one exception. Certain services are excluded from the MCO capitation rate and provided on another basis, such as a fee-for-service basis. Medicaid MCOs must cover services in the same amount, duration, and scope as traditional fee-for-service Medicaid.

DELIVERY OF MENTAL HEALTH TARGETED CASE MANAGEMENT AND MENTAL HEALTH REHABILITATIVE SERVICES IN THE TEXAS MEDICAID PROGRAM

The Texas Medicaid program covers behavioral health services to treat mental, emotional, alcohol, and substance use disorders. Within the broader category of behavioral health services, Medicaid covers mental health services, including Mental Health Targeted Case Management (MHTCM) and Mental Health Rehabilitative Services

**FIGURE 1
TEXAS MEDICAID MANAGED CARE PROGRAMS, FISCAL YEAR 2017**

PROGRAM	MEMBER	SERVICE CATEGORIES	MEMBERS ENROLLED
STAR	Low-income families, children, pregnant women, and some former foster care youth	Primary care, acute care, behavioral healthcare, pharmacy services	2,986,241
STAR+PLUS	Individuals who are age 65 or older and adults age 21 or older who have a disability	Primary care, acute care, behavioral healthcare, pharmacy services, certain long-term services and supports	527,331
STAR Kids	Children and youth younger than age 21 who have a disability	Primary care, acute care, behavioral healthcare, pharmacy services, certain long-term services and supports	136,033
STAR Health	Children in state conservatorship, young adults up to the month of turning age 22 who have voluntary foster care placement agreements, and some former foster care youth	Primary care, acute care, behavioral healthcare, dental, vision, pharmacy services, certain long-term services and supports	32,091
Dual Eligible Project	Certain individuals age 21 or older who are eligible for both Medicaid and Medicare	Primary care, acute care, behavioral healthcare, pharmacy services, certain long-term services and supports	39,950

NOTE: Data is based on average monthly enrollment during fiscal year 2017.
SOURCE: Texas Health and Human Services Commission.

**FIGURE 2
TEXAS MEDICAID MENTAL HEALTH SERVICES, FISCAL YEAR 2018**

Psychiatric diagnostic evaluation	Prescription medications
Psychotherapy	Medication management
Psychological and neuropsychological testing	Care and treatment of behavioral health conditions by a primary care physician
Inpatient psychiatric care in a general acute care hospital	Mental health targeted case management
Inpatient care in psychiatric hospitals	Mental health rehabilitative services

NOTE: Inpatient care in psychiatric hospitals is limited to individuals younger than age 21 and age 65 and older. Figure 4 shows the types of services provided within Mental Health Targeted Case Management and Mental Health Rehabilitative Services.
SOURCE: Texas Health and Human Services Commission.

(MHR). **Figure 2** shows the types of mental health services available to clients.

MHTCM and MHR are for adults that have serious mental illness (SMI) and children and youth that have a serious emotional disturbance (SED). These services provide assistance with gaining access to care and improving functioning. The definition of SMI in the mental health field includes one or more diagnoses of mental disorders combined with significant impairment in functioning. Schizophrenia, bipolar illness, and major depressive disorder are the diagnoses most commonly associated with SMI. However, people that have one or more other disorders also may fit the definition of SMI if those disorders result in functional impairment. The definition of SED is similar to SMI, but SED applies to children and youth, and some of the diagnoses that contribute to meeting criteria for SED are different from those meeting criteria for SMI. **Figure 3** shows the eligibility

criteria for MHTCM and MHR, and **Figure 4** shows the types of services available.

On September 1, 2014, MHTCM and MHR were added into the capitation rate paid to MCOs, pursuant to Senate Bill 58, Eighty-third Legislature, Regular Session, 2013. MCOs already were responsible for other mental health services. Before this date, MHTCM and MHR were provided to managed care members within a fee-for-service payment arrangement among local mental health authorities (LMHA) and the Department of State Health Services. STAR and STAR+PLUS began offering MHTCM and MHR, and STAR Health, which already offered MHTCM, began offering MHR. STAR Kids, which was implemented in November 2016, also is responsible for providing mental health services to its members, including MHTCM and MHR. MCOs are responsible for the network development and payment for MHTCM and MHR, but they may

**FIGURE 3
ELIGIBILITY CRITERIA FOR TEXAS MEDICAID MENTAL HEALTH TARGETED CASE MANAGEMENT AND MENTAL HEALTH REHABILITATIVE SERVICES, FISCAL YEAR 2018**

ADULTS	CHILDREN AND YOUTH
<p>Clients have a diagnosis or diagnoses of mental illness and have been determined via assessment process to have a serious functional impairment and are in need of Mental Health Targeted Case Management (MHTCM) or Mental Health Rehabilitative Services (MHR).</p> <p>Clients with schizophrenia or bipolar disorder automatically are eligible for services and service renewals.</p> <p>Clients with major depressive disorder whose levels of functioning qualified them initially are eligible automatically for continued services, regardless of whether their levels of functioning have improved.</p> <p>NOTE: The Texas Medicaid program defines an adult as an individual who is age 21 and older and defines children and youth as individuals who are younger than age 21. SOURCE: Texas Health and Human Services Commission.</p>	<p>Clients have a diagnosis or diagnoses of mental illness or serious emotional disturbance <u>and</u> have been determined via assessment process to have a serious functional impairment and are in need of MHTCM or MHR, <u>or</u> are at risk of disruption of a preferred living or childcare environment due to psychiatric symptoms, <u>or</u> are enrolled in a school system’s special education program because of a serious emotional disturbance.</p>

**FIGURE 4
SERVICES PROVIDED IN TEXAS MEDICAID MENTAL HEALTH TARGETED CASE MANAGEMENT AND MENTAL HEALTH REHABILITATIVE SERVICES, FISCAL YEAR 2018**

CATEGORY	DEFINITION	SERVICES
Mental Health Targeted Case Management	Assists clients with gaining access to needed medical, social, behavioral, educational, and other services.	<ul style="list-style-type: none"> comprehensive needs assessment and periodic reassessment; development and periodic revision of a treatment plan; making referrals and helping a client obtain needed services and supports; monitoring and follow-up activities; and coordination with institutions and inpatient facilities.
Mental Health Rehabilitative Services	Provides training and instructional guidance to restore a client’s functional deficits. Services are intended to improve or maintain the client’s ability to remain fully integrated and functioning in the client’s community.	<ul style="list-style-type: none"> crisis intervention services; medication training and support services; psychosocial rehabilitative services; skills training and development services; and day programs for acute needs.

SOURCE: Texas Health and Human Services Commission.

subcontract part or all of this responsibility to a managed behavioral health organization (BHO). Strategies used by BHOs to manage behavioral healthcare services include network development, performance measurement, utilization management, care coordination, and rate setting.

As of November 2018, 18 MCOs were participating in Medicaid managed care. Of these MCOs, 12 contract with a BHO, and the remaining 6 provide services within the MCO. MCOs vary by service area and managed care program. As of November 2018, one MCO is contracted to participate in the STAR Health Medicaid managed care program. The other

programs (i.e., STAR, STAR+PLUS, and STAR Kids) have from two to five contracted MCOs participating, depending on the service area. Except for STAR Health, members of the managed care programs have at least two MCOs from which to choose in each service area.

The types of providers that may bill the Texas Medicaid program for MHTCM or MHR include private and public comprehensive provider agencies. These agencies provide or subcontract for the delivery of the full array of MHTCM and MHR, with the exception of day programs for acute needs. Comprehensive provider agencies include public local mental

**FIGURE 5
UTILIZATION AND SPENDING ON MEDICAID MENTAL HEALTH TARGETED CASE MANAGEMENT AND MENTAL HEALTH REHABILITATIVE SERVICES, FISCAL YEAR 2017**

SERVICE TYPE	CLIENTS	SPENDING (IN MILLIONS)	CLIENTS SERVED	AVERAGE ANNUAL SPENDING PER CLIENT
Mental Health Targeted Case Management	Children	\$18.34	31,429	\$583
	Adults	\$5.20	28,764	\$181
	Total	\$23.54	60,107	\$392
Mental Health Rehabilitative Services	Children	\$31.29	35,712	\$876
	Adults	\$53.55	38,204	\$1,402
	Total	\$84.84	73,747	\$1,150
Total		\$108.38	92,061	\$1,177

NOTE: Client counts are unduplicated. The unduplicated number of clients served across both categories (i.e., 92,061) is smaller than the sum of the total number of clients served within each service category because some clients receive both services. Data does not include services provided to NorthSTAR clients. Data was estimated at the time of collection due to a lag in claim data.

SOURCE: Legislative Budget Board.

health authorities, also referred to as community mental health centers, and private non-LMHA providers. As of November 2017, 38 LMHAs and 28 non-LMHA providers were contracted to provide MHTCM and MHR to Texas Medicaid clients. Multiple LMHA and non-LMHA providers contract to participate in each Medicaid managed care program within a service delivery area. However, Medicaid client access to a given provider depends on the provider’s address within the service delivery area and whether the MCO has contracted capacity with a non-LMHA provider.

SPENDING AND UTILIZATION OF MENTAL HEALTH TARGETED CASE MANAGEMENT AND MENTAL HEALTH REHABILITATIVE SERVICES IN THE TEXAS MEDICAID PROGRAM

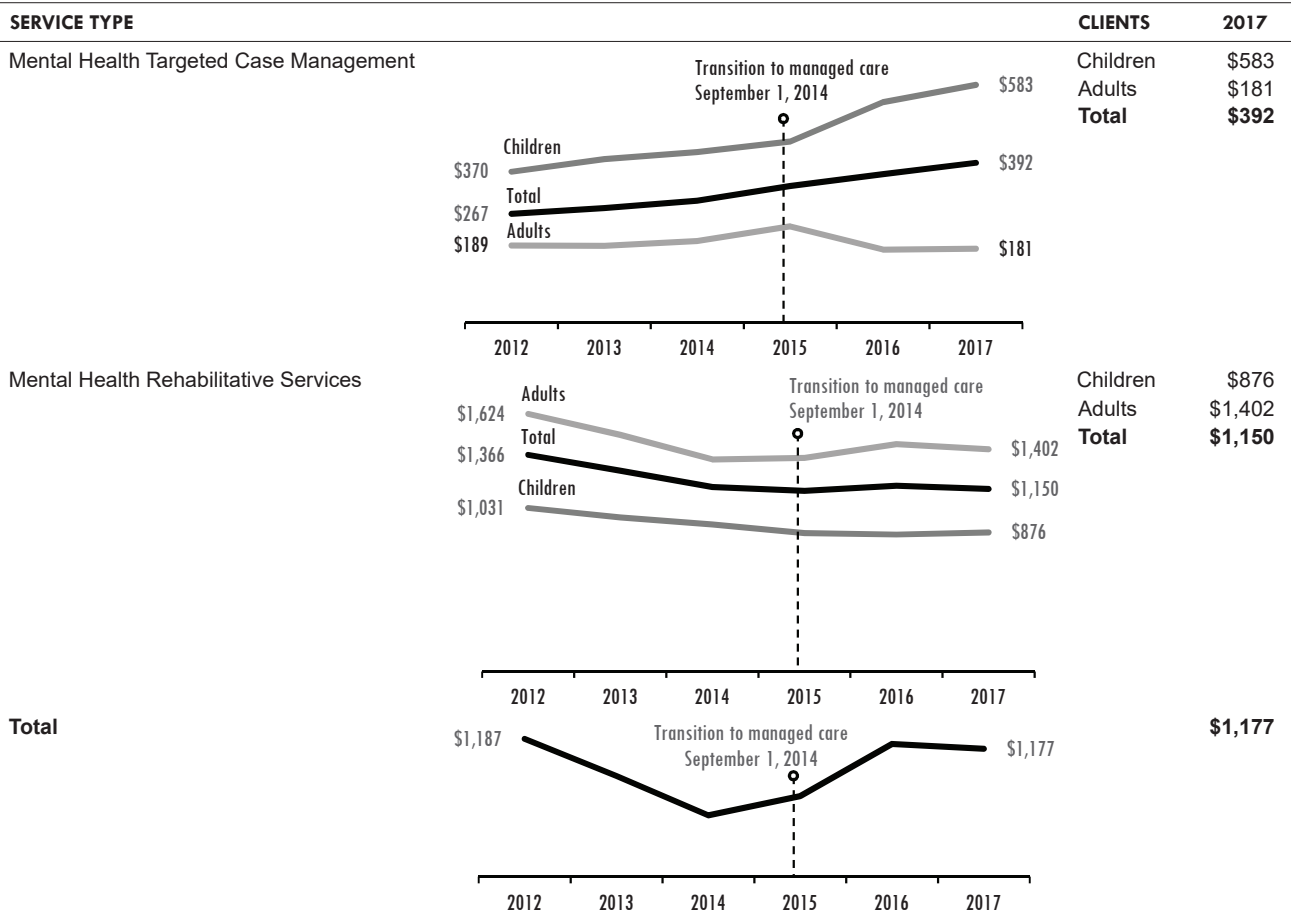
From fiscal years 2012 to 2017, Texas Medicaid spending on MHTCM and MHR increased by 32.2 percent, from \$82.0 million in All Funds to \$108.4 million in All Funds. **Figure 5** shows Texas Medicaid program utilization and spending on MHTCM and MHR by type of service for fiscal year 2017. Spending on MHR totaled \$84.8 million, or 78.3 percent of total Medicaid spending on MHTCM and MHR for fiscal year 2017. Most spending on MHTCM, 77.9 percent, was for services provided to children, whereas almost two-thirds of spending on MHR, 63.1 percent, was for services provided to adults. Utilization and spending data does not include NorthSTAR. NorthSTAR was an integrated behavioral health delivery system in the Dallas service area that served people who were eligible for Medicaid or who met other eligibility criteria. When the state terminated NorthSTAR on December 31, 2016, clients began receiving

all Medicaid services through other managed care programs, including STAR, STAR+PLUS, and STAR Kids.

Average annual spending per client on Medicaid MHTCM and MHR and the percentage of the population enrolled in the Texas Medicaid program who received these services have remained relatively flat since these services transitioned from fee-for-service to managed care during fiscal year 2015. **Figure 6** shows the average annual expenditure per client on Medicaid MHTCM and MHR in Texas from fiscal years 2012 to 2017. The average annual expenditure per client on Medicaid MHTCM and MHR increased from \$1,111 during fiscal year 2014, the last fiscal year before MHTCM and MHR were added into the capitation rate paid to MCOs, to \$1,177 during fiscal year 2017, a 5.9 percent increase. However, average annual per client spending on MHTCM increased by almost one-third for all clients during this period with a 39.8 percent increase for children and a 9.8 percent decrease for adults. Average annual per client spending on MHR decreased by 1.0 percent for all clients, with a 5.3 percent decrease for children and a 4.8 percent increase for adults.

Figure 7 shows the percentage of the Texas Medicaid enrolled population who received Medicaid MHTCM or MHR from fiscal years 2012 to 2017. These percentages were calculated by summing the number of Medicaid clients who received those services and dividing by the total Medicaid enrolled population for the given fiscal year. The percentage of the population enrolled in the Texas Medicaid program who received MHTCM or MHR increased from 1.8 percent during fiscal year 2014 to 2.3 percent during fiscal year 2017.

FIGURE 6
AVERAGE ANNUAL EXPENDITURE PER CLIENT ON MEDICAID MENTAL HEALTH TARGETED CASE MANAGEMENT AND MENTAL HEALTH REHABILITATIVE SERVICES IN TEXAS, FISCAL YEARS 2012 TO 2017



NOTES:
 (1) Data does not include services provided to NorthSTAR clients.
 (2) Mental Health Targeted Case Management and Mental Health Rehabilitative Services transitioned from a fee-for-service payment arrangement to managed care September 1, 2014.
 (3) Data for fiscal year 2017 was estimated at the time of collection due to a lag in claim data.
 SOURCE: Legislative Budget Board.

FIGURE 7
UTILIZATION OF MENTAL HEALTH TARGETED CASE MANAGEMENT OR MENTAL HEALTH REHABILITATIVE SERVICES AMONG TEXAS MEDICAID ENROLLED POPULATION, FISCAL YEARS 2012 TO 2017

SERVICE TYPE	CLIENTS	2012	2013	2014	2015	2016	2017
Mental Health Targeted Case Management	Children	0.9%	0.9%	0.9%	1.0%	1.1%	1.2%
	Adults	3.2%	3.0%	3.0%	3.1%	3.0%	3.2%
	Total	1.3%	1.2%	1.3%	1.3%	1.3%	1.5%
Mental Health Rehabilitative Services	Children	1.0%	1.0%	1.0%	1.0%	1.2%	1.4%
	Adults	3.5%	3.4%	3.5%	3.7%	3.9%	4.3%
	Total	1.4%	1.4%	1.4%	1.4%	1.6%	1.8%
Total		1.9%	1.8%	1.8%	1.8%	2.0%	2.3%

NOTE: Percentages are based on unduplicated client counts. Percentages for each service category cannot be summed to obtain the total percentages because some clients receive both services. Data does not include services provided to NorthSTAR clients. Data for fiscal year 2017 was estimated at the time of collection due to a lag in claim data.
 SOURCE: Legislative Budget Board.

IMPROVE OVERSIGHT OF MENTAL HEALTH TARGETED CASE MANAGEMENT AND REHABILITATIVE SERVICES IN THE TEXAS MEDICAID PROGRAM

Texas Medicaid program rules require that clients who meet eligibility criteria for MHTCM or MHR are entitled to receive these services. Clients with an SMI or SED may experience negative outcomes if they fail to receive necessary services in a timely manner. National studies show that adults with SMI are more likely than the general population to have multiple chronic conditions and general health issues, be unemployed, have incomes at less than the poverty level, experience homelessness, and be at high risk of death by suicide. National guidelines call for early intervention among children and youth with an SED to reduce the effects of mental disorders. State oversight can help ensure cost-efficiency while also ensuring appropriate access and quality of care. To ensure appropriate access to MHTCM and MHR in the Texas Medicaid program, HHSC should take steps in four areas: (1) monitoring receipt of MHTCM and MHR; (2) improving prior authorization policies for MHTCM and MHR; (3) strengthening agency oversight of behavioral health service delivery; and (4) reporting feedback received regarding delivery of MHTCM and MHR. Each of these steps is discussed in the following sections.

MONITOR RECEIPT OF MENTAL HEALTH TARGETED CASE MANAGEMENT AND MENTAL HEALTH REHABILITATIVE SERVICES

Most Texas Medicaid clients with a mental health-related diagnosis indicative of SMI did not receive MHTCM or MHR during fiscal year 2017. These clients are not receiving treatment for which they may be eligible. The definition for SMI used for this analysis includes mental illness diagnosis codes that align with the SMI definition found in the Texas Insurance Code, Chapter 1355, regarding benefits for certain mental disorders. The diagnosis codes used are indicators for SMI and include the following categories of disorders:

- schizophrenia and other psychotic disorders;
- schizotypal personality disorder;
- mood disorders, including, but not limited to, bipolar disorder and major depressive disorder;
- obsessive-compulsive disorder; and
- psychogenic skin disease.

Adult clients diagnosed with schizophrenia or bipolar disorder automatically are eligible for MHTCM and MHR. Clients

that have major depressive disorder whose levels of functioning qualified them initially for MHTCM or MHR also automatically are eligible for continued services at reassessment. Clients with other mental health-related diagnoses indicative of SMI must be determined via assessment process to have serious functional impairments and to be in need of MHTCM or MHR to receive these services.

Clients with other mental health-related diagnoses that are not included in the definition of SMI used for this analysis might have an SMI if they have a significant impairment in functioning. However, they are not included in this analysis because it is difficult to estimate whether these clients would meet functional criteria and would be considered to have an SMI by looking at diagnosis alone. Similarly, due to data limitations, this analysis does not estimate the percentage of children and youth with conditions indicative of a serious emotional disturbance who received MHTCM or MHR.

As shown in **Figure 8**, during fiscal year 2017, the number of Texas Medicaid clients estimated to have an SMI totaled 389,107. This number includes Medicaid clients who had a mental health-related diagnosis indicative of SMI listed on any Medicaid claim or encounter. Of the number of clients enrolled in the Texas Medicaid program estimated to have an SMI, 72,182, or 18.6 percent, received MHTCM or MHR services during fiscal year 2017. This percentage, which is referred to as the penetration rate, is one measure of access to care.

HHSC does not track data to determine why eligible clients with a mental health-related diagnosis indicative of SMI do not receive MHTCM or MHR. Reasons that these clients may not receive treatment include inadequate screening and referral, client refusal, limited provider capacity, or not being found eligible for MHTCM or MHR during the assessment process. This analysis assumes that many of the adult clients with a mental health-related diagnosis indicative of SMI would be eligible for MHTCM and MHR because they have schizophrenia or bipolar disorder and are, therefore, automatically eligible for these services based on diagnosis. In addition, clients with major depressive disorder whose levels of functioning qualified them initially for MHTCM or MHR also are eligible automatically for continued services at reassessment. Furthermore, national studies show that, although the medical complexity and acuity of each individual varies, and symptoms can change, most individuals that have SMI can benefit from MHTCM and MHR because these conditions typically are long-term and involve substantial functional impairment. These impairments can lead to an inability to work, poor social relations, substance

FIGURE 8
TEXAS MEDICAID PENETRATION RATE FOR MENTAL HEALTH TARGETED CASE MANAGEMENT AND MENTAL HEALTH REHABILITATIVE SERVICES, FISCAL YEAR 2017

CLIENT DESCRIPTION	TOTAL
Number of clients who received MHTCM or MHR who have a mental health-related diagnosis indicative of SMI (A)	72,182
Number of clients who have a mental health-related diagnosis indicative of SMI (B)	389,107
Penetration Rate – Estimated percentage of clients who have a mental health-related diagnosis indicative of SMI who received MHTCM or MHR (C=A/B)	18.6%

NOTES:
 (1) MHTCM=Mental Health Targeted Case Management; MHR=Mental Health Rehabilitative Services; SMI=serious mental illness.
 (2) Some clients who received MHTCM or MHR have a mental health-related diagnosis that is not included in the definition of serious mental illness, such as children and youth with conditions indicative of a serious emotional disturbance. As a result, the number of clients who received MHTCM or MHR shown is less than the number who received these services shown in Figure 5.

SOURCE: Legislative Budget Board.

abuse, repeated psychiatric hospitalizations, poor self-care, incarceration, and homelessness.

MCOs that participate in the Texas Medicaid program are required to identify Members with Special Health Care Needs (MSHCN). MCOs are required to provide service management to MSHCN that may include development of service plans for members whose needs require care coordination to meet short-term and long-term needs and goals. Service plans are required in STAR+PLUS. SMI may be considered a Special Health Care Need; therefore, these requirements provide an opportunity for MCOs to locate members with an identified SMI and connect them to MHTCM and MHR. HHSC defines MSHCN as members who have the following factors: (1) have a serious ongoing illness, a chronic or complex condition, or a disability that has lasted or is anticipated to last for a significant period; and (2) require regular, ongoing therapeutic intervention and evaluation by appropriately trained healthcare personnel. HHSC requires that Medicaid MCOs designate certain groups of members as MSHCN. Two of these groups, which may include members with SMI or SED, are the following:

- members that have mental illness and co-occurring substance abuse diagnoses; and
- members identified by the MCO as having behavioral health issues that may affect their physical health and treatment compliance.

Option 1 would include a rider in the introduced 2020–21 General Appropriations Bill to require HHSC to monitor regularly the extent to which Texas Medicaid clients are receiving MHTCM and MHR for which they may be eligible. At a minimum, HHSC should determine the number of Medicaid clients who have a mental health-related diagnosis

indicative of SMI based on claims or encounter data and calculate the following:

- percentage of Medicaid clients who have a mental health-related diagnosis indicative of SMI who were identified by the MCOs as a Member with Special Health Care Needs;
- percentage of Medicaid clients who have a mental health-related diagnosis indicative of SMI who have a service plan developed by the MCO; and
- percentage of Medicaid clients who have a mental health-related diagnosis indicative of SMI who received MHTCM or MHR.

HHSC also should determine the reasons why clients may not receive services and develop a strategy to ensure that clients receive the services for which they are eligible and desire. The rider also would require HHSC to submit an annual report of the findings to the Legislative Budget Board (LBB) and the Office of the Governor by December 1.

IMPROVE PRIOR AUTHORIZATION POLICIES FOR MENTAL HEALTH TARGETED CASE MANAGEMENT AND MENTAL HEALTH REHABILITATIVE SERVICES

Current prior authorization policies for MHTCM and MHR are inefficient. MHTCM and MHR require prior authorization before a client can receive services. MCOs may choose to waive this requirement. Providers use a uniform assessment process and utilization management guidelines to complete the authorization requests for MHTCM and MHR submitted to MCOs. As of fiscal year 2018, the uniform assessment includes, among other items, use of the Child and Adolescent Needs and Strengths and the Adult Needs and Strengths Assessment tools. These tools help assess a client’s need for services. The utilization management guidelines

used are the Texas Resilience and Recovery Utilization Management Guidelines (TRRUMG). TRRUMG describes the type, amount, and duration of MHTCM and MHR that should be provided to each client. The following steps are in this process:

1. Providers enter information from the uniform assessment into the Clinical Management for Behavioral Health Services (CMBHS) web-based system;
2. CMBHS generates a recommended level of care (LOC-R) based on information entered by the provider using an algorithm;
3. The provider evaluates the client's clinical needs to determine if the type and amount of service for the LOC-R described in TRRUMG are sufficient to meet those needs. The provider may deviate from the LOC-R due to clinical need, client choice, or lack of resources when determining the requested level of care;
4. The provider uses a standard prior authorization request form to document the requested level of care, also known as the authorized level of care (LOC-A); and
5. The provider submits the prior authorization request form to the client's MCO.

According to HHSC, the agency has instructed MCOs to accept the level of care requested by providers (i.e., LOC-A) when it does not deviate from the LOC-R. In cases where the provider wants to deviate from the LOC-R, MCOs can modify or deny requests using the same utilization management guidelines used by the providers –TRRUMG. A few MCOs have chosen to waive the prior authorization requirement for MHTCM and MHR. However, many MCOs continue to process prior authorization request forms despite the following requirements: (1) MCOs cannot modify requested levels of care that do not deviate from uniform assessment tool results (i.e., LOC-R); (2) MCOs must use the same utilization management guidelines used by providers when determining deviation requests; and (3) MCOs must approve requests for MHTCM and MHR for clients with schizophrenia or bipolar disorder because these clients are automatically eligible for these services. As a result, the process for authorizing MHTCM and MHR results in unnecessary administrative cost for MCOs and providers due to duplication in effort among these entities. The state eventually incurs greater expense from an increase in these costs through the administrative portion of capitation rates.

Option 2 would amend the Texas Government Code to require HHSC to implement changes to prior authorization

provisions for MHTCM and MHR in the Texas Medicaid program to reduce any redundancy and unnecessary administrative cost for MCOs and providers. The amended statute also would require HHSC to modify MCO capitation payments to incorporate decreases in administrative costs. HHSC also would be required to submit a report to the LBB and the Office of the Governor regarding actions performed by September 1, 2020. HHSC should consider discontinuing prior authorization requirements for MHTCM and MHR, especially in cases where the services requested by the provider and determined by the uniform assessment tool do not differ (i.e., LOC-R). If prior authorization is discontinued, MCOs still would be able to perform retrospective utilization reviews to ensure provider adherence to TRRUMG.

STRENGTHEN AGENCY OVERSIGHT OF BEHAVIORAL HEALTH SERVICE DELIVERY

MCOs do not report data that would enable HHSC to monitor adequately the provision of MHTCM and MHR. According to the Institute of Medicine, the structure of the contract between a payer and MCO and the means for monitoring and enforcing the contract are among the most important ways to influence the quality of care. A purchaser of managed care can use a well-written contract to establish what standards it expects from an MCO and to specify how access and quality will be defined, monitored, and managed. Specifications in law, regulations, or contracts are needed to ensure access to care, to maintain the quality of care, and to establish and protect consumers' rights.

MCOs that participate in the Texas Medicaid program must adhere to federal regulations, state laws and rules, and contract requirements. First, Medicaid MCOs must adhere to federal regulations related to the operation of Medicaid managed care in accordance with Medicaid waiver authority pursuant to the U.S. Social Security Act, Section 1115. Federal regulations require MCOs to conduct, among other activities, quality assessment and performance improvement. Second, Texas statute and administrative rules include requirements related to the implementation of Medicaid managed care, including required contract provisions and contract compliance. Medicaid MCOs also must adhere to rules promulgated by the Texas Department of Insurance. Finally, the most detailed listing of Medicaid MCO requirements is in the Uniform Managed Care Contract (UMCC) and the Uniform Managed Care Manual (UMCM). The UMCM contains policies and procedures required of all MCOs participating in the Texas Medicaid program. The UMCM also includes the Consolidated

FIGURE 9
DATA USED BY THE TEXAS HEALTH AND HUMAN SERVICES COMMISSION TO MONITOR BEHAVIORAL HEALTH SERVICE DELIVERY IN TEXAS MEDICAID MANAGED CARE, FISCAL YEAR 2018

DATA COLLECTION AREAS	BEHAVIORAL HEALTH	MHTCM AND MHR
Prior authorization requests and determinations	No	No
Member complaints	Yes	No
Member appeals	Yes	No
Provider complaints	Yes	No
Network adequacy	Yes	Yes
Claims processing, including provider appeals	Yes	No
Performance measures	Yes	No
Quality Assessment and Performance Improvement Program reports	Yes	No
Behavioral Health Services Hotline Report	Yes	N/A
Customer satisfaction	Yes	No

NOTE: Within the broader category of behavioral health services, Medicaid funds mental health services, including Mental Health Targeted Case Management (MHTCM) and Mental Health Rehabilitative Services (MHR).
 SOURCE: Legislative Budget Board.

Deliverables Matrix that lists all reports that MCOs are required to submit to HHSC. The UMCC includes requirements specifically related to the delivery of behavioral health services.

MHTCM and MHR are intended to improve or maintain a client’s ability to remain fully integrated and functioning in the client’s community. As a result, Texas Medicaid clients with an SMI or SED may experience negative outcomes if they fail to receive these services in a timely manner. As shown in **Figure 9**, HHSC collects data in several areas that are used to monitor MCO performance related to the delivery of behavioral health services. However, MCOs do not report most data separately for MHTCM or MHR, which are subsets of behavioral health services. As a result, it is not possible for the state to ensure that access to MHTCM and MHR for Medicaid managed care clients is adequate.

One key area where the state can monitor MCO performance is prior authorizations. For example, the state can use prior authorization data to identify MCOs with a greater-than-average number of adverse determinations for MHTCM or MHR and evaluate potential effects on clients and providers. HHSC reports that it does not review prior authorization documents specific to behavioral health services, but it has a long-term plan to perform this review. Furthermore, HHSC was unable to provide LBB staff with data regarding prior authorizations for MHTCM or MHR submitted by providers to MCOs, including the number of requests and determinations. The state’s external quality review

organization (EQRO) conducted biennial behavioral health surveys of Texas Medicaid managed care members in 2017. As shown in **Figure 10**, most members responding to the survey reported experiencing delays in counseling or treatment while waiting for approval from their MCOs or BHOs. In addition, some members reported that the MCOs denied the requests made by their behavioral health providers for additional treatment. These findings are similar to results of the American Medical Association’s December 2017 survey of physicians practicing in the U.S. This survey found that 92.0 percent of physicians reported that prior authorization processes delay access to necessary care and can have negative effects on patients’ clinical outcomes.

Option 3 would amend the Texas Government Code to require HHSC to ensure that its oversight of behavioral health service delivery in Medicaid managed care includes the tracking and publishing of certain data. This data should include the areas of member complaints and appeals, provider complaints and appeals, network adequacy, claims processing, utilization management, customer satisfaction, and performance measures. HHSC would be required to ensure that data is reported separately for MHTCM and MHR. HHSC should consider performing the following actions:

1. Amend the UMCC and the UMCM, including the Consolidated Deliverables Matrix, to include additional requirements related to increased oversight of behavioral health services;
2. Require MCOs to file quarterly Behavioral Health Reports (with breakouts for MHTCM and MHR)

**FIGURE 10
TEXAS MEDICAID STAR ADULT, STAR CHILD, AND STAR+PLUS BEHAVIORAL HEALTH SURVEY QUESTIONS REGARDING
ACCESS TO CARE, CALENDAR YEAR 2017**

QUESTION	PERCENTAGE ACROSS MCOS		
	STAR ADULT	STAR CHILD	STAR+PLUS
Never or sometimes got professional counseling needed on the phone.	62.0%	66.1%	53.8%
Never or sometimes saw someone for counseling or treatment as soon as wanted when needing care right away.	33.7%	26.0%	42.7%
Never or only sometimes got an appointment for counseling or treatment as soon as wanted when not needing care right away.	29.2%	25.8%	30.8%
Getting the counseling or treatment needed was a problem.	29.8%	18.4%	31.2%
Delays in counseling or treatment were a problem while waiting for approval.	56.2%	48.6%	58.2%
Health plan denied behavioral health provider request for additional treatment	10.8%	17.0%	17.3%

NOTE: MCO=managed care organization.
SOURCE: Texas External Quality Review Organization, University of Florida Survey Research Center.

- that include key utilization and performance data, including the amount and type of services provided;
3. Modify processes to categorize and report provider and member complaint and appeal data, network adequacy, and claims processing reports to provide a breakout for MHTCM and MHR;
 4. Monitor MCO utilization management functions by analyzing and reporting prior authorization and retrospective utilization review data. At a minimum, tracked data should include number of requests or reviews, initial and final determinations, and average wait time for determinations. If HHSC decides to discontinue prior authorization for MHTCM and MHR, agency review of utilization management functions still should include retrospective utilization review data;
 5. Modify the biennial behavioral health surveys conducted by the state’s EQRO to include a subset of questions specific to MHTCM and MHR;
 6. Develop and implement a biennial behavioral health survey for STAR Health and STAR Kids; and
 7. Establish a mechanism to obtain timely feedback from providers.

As shown in **Figure 11**, recent legislation requires HHSC to improve efforts to serve Medicaid clients that have SMI. HHSC could modify action performed on these efforts to include oversight mechanisms proposed in Option 3.

REPORT FEEDBACK RECEIVED REGARDING THE DELIVERY OF MENTAL HEALTH TARGETED CASE MANAGEMENT AND MENTAL HEALTH REHABILITATIVE SERVICES

HHSC lacks a formal mechanism to receive feedback regarding the provision of MHTCM and MHR. Senate Bill 58, Eighty-third Legislature, Regular Session, 2013, established the Behavioral Health Integration Advisory Committee (BHIAC). The membership of this committee included representation from consumers, managed care organizations, and public and private providers. The committee was required to meet at least quarterly and to issue formal recommendations to HHSC regarding the integration of behavioral health services, including MHTCM and MHR, and physical health services into Texas Medicaid managed care. The BHIAC was abolished January 2016 pursuant to Senate Bill 200, Eighty-fourth Legislature, 2015. In its final formal report issued in July 2015, the BHIAC wrote that its members were concerned that the elimination of the advisory committee would impede transformation of the system. The report included the following statement:

This report recommends high-level policy changes but many decisions must be made as operational procedures are written. Without the BHIAC, or another committee with similar membership, HHSC will not have a stakeholder voice in the process of implementation. The BHIAC can provide continuity of feedback to HHSC from high-level policy to operational procedures if it is not eliminated.

Since the dissolution of the BHIAC, no formal reports have been submitted to HHSC by a collective group of consumers, providers, and managed care organizations, regarding

FIGURE 11
RECENT TEXAS LEGISLATION RELATED TO MEDICAID SERVICES FOR INDIVIDUALS THAT HAVE SERIOUS MENTAL ILLNESS
FISCAL YEARS 2015 TO 2018

BILL OR RIDER	PROVISIONS RELATED TO SMI POPULATION	ACTION REPORTED BY HHSC
Senate Bill 200, Eighty-fourth Legislature, 2015	Requires the Health and Human Services Commission (HHSC) to monitor compliance with behavioral health integration, including: (1) ensure that managed care organizations (MCO) fully integrate behavioral health services into a client’s primary care coordination; (2) use performance audits and other oversight tools to improve monitoring of the provision and coordination of behavioral health services; and (3) establish performance measures that may be used to determine the effectiveness of the integration of behavioral health services. Requires HHSC to give particular attention to MCOs that provide behavioral health services through a contract with a third party.	HHSC reviewed related contract provisions and identified additional monitoring mechanisms, including reporting of incorporating integration into quality improvement plans and provider contract provisions to ensure that MCOs are requiring primary care providers and behavioral health providers to coordinate. HHSC is tracking performance measures related to integration. HHSC analyzed potentially preventable events among members that have behavioral and physical health conditions and plans to work with MCOs to improve outcomes. HHSC surveyed MCOs to measure integration and is using the information to inform contract changes.
Eighty-fourth Legislature, General Appropriations Act (GAA), 2016–17 Biennium, HHSC, Rider 29, Monitor the Integration of Behavioral Health Services, and Eighty-fifth Legislature, GAA, 2018–19 Biennium, HHSC, Rider 29, Monitor the Integration of Behavioral Health Services	Requires HHSC to monitor the integration of behavioral health services into Medicaid managed care and to prioritize monitoring MCOs that provide behavioral health services through a contract with a third party.	Same action as Senate Bill 200, 2015. HHSC also added an MCO contract requirement specific to network adequacy for Mental Health Targeted Case Management (MHTCM) and Mental Health Rehabilitative Services (MHR) providers effective September 1, 2018.
Senate Bill 74, Eighty-fifth Legislature, Regular Session, 2017	Clarifies that a provider that is not a local mental health authority (LMHA) may contract with an MCO to provide MHTCM, and MHR to children, adolescents, and their families. Streamlines credentialing requirements and restricts application of certain rules and guidelines in an attempt to increase the number of these providers. Establishes requirements for MCOs that provide behavioral health services through contracts with third parties or arrangements with subsidiaries of the MCO related to data sharing, colocation of physical and behavioral healthcare coordination staff, certain call transfers, sharing of clinical information (joint rounds), and a seamless provider portal.	HHSC met with stakeholders in January 2018 and made changes to administrative rules effective October 17, 2018, and MCO contracts effective September 1, 2018.
2018–19 GAA, HHSC, Rider 45, Managed Care Organization Services for Individuals with Serious Mental Illness	Requires HHSC to improve efforts to serve individuals with serious mental illness better, including developing performance metrics to hold MCOs accountable for care provided to this population. The agency must submit a report to the Legislative Budget Board and the Office of the Governor by November 1, 2018. Authorizes HHSC, if cost-effective, to develop and procure an alternative model of managed care in at least one service delivery area of the state to serve individuals with serious mental illness in Medicaid and CHIP. HHSC must submit a report before any relevant procurement regarding why it did not develop and procure an alternative model, including an explanation of how HHSC and MCOs will serve better those with severe mental illness in existing managed care service models.	HHSC worked to increase the number of performance measures used to monitor outcomes for clients that have serious mental illness (SMI) and submitted the report due November 1, 2018. HHSC also submitted an initial report regarding MCO services for individuals with SMI in November 2017 that documented its decision to not pursue an alternative model for SMI as part of the STAR+PLUS repurchase. HHSC continues to evaluate the feasibility and cost-effectiveness of procuring an alternative model of managed care for members that have SMI. HHSC plans to issue a Request for Information regarding how MCOs might operationalize an alternative model in the existing market.

**FIGURE 11 (CONTINUED)
RECENT TEXAS LEGISLATION RELATED TO MEDICAID SERVICES FOR INDIVIDUALS THAT HAVE SERIOUS MENTAL ILLNESS
FISCAL YEARS 2015 TO 2018**

BILL OR RIDER	PROVISIONS RELATED TO SMI POPULATION	ACTION REPORTED BY HHSC
2018–19 GAA, HHSC, Rider 77, Medicaid Services Capacity for High-needs Children in the Foster Care System	Allocates \$2.0 million in General Revenue Funds for fiscal year 2018 to establish a statewide grant program to increase access to Targeted Case Management and Rehabilitation for high-needs children in the foster care system. The onetime grant program may provide funds to LMHAs and other nonprofit entities. HHSC is required to enter into a no-cost agreement with a nonprofit third party that will act as administrator of the initiative. HHSC is required to provide monthly updates regarding the number of entities that have been credentialed or have expanded services and the number of children in the foster care system that receive services from newly credentialed or expanded entities.	As of October 2018, HHSC plans to execute contracts during the first quarter of fiscal year 2019 with the entities who will receive grant funds.

SOURCE: Legislative Budget Board.

integration of physical and behavioral health services, including MHTCM and MHR, into Texas Medicaid managed care. As a result, it is difficult for the Texas Legislature to monitor stakeholder feedback regarding the integration of these services.

HHSC established the Behavioral Health Advisory Committee (BHAC) in July 2016 in response to federal law that requires states that receive certain federal grant funds to establish and maintain a state mental health planning council. The membership of this committee includes representation from consumers, managed care organizations, and public and private providers. The purpose of the committee is to provide stakeholder feedback to the state Health and Human Services system in the form of recommendations regarding the allocation and adequacy of behavioral health services and programs within Texas. Option 4 would include a rider in the introduced 2020–21 General Appropriations Bill to require HHSC to submit an annual report to the LBB and the Office of the Governor outlining feedback received from the BHAC regarding delivery of MHTCM and MHR in the Texas Medicaid program by December 1. One stated task of the BHAC is to issue recommendations regarding the integration of behavioral health services and supports with physical health service delivery. HHSC should include any BHAC recommendations related to this task that are specific to MHTCM or MHR in its report to implement Option 4.

FISCAL IMPACT OF THE OPTIONS

The options in this report would direct HHSC to take steps to help ensure that Medicaid clients with SMI or SED receive adequate care. These options would direct HHSC to monitor receipt of MHTCM and MHR among clients, improve prior authorization policies, strengthen agency oversight of behavioral health service delivery, and report feedback received regarding delivery of these services.

It is assumed that Options 1, 3, and 4 would have no significant fiscal impact and could be implemented using existing resources. These options may result in Medicaid clients' increased access to MHTCM and MHR, improved client functioning, and reduced hospitalizations. If the options increase use of MHTCM or MHR, then MCOs and, ultimately, the state could incur a cost. However, if increased utilization of MHTCM or MHR results in reduced hospitalizations because client functioning has improved, the increased cost from expanding access to these services may be offset by reduced hospital spending. Modifications to costs and savings would accrue to MCOs unless the capitation amounts paid by HHSC to MCOs are adjusted to include these changes.

In accordance with Option 2, if HHSC discontinues prior authorization requirements for Medicaid MHTCM and MHR, there could be savings during the 2020–21 biennium due to reduced administrative costs currently incurred by MCOs to process prior authorization requests submitted by providers. The savings would be achieved by requiring HHSC to reduce the portion of the capitation rates paid to

MCOs for fixed administrative costs. These amounts cannot be estimated at this time.

The introduced 2020–21 General Appropriations Bill does not include any adjustments as a result of these options.

CLARIFY COST-RECOVERY REQUIREMENTS AND AGENCY FEES TO IMPROVE TRANSPARENCY AND EFFICIENCY

In Texas, as in other states and the federal government, certain programs or services are financed by user fees rather than with general tax revenue. These services and programs typically have a fee-paying primary beneficiary, such as a professional license applicant or retail food establishment operator, and provide secondary benefits to the general public. Fees typically are intended to recover the costs of a program or service, although they may result in additional revenue that the Legislature can appropriate for other purposes. Fees that are not reviewed regularly may not keep pace with cost growth.

Cost-recovery activities among agencies within the General Appropriation Act may, in part, be governed by rider and may, to some extent, be tracked through the use of Appropriated Receipts. Some agencies have riders specifying that their appropriations may be reduced to the level of fee revenue that is collected during the biennium. This report summarizes cost-recovery methods of finance for state agencies and programs included in the General Appropriations Act and the self-directed, semi-independent agencies and program that are not included.

FACTS AND FINDINGS

- ◆ User fees directly benefit a license holder, who receives the right to engage in a regulated activity, and indirectly benefit the public through regulation and enforcement.
- ◆ Nineteen agencies in the General Appropriations Act are entirely subject to an Appropriations Limited to Revenue Collections rider, and 13 others have programs subject to one. Agencies entirely subject to these riders contributed approximately \$365.6 million in excess of their appropriated amounts to the General Revenue Fund during the 2016–17 biennium.
- ◆ Cost-recovery provisions in statute either set or limit the amount of a fee or instruct agencies to set fees through their rule-making processes. Five agencies collect fees that are capped in statute, although those fees are not set necessarily at their statutory maximums.

- ◆ Four statutory provisions give nine agencies and one program at the Texas Department of Insurance self-directed, semi-independent status. These agencies are responsible for generating a self-supporting level of revenue. In some cases, the agencies also must make an annual remittance to the General Revenue Fund.
- ◆ State agencies vary in how often they review or revise their fees. Of the 32 agencies contacted by the Legislative Budget Board, 19 reported that they have reviewed or revised their fees in the last four years. Thirteen reported that they reviewed their fees irregularly or had not revised their fees in at least 10 years.

CONCERNS

- ◆ Fees that are not reviewed regularly may result in fee revenue not keeping pace with cost growth. The U.S. Government Accountability Office advises agencies that set fees to report their methods clearly, including an accounting of program costs and the assumptions they use to project future costs and fee collections.

OPTION

- ◆ **Option 1:** To ensure that fees are consistent with statutory and General Appropriations Act direction, include a rider in the 2020–21 General Appropriations Bill requiring each state agency to review all of the fees within its authority biennially, assess the extent to which those fees cover the projected costs of associated programs, and consider adjustments.

DISCUSSION

Statutes provide agencies with authority to charge user fees to recover the cost of an activity or service. Statutes and the General Appropriations Act (GAA) work together to establish requirements for how revenue is deposited and spent. These agency-generated fees generally differ from taxes insofar as taxes are generally collected to be used for general purposes and payment is not optional. User fees, however, fund generally voluntary transactions with government that have specific primary beneficiaries. These fees cover the cost of administering and enforcing licensing programs, thereby decreasing the burden on taxpayers.

BEST PRACTICES IN COST RECOVERY

In a 2008 report, the U.S. Government Accountability Office (GAO) found that the decision to fund an agency or program with fees should be guided by whether the agency or program has an identifiable primary beneficiary. If a program primarily benefits the general public, it should be supported by general revenue; if a program primarily benefits identifiable users, it should be funded by user fees. For instance, the recipient of a license to practice medicine is the primary beneficiary of that individual's direct, voluntary interaction with the Texas Medical Board (TMB). The general public benefits from the regulatory infrastructure that TMB provides, but in GAO's formulation, the general public is a secondary beneficiary.

In subsequent reports, GAO identified several variables for a legislative entity to consider in structuring and implementing user fees, including how the rates will be set, for what purposes the fee revenue may be used, and how often the fee is reviewed.

GAO found that fees set through an agency's rule-making process may be updated more easily and, thus, are more likely to remain aligned with costs than fees set by statute. Most of the fees that fund Texas' regulatory agencies and programs are set through an agency's rule-making process. However, some agency fees either are statutorily set or limited to a range or maximum. For instance, since the Seventy-third Legislature, 1993, the Texas Health and Safety Code has required shellfish dealers to pay the state \$1.00 per barrel for oysters that they harvest, purchase, handle, or process. Revenue from this fee pays for the regulatory structure that enforces and collects the fee, and for various activities that support the oyster-harvesting industry. Another example is the State Securities Board, which collects the majority of its revenue from fees set by statute. Other examples of fees set or limited in statute include the following:

- the Texas Alcoholic Beverage Code sets the fee for an initial permit to sell mixed beverages at \$3,000;
- the Texas Occupations Code limits the fee for a medical license to no more than \$900 (currently set at \$817); and
- the Texas Health and Safety Code requires that the license fee for home and community support services agencies is not less than \$600 or more than \$2,000 (currently set at \$1,750).

In addition, certain fees collected by the Railroad Commission of Texas and other fees collected by the State Securities Board also are limited by statute.

Fees that are not reviewed regularly may yield fee revenue does not keep pace with cost growth. GAO advises that fee-setting agencies clearly report their methods for setting fees, including an accounting of program costs and the assumptions they use to project costs and fee collections, to the public and its legislative stakeholders. Such reporting can provide opportunity for stakeholder input and promote understanding and acceptance of the fee.

Cost-recovery provisions in statute and the GAA rarely require an agency to review its fees. One exception is that the Department of State Health Services' bill pattern includes a rider that requires the agency to review its fees annually and to provide a report to the Legislative Budget Board and the Office of the Governor. Another exception is that the Texas Health and Safety Code requires that the Texas Commission on Environmental Quality at least biennially review fees that it assesses for vehicle emissions-related inspections to recover the costs of the vehicle emissions inspection and maintenance program.

Texas state agencies vary in how often they review or revise their fees. Of the 32 agencies contacted by the Legislative Budget Board, 19 reported that they have regularly reviewed or had revised their fees in the last four years. Thirteen reported that they reviewed their fees irregularly or had not revised their fees in at least 10 years. Option 1 would include a rider in the 2020–21 General Appropriations Bill requiring each agency to review all of the fee schedules within its authority biennially, assess the extent to which those fees cover the projected costs of associated programs, and consider adjustments.

COST RECOVERY IN THE GENERAL APPROPRIATIONS ACT

Texas uses cost recovery for agencies and programs within the GAA and for the self-directed, semi-independent agencies and program that are not included in the GAA. Among agencies and programs within the GAA, cost-recovery activity may occur in one of three ways: through Appropriated Receipts, an Appropriations Limited to Revenue Collections (ALRC) rider, and a non-ALRC rider.

APPROPRIATED RECEIPTS

Some agencies are authorized to charge fees to at least partially offset the costs of certain activities and are appropriated that fee revenue in the form of Appropriated

Receipts. With some exceptions, an agency's Appropriated Receipts typically represent cost-recovery activity. For instance, the fee revenue collected by the State Law Library to provide digital court records is shown in the agency's bill pattern as Appropriated Receipts. Part of the Texas Board of Nursing's Appropriated Receipts include fee revenue collected from attendees of the agency's continuing education workshops, webinars, and online courses. The Texas State Board of Dental Examiners' Appropriated Receipts include fee revenue related to its licensees' triennial jurisprudence assessments.

When agencies receive appropriations, a method of finance is specified to indicate from which type of funding is appropriated. Methods of finance include General Revenue Funds, General Revenue–Dedicated Funds, Federal Funds, and Other Funds. Appropriated Receipts are among the Other Funds that appear in agency bill patterns.

Some revenue in the GAA that is categorized as Appropriated Receipts is unrelated to cost-recovery transactions. For example, the Texas Education Agency's Appropriated Receipts line item includes recapture payments, which is a local revenue source used as a method of finance for the Foundation School Program. Similarly, the Texas Department of Criminal Justice and the Texas Juvenile Justice Department each receive the unused portion of probation grants from local probation departments. These refunds are included in the agencies' bill patterns as Appropriated Receipts. Neither of these items are comparable to Appropriated Receipts that other agencies generate from cost recovery.

APPROPRIATIONS LIMITED TO REVENUE COLLECTION

Through statute, the Legislature has required certain agencies and programs to collect sufficient revenue to cover their operating costs. To implement these requirements, the GAA includes ALRC riders for certain agencies and programs. These provisions require that fees, fines, and other revenue generated by the agency or program must cover, at a minimum, the corresponding cost of appropriations and other direct and indirect costs (ODIC), which include employee Social Security, health insurance, retirement benefits, and other costs.

For agencies subject to an ALRC provision, the Comptroller of Public Accounts releases their General Revenue Funds appropriations at the beginning of the fiscal year and tracks the agency's repayment through its fee revenue. For most of the ALRC programs, however, the corresponding

appropriations are set up so that expenditures are restricted to the amount of actual revenue the agency collects.

Most agencies and programs subject to an ALRC provision remit agency-generated revenue greater than appropriated amounts to the General Revenue Fund. The Texas Racing Commission, which is authorized by the Texas Racing Act to carry forward up to \$750,000 in fee-generated revenue into the next biennium, and the Office of Public Insurance Counsel, which does not generate its revenue, are exceptions. Agencies subject to ALRC riders contributed approximately \$365.6 million more than their appropriated amounts to the General Revenue Fund during the 2016–17 biennium.

Figure 1 shows agencies subject to an ALRC rider in the Eighty-fifth Legislature, GAA, 2018–19 Biennium.

Figure 2 shows agencies with specific programs subject to an ALRC rider.

Certain agencies are authorized to retain fee revenue that exceeds appropriated amounts for certain programs, typically for the same purpose that generated the revenue. **Figure 3** shows the amounts by which revenue from these programs exceeded their appropriations and other direct and indirect costs during the 2016–17 biennium. For example, excess revenue from the Federal Surplus Property Program was added to the Texas Facilities Commission's appropriation for that program. Likewise, the GAA appropriated revenue in excess of the Biennial Revenue Estimate (BRE) from the Animal Health Commission's fees to the agency for the program that generated it.

The GAA also appropriated to the respective programs the excess fee revenue that the Department of Aging and Disability Services (DADS) collected for its Nursing Facility Administrator and Home and Community Support Services Agencies programs and that the Department of Assistive and Rehabilitative Services (DARS) collected for its Interpreter Certification program. Senate Bill 200, Eighty-fourth Legislature, 2015, abolished DADS and DARS and transferred those programs to the Health and Human Services Commission.

During the 2016–17 biennium, seven fee-generating programs at the Texas Education Agency (TEA) were appropriated their respective revenue in excess of the BRE. The agency reported that fee revenue from five programs did not exceed appropriations for at least one year of the 2016–17 biennium, three of which did not exceed appropriations during either year. TEA also reported that one program's fee

FIGURE 1
TEXAS STATE AGENCIES SUBJECT TO AN APPROPRIATIONS LIMITED TO REVENUE COLLECTIONS RIDER
FISCAL YEAR 2018

(IN MILLIONS)		2016–17 BIENNIUM		
ARTICLE	AGENCY	GENERAL REVENUE FUNDS AND GENERAL REVENUE–DEDICATED FUNDS APPROPRIATIONS	OTHER DIRECT AND INDIRECT COSTS (ODIC)	AMOUNT AGENCY REPORTS REVENUE OVER/(UNDER) APPROPRIATIONS AND ODIC
V	Alcoholic Beverage Commission	\$99.5	\$31.6	\$22.6
	Commission on Fire Protection	\$3.9	\$1.7	\$3.1
VIII	Board of Chiropractic Examiners	\$1.5	\$0.4	\$0.7
	Texas State Board of Dental Examiners	\$8.2	\$1.7	\$8.9
	Funeral Service Commission	\$1.5	\$0.5	\$1.5
	Board of Professional Geoscientists	\$1.2	\$0.3	\$0.9
	Office of Public Insurance Counsel (2)	\$1.7	\$0.7	\$2.8
	Board of Professional Land Surveying	\$0.9	\$0.3	(\$0.03)
	Department of Licensing and Regulation	\$58.3	\$17.7	\$4.5
	Texas Medical Board	\$27.8	\$8.3	\$23.9
	Texas Board of Nursing	\$17.2	\$4.6	\$3.3
	Optometry Board	\$0.9	\$0.3	\$0.9
	Board of Pharmacy	\$14.4	\$3.4	\$4.0
	Executive Council of Physical Therapy and Occupational Therapy Examiners	\$2.6	\$0.8	\$6.9
	Board of Plumbing Examiners	\$5.2	\$1.6	\$3.6
	Board of Examiners of Psychologists	\$1.6	\$0.6	\$1.4
	Racing Commission	\$15.4	\$2.4	\$0.05
Securities Board	\$14.4	\$4.9	\$276.6	
Board of Veterinary Medical Examiners	\$2.6	\$0.8	(\$0.1)	
Total (3)				\$365.6

NOTES:

- (1) Appropriation amounts do not indicate actual spending amounts.
 - (2) The Office of Public Insurance Counsel is funded by an annual assessment on insurance policies.
 - (3) Total excludes Texas Racing Commission.
 - (4) Totals may not sum due to rounding.
- SOURCE: Legislative Budget Board.

**FIGURE 2
TEXAS STATE AGENCY PROGRAMS SUBJECT TO AN APPROPRIATIONS LIMITED TO REVENUE COLLECTIONS RIDER
2018–19 BIENNIUM**

AGENCY	PROGRAMS OR STRATEGIES
Article I	
Texas Facilities Commission	Federal Surplus Property
Article II	
Health and Human Services Commission	Interpreter Certification Program; Health Care Facilities; Nursing Facility Administrator Program; Home Health and Community Support Services Agencies; Health Care Professionals and Other
Department of State Health Services	Various programs in strategies Vital Statistics; Food (Meat) and Drug Safety; Environmental Health; Radiation Control
Article III	
Texas Education Agency	Guaranteed Program for School District and Charter School Bonds; Texas Certificate of High School Equivalency; Educator Certification; Criminal History Background Check; Electronic Courses and Programs Virtual School Network; Educator Preparation Program Approval and Accountability; Texas High Performance Schools Consortium Fee
Article IV	
Office of Court Administration, Texas Judicial Council	Judicial Branch Certification Commission
Article V	
Department of Public Safety	Private Security Program
Article VI	
Department of Agriculture	Livestock Export Pens; International and Domestic Trade; Plant Health; Egg Quality Regulation; Handling and Marketing of Perishable Commodities; Grain Warehouse; Agricultural Pesticide Regulation; Organic Certification; Prescribed Burn; Structural Pest Control; Weights and Measures; Metrology; Central Administration; Information Resources; and Other Support Services
Animal Health Commission	Chronic Wasting Disease; Poultry Registration; and specific programs within the agency's Field Operations strategy.
Texas Commission on Environmental Quality	Automobile Emission Inspections
Railroad Commission of Texas	Liquefied Petroleum Gas Program and Alternative Fuels Licensing Program; Surface Mining Permits; Pipeline Safety; Uranium Mining Regulation
Article VII	
Department of Housing and Community Affairs	Manufactured Housing
Texas Lottery Commission	Enforce Bingo Laws
Department of Transportation	Rail Safety

SOURCE: Legislative Budget Board.

had not been collected since 2012. In these circumstances, pursuant to the ALRC rider, the Comptroller of Public Accounts (CPA) releases the revenue for expenditure that the agency actually collects.

During the 2016–17 biennium, the Railroad Commission of Texas was appropriated excess fee revenue related to liquefied petroleum gas, compressed natural gas, liquefied natural gas, and surface mining permits. The agency's appropriation authority for the excess revenue expired at the end of the

biennium. The agency also was appropriated excess revenue related to pipeline safety fees. Unspent funds from this revenue source are retained in the General Revenue–Dedicated Account No. 5155, Oil and Gas Regulation and Cleanup, at the end of the biennium.

House Bill 1290, Eighty-fifth Legislature, Regular Session, 2017, prohibits state agencies from adopting rules that increase costs on regulated individuals without first repealing or amending an existing rule to at least offset the new rule's

**FIGURE 3
TEXAS STATE AGENCY PROGRAM FEE REVENUE IN EXCESS OF APPROPRIATIONS AND OTHER DIRECT AND INDIRECT COSTS (ODIC), 2016–17 BIENNIUM**

AGENCY (1)	PROGRAM	AMOUNT EXCEEDING APPROPRIATIONS AND ODIC (IN MILLIONS)
Texas Facilities Commission	Federal Surplus Property	\$0.6
Department of Aging and Disability Services	Nursing Facility Administrator	Did not exceed
	Home and Community Support Services Agencies	Did not exceed
Department of Assistive and Rehabilitative Services	Interpreter Certification	\$0.1
Texas Education Agency	Guaranteed Program for School District and Charter School Bonds	\$0.3
	Texas Certificate of High School Equivalency	\$0.3
	Educator Certification	Did not exceed
	Criminal History Background Check	\$0.0
	Electronic Courses and Programs Virtual School Network	Did not exceed
	Educator Preparation Program Approval and Accountability	Did not exceed
	Texas High Performance Schools Consortium Fee	Not collected
Animal Health Commission	Fowl Registration, Chronic Wasting Disease Inspections, Certificates of Veterinary Inspection	\$0.07
Texas Commission on Environmental Quality	Automobile Emission Inspections (2)	\$4.6
Railroad Commission of Texas	Liquefied Petroleum Gas/Compressed Natural Gas/Liquefied Natural Gas	\$3.6
	Surface Mining Permits	\$0.4
	Pipeline Safety Fees	\$4.9
Total		\$14.8

NOTE:
 (1) For some agencies, unspent revenue is subject to a sweep by the Comptroller of Public Accounts at the end of the biennium.
 (2) Revenue collected in excess of the Texas Commission on Environmental Quality’s Automobile Emission Inspections program appropriation accrues to the General Revenue–Dedicated Account No. 151, Clean Air.
 (3) Totals may not sum due to rounding.
 SOURCE: Legislative Budget Board.

cost on regulated individuals. The following agencies are exempted from the requirement:

- Department of Family and Protective Services;
- Department of Motor Vehicles;
- Public Utility Commission of Texas;
- Texas Commission on Environmental Quality;
- Texas Racing Commission; and
- self-directed, semi-independent agencies.

Certain kinds of rules also are exempted from the requirement, including those that meet the following qualifications:

- are adopted in response to natural disasters;

- are necessary to receive federal funding or to comply with federal law;
- are necessary to protect water resources as authorized by the Texas Water Code; or
- are necessary to protect the health, safety, and welfare of Texas residents.

OTHER REVENUE RIDERS

ALRC provisions sometimes are viewed interchangeably with provisions for contingent revenue and self-leveling programs or agencies. Although they are similar, an agency or program can be held to more than one set of provisions.

A contingent-revenue appropriation depends on enough revenue being raised to cover it. Unlike ALRC appropriations,

FIGURE 4
TEXAS STATE SELF-DIRECTED, SEMI-INDEPENDENT (SDSI) ENTITIES, 2018–19 BIENNIUM

AGENCY OR PROGRAM	SOURCE OF SDSI STATUS	SDSI STATUS PROVIDED
State Board of Public Accountancy	The Texas Government Code, Chapter 472	2001
Board of Professional Engineers	The Texas Government Code, Chapter 472	2001
Board of Architectural Examiners	The Texas Government Code, Chapter 472	2001
Department of Banking	The Texas Finance Code, Chapter 16	2009
Department of Savings and Mortgage Lending	The Texas Finance Code, Chapter 16	2009
Office of Consumer Credit Commissioner	The Texas Finance Code, Chapter 16	2009
Credit Union Department	The Texas Finance Code, Chapter 16	2009
Real Estate Commission	The Texas Occupations Code, Chapter 1105	2011
Appraiser Licensing and Certification Board	The Texas Occupations Code, Chapter 1105	2011
Texas Department of Insurance Financial Program	The Texas Insurance Code, Chapter 401, Subchapter F	2011

SOURCE: Legislative Budget Board.

contingent-revenue appropriations are not released to the agency in advance of the revenue collection. Depending on the terms of the provision, CPA may wait until the revenue is certified or otherwise ensure that expenditures are limited to collected revenue. An ALRC provision can contain a contingent-revenue component. For example, the 2018–19 GAA, Article VI, Texas Animal Health Commission, Rider 8, is a cost-recovery provision with a contingent-revenue stipulation.

A self-leveling agency or program is required to set the fees and fines funding a specified appropriation or group of appropriations equal to the amount to cover that appropriation or group. Unlike ALRC provisions, which require revenue to cover appropriations, self-leveling provisions require revenue to equal appropriations. For example, the 2018–19 GAA, Article VII, Texas Department of Transportation, Rider 20, regarding a fee on railroad operators to fund Federal Rail Safety Act implementation, is an ALRC provision whose statutory authorization requires fees to be self-leveling. Similarly, the statutory provisions authorizing the Texas Department of Insurance (TDI) to collect insurance maintenance taxes also require the agency to set the taxes at rates that pay the succeeding year’s expenses.

SELF-DIRECTED, SEMI-INDEPENDENT ENTITIES

Self-directed, semi-independent (SDSI) agencies operate exclusively on a cost-recovery basis. Four statutory provisions give SDSI status to nine agencies and one program at TDI. SDSI agencies are responsible for generating a self-supporting

level of revenue. In some cases, they also must make an annual remittance to the General Revenue Fund.

These agencies are excluded from the appropriations process, although their staff are members of the Employees Retirement System and the agencies must comply with general laws that cover other state agencies, including the Texas Public Information and Texas Open Meetings acts.

Figure 4 shows the SDSI entities and the statutory provisions that gave them that status.

The SDSI provisions vary in their requirements of the respective agencies. Requirements in the Texas Government Code are the most detailed. SDSI agencies governed by provisions in the Texas Government Code, the Texas Finance Code, and the Texas Occupations Code must report to the Legislature and the Office of the Governor on or before the first day of each legislative session. These statutes have the following similar reporting requirements:

- an audit by the State Auditor’s Office;
- a financial report for the previous fiscal year;
- a description of changes in licensing fees or fees imposed on regulated persons; and
- a description of all new rules adopted or repealed.

SDSI provisions in the Texas Insurance Code do not include a comparable biennial reporting requirement.

FIGURE 5
ANNUAL REPORTING REQUIREMENTS FOR SELF-DIRECTED, SEMI-INDEPENDENT STATE AGENCIES AND PROGRAM BY AUTHORIZING STATUTE, 2018–19 BIENNIUM

REQUIREMENTS	THE TEXAS GOVERNMENT CODE, CHAPTER 472	THE TEXAS FINANCE CODE, CHAPTER 16	THE TEXAS OCCUPATIONS CODE, CHAPTER 1105	THE TEXAS INSURANCE CODE, CHAPTER 401
Report to	Governor, Texas House of Representatives Appropriations Committee (HAC), Texas Senate Committee on Finance (SFC), and the Legislative Budget Board (LBB)	Governor, HAC, SFC, and LBB	Governor, HAC, SFC, and LBB	Commissioner of Insurance and LBB
Annual report due	November 1	November 1	November 1	No date specified
Salary, per diem, and travel expenses for employees	X	X	X	X
Portion of salary and travel expenses paid from self-directed budget and portion from appropriated funds				X
Per diem and travel expenses paid for the governing or policy-making body members or member of each agency	X	X	X	
Agency Operating Plan	X	X	X	
Report of revenue received and expenses incurred by the entity	X	X	X	X
Trend performance data for the preceding five fiscal years for 13 metrics	X			

SOURCE: Legislative Budget Board.

All four statutes governing SDSI provisions require a separate annual report from each agency. **Figure 5** shows the annual reporting requirements of the four SDSI provisions.

The Self-Directed Semi-Independent Agency Project Act and the Texas Occupations Code, Chapter 1105, each require that the agencies within their purviews make an annual remittance to the General Revenue Fund. The remittances pursuant to the SDSI Act initially were established in by the Seventy-sixth Legislature, 1999, and updated by the Seventy-eighth Legislature, Regular Session, 2003. The remittances required by the Texas Occupations Code have not been updated since their initial implementation. **Figure 6** shows the current remittances required of the agencies subject to

the SDSI provisions in the Texas Government Code and the Texas Occupations Code.

OTHER STATES

The National Conference of State Legislatures (NCSL) found that other states also commonly rely on fee revenue, particularly for professional regulation. In a survey of 15 other states, NCSL found that each one relied on fee revenue to fund regulatory activities. Three of those states, Louisiana, Maryland, and Washington, reported that they supplement fee revenue with some general fund spending. Most of the 15 states rely on some regulatory fee revenue for their general funds. These other states also set their fees through a combination of agency rules, legislative or gubernatorial action, and statutes.

FIGURE 6
ANNUAL REMITTANCES STATUTORILY REQUIRED OF CERTAIN SELF-DIRECTED, SEMI-INDEPENDENT AGENCIES
FISCAL YEAR 2018

AGENCY	THE TEXAS GOVERNMENT CODE, SECTION 472.102	THE TEXAS OCCUPATIONS CODE, SECTION 1105.003
State Board of Public Accountancy	\$703,344	
Board of Professional Engineers	\$373,900	
Board of Architectural Examiners	\$510,000	
Real Estate Commission		\$750,000
Appraiser Licensing and Certification Board		\$750,000

SOURCE: Legislative Budget Board.

FISCAL IMPACT OF THE OPTION

Option 1 would not have a significant fiscal impact. Any additional workload would be managed by existing staff and resources.

The introduced 2020–21 General Appropriations Bill does not include any adjustments as a result of this option.

IMPROVE THE STATE RESPONSE TO HUMAN TRAFFICKING

Human trafficking, often referred to as modern slavery, is the trade of adults or children for forced labor or sex. The state's response to human trafficking consists of anti-trafficking legislation and activities undertaken by state agencies working individually and collaboratively with each other, law enforcement agencies and local government, and nongovernmental organizations. These activities vary by agency and organization, but typically consist of training, investigation, prosecution, research, and victim services. The Office of the Governor and Office of the Attorney General have statutorily-mandated units dedicated to anti-trafficking and support anti-trafficking activities at other agencies. Despite ongoing efforts, human trafficking remains a considerable problem, due to challenges inherent to the crime and challenges facing the state response. This overview of state anti-trafficking efforts includes options for improving discrete elements of these efforts.

FACTS AND FINDINGS

- ◆ Many state anti-trafficking activities originate from or involve three statutorily mandated entities: the Child Sex Trafficking Team within the Office of the Governor, the Human Trafficking and Transnational/Organized Crime Section within the Office of the Attorney General, and the Texas Human Trafficking Prevention Task Force coordinated through the Office of the Attorney General.
- ◆ The Texas Human Trafficking Prevention Task Force, statutorily composed of 17 state agencies and other nonagency appointments made by the Attorney General, has been a driver of anti-trafficking legislation. The task force is required by statute and the General Appropriations Act to make legislative recommendations.
- ◆ According to the Institute on Domestic Violence and Sexual Assault at the University of Texas at Austin, there are an estimated 234,000 labor trafficking victims and 79,000 minor and youth sex trafficking victims in Texas.

CONCERNS

- ◆ Changes in the membership of the Texas Human Trafficking Prevention Task Force must be made by

amending statute, which may delay or impede the participation of prospective state agency members.

- ◆ One of the two task force reporting requirements asks for recommendations to enhance efforts to prevent human trafficking annually, which, in odd-numbered years, doesn't provide enough time for previously enacted recommendations to be implemented and assessed for potential corrections.
- ◆ The Human Trafficking and Transnational/Organized Crime Section has prosecutorial expertise and resources for human-trafficking cases that some local prosecutors may lack, but the circumstances within which it can participate in these cases are limited.
- ◆ Inadequate data collection and a lack of services for trafficking victims are persistent challenges facing the state response to human trafficking, but no lasting solutions have been implemented.

OPTIONS

- ◆ **Option 1:** Amend statute to authorize the Office of the Attorney General to set the membership of the Texas Human Trafficking Prevention Task Force, which should include any members specified by the Legislature.
- ◆ **Option 2:** Remove the requirement that the Texas Human Trafficking Prevention Task Force's annual report includes recommendations to enhance efforts to prevent human trafficking from the 2020–21 General Appropriations Bill.
- ◆ **Option 3:** Amend statute to grant the Office of the Attorney General concurrent jurisdiction in human-trafficking cases with the consent of the appropriate county or district attorney.
- ◆ **Option 4:** Amend statute to direct the Texas Human Trafficking Prevention Task Force to consider recommendations specifically targeting the improvement of human trafficking data collection and the expanded provision of services for trafficking victims.

DISCUSSION

Human trafficking, along with trafficking in persons and modern slavery, are umbrella terms used to refer to both sex and labor trafficking. The Office of the Attorney General (OAG), paraphrasing the Texas Penal Code, Chapter 20A, Trafficking of Persons, describes the following four types of trafficking:

- trafficking of adults for forced labor, such as in agriculture, food service, factory work, or sales;
- trafficking of adults for sex, such as in strip clubs, brothels, or massage parlors, or via street or Internet prostitution;
- trafficking of children age 17 or younger for forced labor; and
- trafficking of children age 17 or younger for sex.

An individual can be trafficked into any industry or type of work and need not be transported physically from one location to another to be trafficked. An individual is trafficked if force, fraud, or coercion is used to make the individual work, or if a minor is trafficked for sex by any means, regardless of a trafficker's use of force, fraud, or coercion. The circumstances of victims can vary considerably. Sex trafficking victims may consent to romantic involvement with someone who then coerces them into prostitution. Some are forced into prostitution by family members or lured in with false promises of a job such as modeling or dancing. Labor trafficking victims may face debt bondage or forced labor. In debt bondage, labor is demanded as a means of repayment of a debt for which the full value of the victims' labor is not applied toward the debt's liquidation. In forced labor, victims' freedom is restricted, and they are forced to work against their will under threat of violence or other forms of punishment. Common labor trafficking victims include domestic servants; migrant farmworkers; factory, construction, and restaurant workers; and health and beauty industry employees, among others.

The characteristics of human trafficking victims also vary, and not all victims share a defining characteristic. Traffickers frequently target individuals who are poor, vulnerable, living in an unsafe situation, or in search of a better life. In the U.S., these populations often include American Indian and Alaska Native communities; lesbian, gay, bisexual, transgender, or gender-questioning individuals; individuals with disabilities; undocumented immigrants; runaway and homeless youth; and low-income individuals.

CHALLENGE INHERENT TO HUMAN TRAFFICKING

The hidden nature of human trafficking poses a significant challenge to those seeking to ascertain the scope of the crime and address it. In other types of criminal cases, police often are alerted to the existence of the crime by victims or witnesses affected by it. This type of reactive identification is less common in cases of human trafficking, because victims often are unwilling to seek help or are hidden by their exploiters and by others who come into contact with them and benefit from their exploitation. Some victims fear law enforcement and do not trust authority figures, due to past experiences or conditioning from their traffickers. Others fear retaliation against themselves or loved ones or shame if the activities in which they have been forced to engage are revealed. Many international trafficking victims are brought into the U.S. illegally, and traffickers use victims' illegal entry as a form of control. These victims may be unaware of their rights and unable to understand U.S. laws or the language spoken, all of which aid traffickers to keep the crimes and the victims hidden. Domestic and international victims often are isolated, and traffickers control victims' limited contact with anyone else, which can make victims dependent on traffickers and unaware that they are victims. **Figure 1** shows common barriers to identifying human trafficking victims compiled by the Polaris Project, a nongovernmental organization (NGO) that operates the National Human Trafficking Hotline.

The hidden nature of human trafficking is compounded by a lack of awareness and understanding of the crime and is complicated further when human trafficking cases involve or overlap with other crimes, such as kidnapping, prostitution, and smuggling. A 2014 survey found that, although most respondents understood human trafficking to be a form of slavery, most also held incorrect beliefs about the crime. These incorrect beliefs include that trafficking victims are almost always female and that trafficking mostly involves undocumented immigrants and requires movement across state or national borders. Without awareness, even if a victim is visible, he or she may not be recognized as a victim.

PREVALENCE OF HUMAN TRAFFICKING IN TEXAS

According to a 2016 report by the Institute on Domestic Violence and Sexual Assault at the University of Texas at Austin, funded by a grant from the Office of the Governor, approximately 79,000 minors and youth are victims of sex trafficking, and 234,000 individuals are victims of labor trafficking in Texas, for a total of 313,000 trafficking victims. The report's authors cited these as conservative estimates

**FIGURE 1
COMMON BARRIERS TO IDENTIFYING HUMAN TRAFFICKING VICTIMS, 2018**

Captivity or confinement	Distrust of law enforcement or service providers
Frequent accompaniment or being guarded	Isolation
Use and threat of violence	False promises
Use of reprisals and threats of reprisals against loved ones or third parties	Hopelessness and resignation
Fear	Facilitated drug addiction
Shame	Lack of awareness of available resources
Self-blame	Psychological trauma
Debt bondage	Not self-identifying as trafficking victims
Traumatic bonding to the trafficker, commonly called Stockholm syndrome	Normalization of exploitation
Language and social barriers	

SOURCE: The Polaris Project.

considering the limited data and statistics for trafficking and the difficulty of collecting data. The second and final phase of the institute's research in accordance with the grant, at the direction of the Office of the Governor, will focus specifically on the regional prevalence of domestic minor sex trafficking.

STATE ANTI-TRAFFICKING LEGISLATION

After passage of the federal Trafficking Victims Protection Act in 2000, which followed a period of increased publicity about trafficking, the U.S. Department of Justice encouraged states to pass uniform anti-trafficking laws that fostered criminal prosecution, victim protection, and prevention at the state level. Texas was the second state to pass such laws, with its anti-trafficking statute, House Bill 2096, Seventy-eighth Legislature, Regular Session, 2003. This legislation made the trafficking of persons a felony offense and established definitions for forced labor or services and traffic in the context of the offense. The Eightieth Legislature, 2007, passed five pieces of legislation that involved human trafficking, including one that required OAG to issue a report concerning the needs of human trafficking victims and recommended areas of improvement and modifications to laws and rules. In that report, published in 2008, OAG recommended the establishment of a statewide human trafficking task force. The Eighty-first Legislature, Regular Session, 2009, established the Texas Human Trafficking Prevention Task Force.

OAG presides over the Texas Human Trafficking Prevention Task Force, which develops and reports recommendations to strengthen state and local efforts to prevent human trafficking, protect and assist victims, and prosecute offenders. As of fiscal year 2018, 65 of the task force's 70

recommendations have become law. According to the OAG, the number of task force recommendations is decreasing as the state's approach to human trafficking is established. **Figure 2** shows select anti-human trafficking legislation from the Seventh-eighth Legislature, Regular Session, 2003, to the Eighty-fifth Legislature, Regular Session, 2017.

STATE ANTI-TRAFFICKING ACTIVITIES

Multiple state agencies are responsible for implementing the state's anti-trafficking legislation and other anti-trafficking activities that are not set out by statute. These agencies work independently and collaboratively with each other, with law enforcement agencies and local government, and with NGOs. **Figure 3** shows examples of state anti-trafficking activities by category. Much of the collaboration among anti-trafficking stakeholders occurs in regionally organized coalitions and task forces. The composition and structure of these coalitions and task forces vary, but at a minimum they serve to bring federal, state, and local stakeholders involved in anti-trafficking efforts together to meet and collaborate. Although the state plays no formal role in organizing these groups, the Human Trafficking and Transnational/Organized Crime Section (HTTOC) within OAG has encouraged their development, and representatives from several state agencies participate on them.

OFFICE OF THE ATTORNEY GENERAL

At the state level, many anti-trafficking activities involve or originate from OAG and the Office of the Governor. OAG has two main initiatives that address human trafficking: the Texas Human Trafficking Prevention Task Force and HTTOC. The establishment of both was required by statute. The Texas Human Trafficking Prevention Task Force consists

FIGURE 2
SELECT ENACTED ANTI-TRAFFICKING LEGISLATION, CALENDAR YEARS 2003 TO 2017

YEAR	BILL	SUMMARY
2003	House Bill 2096	Established the felony offense of trafficking of persons.
2007	House Bill 1121	Amended the trafficking of persons offense and required trafficking-related reports from the Office of the Attorney General (OAG) and the Health and Human Services Commission (HHSC).
2007	Senate Bill 11	Amended the trafficking of persons offense, included trafficking as an offense for which a wiretap could be authorized, and required trafficking-related reports from OAG and HHSC.
2007	House Bill 1751	Imposed a fee on certain sexually oriented businesses, with a portion of the revenue deposited to the credit of General Revenue–Dedicated Account No. 5010, Sexual Assault Program, and included human trafficking-related grants among the approved uses of the fund.
2009	House Bill 533	Made a defendant who engages in the trafficking of persons or intentionally or knowingly benefits from participating in a venture that traffics another person liable in a civil court to the person trafficked for damages arising from the trafficking or venture.
2009	House Bill 4009	Established the Texas Human Trafficking Prevention Task Force, required HHSC to establish a victim's assistance program for domestic victims of trafficking, and provided separate offenses for sex trafficking of an adult and sex trafficking of a child.
2011	House Bill 2014	Added mandatory restitution for child trafficking victims, added certain trafficking-related reporting requirements, and added the trafficking of a child to the list of offenses for which bail could be revoked for a violation, for which a child safety zone could be established, and for which contraband could be seized.
2011	House Bill 2329	Provided for the confidentiality of certain information regarding trafficking victims and the enforcement of protective orders to protect trafficking victims.
2011	House Bill 3000	Established the felony offense of continuous trafficking of persons.
2011	Senate Bill 24	Enacted certain of the legislative changes recommended in the 2011 Texas Human Trafficking Prevention Task Force Report, including establishing separate definitions for sex trafficking and labor trafficking and adding human trafficking offenses to those for which registration as a sex offender is required.
2013	House Bill 8	Enacted the legislative changes recommended in the 2012 Texas Human Trafficking Prevention Task Force Report, including the resolution of conflicting protective order statutes and the inclusion of trafficking among the crimes eligible to receive reimbursement for relocation expenses pursuant to the state Crime Victims' Compensation Act.
2013	House Bill 1272	Continued the Human Trafficking Prevention Task Force and expanded its duties.
2013	House Bill 2725	Exempted information maintained by a victims of trafficking shelter center from state public information law and required the establishment of minimum standards for certain facilities that provide services to trafficking victims.
2013	House Bill 3241	Established a cause of action authorizing the state to bring suit against a person or enterprise for racketeering related to trafficking of persons.
2013	Senate Bill 92	Authorized a juvenile board to establish a trafficked persons program for the assistance, treatment, and rehabilitation of children who may be the victims of human trafficking.
2015	House Bill 10	Enacted the legislative changes recommended in the 2014 Texas Human Trafficking Prevention Task Force Report, including the establishment of the Child Sex Trafficking Team within the Office of the Governor.
2015	House Bill 11	Established the Human Trafficking and Transnational/Organized Crime Section within the OAG.
2015	House Bill 188	Continued the Human Trafficking Prevention Task Force and expanded its membership and duties.
2015	House Bill 2455	Established a task force at the Office of Court Administration to promote uniformity in the collection and reporting of information on family violence, sexual assault, stalking, and human trafficking.
2017	House Bill 29	Enacted the legislative changes recommended in the 2016 Texas Human Trafficking Prevention Task Force Report, expanded the task force's membership, and made the task force permanent by repealing its expiration date.
2017	House Bill 2552	Set out measures to address and deter human trafficking, including the required display of human trafficking signs at abortion facilities, emergency rooms, and licensed cosmetology facilities.

NOTE: Summaries are not comprehensive.
 SOURCE: Texas Legislature Online.

**FIGURE 3
EXAMPLES OF STATE ANTI-TRAFFICKING ACTIVITIES, FISCAL YEAR 2018**

CATEGORY	EXAMPLES
Training	<p>Anti-trafficking training typically consists of awareness training for law enforcement, healthcare personnel, or the public and skills training for professionals tasked with investigating and prosecuting human trafficking or caring for its victims. Examples include:</p> <ul style="list-style-type: none"> the <i>Be the One</i> documentary training tool produced by the Office of the Attorney General (OAG), which is intended to equip state employees and the public with an understanding of sex and labor trafficking, the red flags for recognizing either, and a protocol for reporting; the Interdiction for the Protection of Children program developed by the Department of Public Safety (DPS), which teaches law enforcement officers to identify children who may be victims of crime, especially trafficking; and Texas Rise to the Challenge training, which is an introduction to human trafficking for education professionals developed in part by the Texas Human Trafficking Prevention Task Force.
Investigation	<p>Investigations of human trafficking cases are undertaken by DPS and the Texas Alcoholic Beverage Commission (TABC), Special Investigations Unit. TABC's unit is limited to human trafficking at TABC-licensed premises or involving TABC permittees. The Human Trafficking and Transnational/Organized Crime Section (HTTOC) within OAG also has investigators with statewide jurisdiction.</p>
Prosecution	<p>HTTOC has prosecutors who work on human trafficking cases and assist local prosecutors on human trafficking cases. The Office of the Governor, Child Sex Trafficking Team (CSTT), has issued grants to fund a dedicated human trafficking unit, including a prosecutor, within the Bexar County District Attorney's office.</p>
Research	<p>Research-related activities typically consist of funding academic research of human trafficking and the collection and reporting of human trafficking data. Examples include:</p> <ul style="list-style-type: none"> the CSTT funded a human trafficking prevalence study at the University of Texas at Austin; the Office of Court Administration collects the number of cases filed by district courts or county courts of law for the trafficking of persons; and the Texas Human Trafficking Prevention Task Force collects and periodically reports statistical data regarding the nature and extent of human trafficking in Texas, including information from DPS's Computerized Criminal History system.
Victim services	<p>The provision of services to human trafficking victims (which can include housing, mental health treatment, and job skills training) has been an initial point of emphasis for CSTT's grant funding. Other agencies do not provide trafficking-specific victim services, but do count trafficking victims among the populations they serve as part of their missions. For example, DPS has a victims services program with staff psychologists and case managers to connect trafficking victims with local services; the Department of Family and Protective Services does the same for children within the agency's conservatorship who may be trafficking victims.</p>

SOURCE: Legislative Budget Board.

of more than 50 members, including representatives from 17 statutorily required state agencies and OAG-appointed local law enforcement entities, district attorneys, and nonprofit organizations. OAG's Crime Victim Services Division staff provide support to the task force in addition to their primary roles within the agency. The task force is required to collect data, provide training, and produce legislative recommendations that will enhance the state's anti-trafficking efforts. The task force also summarizes member-reported anti-trafficking activities for publication in the task force's annual report to the Governor, Lieutenant Governor, and Legislature. **Figure 4** shows the state agency members of the Texas Human Trafficking Prevention Task Force as of fiscal year 2018.

Because task force members are identified in statute, formal changes in membership require amendment of statute, which may impede or delay the participation of prospective agency members of the task force. Option 1 would amend the Texas Government Code, Section 402.035, to authorize the OAG to set the task force's membership, but with a provision including members specified by the Legislature to authorize the Legislature to compel agencies to participate on the task force at its discretion.

HTTOC, which was established in January 2016, consists of 11.0 full-time-equivalent positions: 6.0 positions for prosecution, and 5.0 positions for law enforcement. HTTOC describes its approach as holistic, considering all victim categories (child and adult, domestic and international, sex trafficking and labor trafficking). HTTOC team members

**FIGURE 4
STATE AGENCY MEMBERS OF THE TEXAS HUMAN TRAFFICKING PREVENTION TASK FORCE, AS OF FISCAL YEAR 2018**

Office of the Governor	Texas Juvenile Justice Department
Office of the Attorney General	Texas Education Agency
Health and Human Services Commission	Texas Alcoholic Beverage Commission
Department of Family and Protective Services	Texas Parks and Wildlife Department
Department of State Health Services	Texas Department of Licensing and Regulation
Department of Public Safety	Office of Court Administration, Texas Judicial System
Texas Workforce Commission	Secretary of State
Texas Department of Criminal Justice	Texas Commission on Law Enforcement
	Supreme Court of Texas, Permanent Judicial Commission for Children, Youth, and Families

SOURCE: The Texas Government Code, Section 402.035.

prosecute human trafficking cases; provide assistance and consultation to other prosecutors, investigators, and state and local agencies on trafficking-related cases and inquiries; and provide anti-trafficking training for stakeholders. HHTOC also works with the statewide task force to provide resource testimony and background information for the task force’s legislative recommendations.

OFFICE OF THE GOVERNOR

The Office of the Governor also has a statutorily mandated team dedicated to human trafficking. The Child Sex Trafficking Team (CSTT) within the Criminal Justice Division (CJD) consists of 5.0 FTE positions and expects to add 4.0 more positions within calendar year 2018. As its name indicates, CSTT focuses on child sex trafficking by issuing CJD grants to anti-trafficking stakeholders seeking to prevent and combat child sex trafficking and serve victims. CSTT also provides anti-trafficking training across the state. More information on CJD grants appears below. CSTT grantees include the following recipients:

- local governments, such as Harris County for purposes of funding a dedicated human trafficking investigator position in the Harris County Constable’s Office, and Bexar County for a project that provides victims services including case management and counseling to victims of child sex trafficking and abuse; and
- NGOs, such as Arrow Child and Family Ministries for a care and recovery center called Freedom Place.

Before CSTT was established, the Office of the Governor primarily awarded grants through the CJD to service providers, law enforcement, and prosecutors and through the

Budget and Policy Division for research addressing trafficking and policy initiatives.

OTHER AGENCIES

Other agencies’ activities include training, investigation, research, and victim services and typically depend on agency mission, statute, leadership initiative, or a combination of these functions.

The Department of Public Safety (DPS), for example, conducts human trafficking investigations and has teams focusing on that crime in the agency’s Dallas and El Paso regions. DPS also provides trafficking-specific training to Criminal Investigation Division agents and assists trafficking victims through its Crime Victim Services Program. The Texas Alcoholic Beverage Commission (TABC) also investigates crimes, deploying the criminal and administrative authority of TABC peace officers to investigate human trafficking at TABC-licensed premises or involving TABC permittees. TABC estimates that 13.7 percent of the organized criminal activity cases the agency opens have a human trafficking allegation. TABC also has devised a training program for drivers employed by alcoholic beverage distributors so that they are equipped to notice signs of trafficking while making deliveries at TABC-licensed establishments.

The Secretary of State (SOS) operates a statutorily mandated Human Trafficking Prevention Business Partnership program that enables corporations and other private entities to apply for certificates of recognition if they take steps to prevent and combat human trafficking. SOS plans to develop a database of best practices from program participants when the program has a sufficient number of participants.

The Department of Family and Protective Services (DFPS) provides services to human trafficking survivors through contracts with service providers. DFPS has a Human Trafficking and Child Exploitation division funded through an interagency CJD grant that collaborates with other state agencies and NGOs on activities including conducting trainings and executing memoranda of understanding with certain service providers to standardize the system of care for children in DFPS conservatorship who may be trafficking victims.

Other agency-reported anti-trafficking activities are documented in the Texas Human Trafficking Prevention Task Force's annual report, but the provision of that information is voluntary and at the agencies' discretion. Therefore, the documentation may not be complete.

STATE ANTI-TRAFFICKING FUNDING

The Eighty-second Legislature, General Appropriations Act (GAA), 2012–13 Biennium, made the first appropriation specifically for anti-trafficking. The Legislature has made anti-trafficking-specific appropriations for each subsequent biennium. **Figure 5** shows a history of appropriations for anti-trafficking in the GAA with the rider or provision making the appropriation and the method of finance. **Figure 6** shows the same history with total appropriations by agency.

Most of the anti-trafficking appropriations in Texas have been to DPS and the Office of the Governor. OAG does not receive anti-trafficking-specific appropriations, but the agency did receive CJD grants from fiscal years 2012 to 2017 and currently pays for anti-trafficking activities out of General Revenue Funds and Other Funds (Appropriated Receipts in its GAA bill pattern in Strategy A.1.1, Legal Services). The Legislature also appropriates OAG money for crime victims' compensation and victims assistance, both of which can include human trafficking victims. For the 2018–19 biennium, appropriations in OAG's bill pattern in Strategy C.1.1, Crime Victims' Compensation, totaled approximately \$131.3 million; appropriations in Strategy C.1.2, Victims Assistance, totaled approximately \$66.6 million. **Figure 7** shows estimated human trafficking-specific expenditures at OAG and the methods of finance for fiscal years 2012 to 2018.

Human trafficking-specific appropriations at DPS were \$9.9 million for the 2016–17 and 2018–19 biennia and consisted exclusively of appropriations from General Revenue–Dedicated Account No. 5010, Sexual Assault Program (Account No. 5010).

Figure 8 shows human trafficking-specific appropriations at the Office of the Governor for fiscal years 2012 to 2019. The Office of the Governor is the administering agency for multiple Federal Funds, including Victims of Crime Act (VOCA) and Violence Against Women Act (VAWA) funding. Most of CSTT's programs are funded from this federal funding. The use of VOCA and VAWA funding is limited by law; CSTT reports that it reserves appropriated state funds for initiatives that require more flexibility, such as using Account No. 5010 funds to pay for staffing and travel costs. The Office of the Governor has issued approximately \$22.9 million in 73 human trafficking-specific grants since fiscal year 2012 and, therefore, influences statewide anti-trafficking efforts. The Office of the Governor has focused efforts on addressing domestic minor sex trafficking in statewide anti-trafficking efforts.

In addition to OAG, 10 other agencies on the Texas Human Trafficking Prevention Task Force receive no specific anti-trafficking funding: TABC; SOS; the Health and Human Services Commission; the Texas Workforce Commission; the Texas Department of Criminal Justice; the Texas Education Agency; the Texas Parks and Wildlife Department; the Supreme Court of Texas, Permanent Judicial Commission for Children, Youth, and Families; the Texas Department of Licensing and Regulation; and the Texas Commission on Law Enforcement. Three other agencies that receive anti-trafficking funding receive it in the form of interagency CJD grants from the Office of the Governor. DFPS received a \$822,831 grant to implement its Human Trafficking and Child Exploitation division. The Office of Court Administration (OCA) of the Texas Judicial Council received a \$161,123 grant that was used in part to preside over a task force to promote uniformity in the collection and reporting of court information relating to human trafficking, among other crimes. The Texas Juvenile Justice Department (TJJD) received a \$113,715 grant to fund the acquisition of a screening tool used by TJJD and county probation departments to identify victims of sex trafficking among the youth they serve.

The remaining agency on the Texas Human Trafficking Prevention Task Force, the Department of State Health Services (DSHS), received appropriations of \$20,000 in General Revenue Funds for each of fiscal years 2014 to 2018, and \$30,000 in General Revenue Funds for fiscal year 2019. The appropriations were for training regarding awareness of and responding to child sex trafficking victims for the public and regional DSHS staff.

**FIGURE 5
HUMAN TRAFFICKING-RELATED APPROPRIATIONS IN THE GENERAL APPROPRIATIONS ACT BY RIDER OR PROVISION AND
METHOD OF FINANCE
2012–13 TO 2018–19 BIENNIA**

BIENNIUM	AGENCY	RIDER OR PROVISION	METHOD OF FINANCE (IN MILLIONS)	
			GENERAL REVENUE FUNDS	GENERAL REVENUE–DEDICATED FUNDS, ACCOUNT NO. 5010
2012–13	Office of the Attorney General (OAG)	Article IX, Section 18.06, for activities related to sexual trafficking contingent on sufficient excess collections of the Adult Entertainment Fee to cover the cost of the appropriation		\$1.0
2014–15	Office of Court Administration, Texas Judicial Council	Rider 15, to conduct a study during fiscal year 2014 on the financial impact on local governments of statewide Department of Public Safety (DPS) sting operations, including those involving human trafficking	\$0.04	
2016–17	Office of the Governor	Rider 30, included in the amounts appropriated in Strategy B.1.1, Criminal Justice, to implement legislation establishing the Child Sex Trafficking Team and expanding the allowable use of General Revenue–Dedicated Account No. 5010, Sexual Assault Program (Account No. 5010)		\$2.0
2016–17	Office of the Governor	Article IX, Section 18.24, included in the amounts appropriated in Strategy B.1.1, Criminal Justice, to provide grants to support victim services contingent on enactment of legislation establishing a program for victims of child sex trafficking within the Office of the Governor, Criminal Justice Division	\$2.5	
2016–17	Office of the Governor	Article IX, Section 18.33, included in the amounts appropriated in Strategy B.1.1, Criminal Justice, to implement legislation establishing the Child Sex Trafficking Team and increase the number of full-time-equivalent positions by 11.0 positions each year of the biennium	\$1.1	
2016–17	DPS	Rider 56, included in the amounts appropriated in Strategy A.1.1, Organized Crime, to provide funding for human trafficking enforcement contingent on enactment of legislation expanding the allowable use of Account No. 5010		\$9.9
2018–19	Office of the Governor	Rider 25, included in the amounts appropriated in Strategy B.1.1, Criminal Justice, for the purpose of operating the Child Sex Trafficking Team	\$1.1	\$2.0
2018–19	Office of the Governor	Rider 25, included in the amounts appropriated in Strategy B.1.1, Criminal Justice, to provide grants to support victim services for child sex trafficking victims	\$2.5	
2018–19	DPS	Rider 46, included in the amounts appropriated in Strategy A.1.1, Organized Crime, for human trafficking enforcement		\$9.9

SOURCE: Legislative Budget Board.

TEXAS HUMAN TRAFFICKING PREVENTION TASK FORCE REPORTING

The Texas Human Trafficking Prevention Task Force’s annual report is the result of two reporting requirements. The Texas Government Code, Section 402.035(g), requires a biennial report regarding the task force’s activities, findings, and recommendations in the following section:

Not later than December 1 of each even-num-

bered year, the task force shall submit a report regarding the task force’s activities, findings, and recommendations, including any proposed legislation, to the governor, the lieutenant governor, and the legislature.

The Eighty-fifth Legislature, GAA, 2018–19 Biennium, Article I, OAG, Rider 29, requires an annual report regarding

**FIGURE 6
HUMAN TRAFFICKING-RELATED APPROPRIATIONS IN THE GENERAL APPROPRIATIONS ACT BY AGENCY
2012–13 TO 2018–19 BIENNIA**

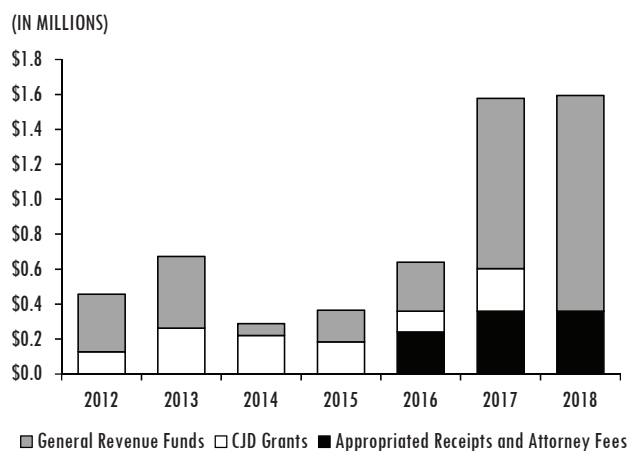
(IN MILLIONS) BIENNIUM	OFFICE OF THE ATTORNEY GENERAL	OFFICE OF COURT ADMINISTRATION	OFFICE OF THE GOVERNOR	DEPARTMENT OF PUBLIC SAFETY	TOTAL
2012–13	\$1.0	\$0.0	\$0.0	\$0.0	\$1.0
2014–15	\$0.0	\$0.04	\$0.0	\$0.0	\$0.04
2016–17	\$0.0	\$0.0	\$5.7	\$9.9	\$15.6
2018–19	\$0.0	\$0.0	\$5.7	\$9.9	\$15.6
Total	\$1.0	\$0.04	\$11.3	\$19.8	\$32.1

NOTES:

- (1) Amounts may not sum due to rounding.
- (2) The Office of the Governor was appropriated an additional 11.0 full-time-equivalent positions for each of fiscal years 2016 and 2017 to implement legislation establishing the Child Sex Trafficking Team.

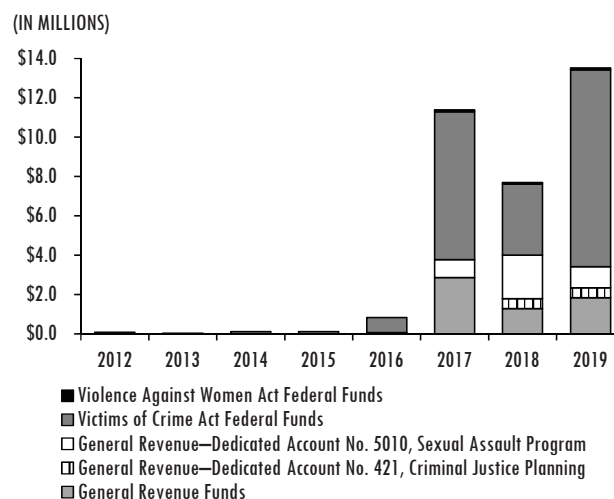
SOURCE: Legislative Budget Board.

**FIGURE 7
HUMAN TRAFFICKING-SPECIFIC EXPENDITURES AT THE
OFFICE OF THE ATTORNEY GENERAL
FISCAL YEARS 2012 TO 2018**



NOTE: CJD=Office of the Governor, Criminal Justice Division.
SOURCE: Office of the Attorney General.

**FIGURE 8
HUMAN TRAFFICKING-SPECIFIC APPROPRIATIONS TO
THE OFFICE OF THE GOVERNOR
FISCAL YEARS 2012 TO 2019**



SOURCE: Office of the Governor.

the task force’s activities that also includes recommendations in the following section:

Out of funds appropriated above, the Office of the Attorney General shall report annually the activities of the Human Trafficking Prevention Task Force, as established by Government Code, Section 402.035. The report shall include information on collaborations with federal, state, and local partners, statistical data on the nature and extent of human trafficking in the state, and recommendations to enhance efforts to prevent

human trafficking. The Office of the Attorney General shall provide the report to the Governor, Lieutenant Governor, and Legislature not later than December 1 each fiscal year.

The overlapping reporting requirements are an administrative burden on OAG staff tasked with compiling information from the task force members. OAG staff reported that the requirement for legislative recommendations is unnecessary during odd-numbered years because legislation from the previous session has not been implemented fully or evaluated. Option 2 would amend the 2020–21 General Appropriations

Bill, Article I, OAG, Rider 29, to remove the requirement that the Texas Human Trafficking Prevention Task Force's report includes recommendations to enhance efforts to prevent human trafficking, which results in an annual report of ongoing task force activities. The statutory reporting requirement would remain unchanged, including the requirement for any proposed legislative changes.

CHALLENGES FACING THE STATE RESPONSE TO HUMAN TRAFFICKING

State efforts to address human trafficking are faced with multiple challenges beyond those inherent to the crime. Data collection and reporting of human trafficking are limited by the hidden nature of human trafficking and the fact that human trafficking crimes often co-occur with, or are misidentified as, other crimes. Data collection is challenged further by the inaccessibility of some of collected data and a lack of mechanisms to share data among stakeholders. The task force to promote uniformity in the collection and reporting of trafficking information, presided over by OCA, found that, although multiple federal and state agencies and national NGOs collect data related to human trafficking, none collect data that reveal the full scope of the crime in Texas, and that no statewide process exists to identify and track cases from the time of initial identification or reporting through the conclusion of prosecution. The task force sought to address the data collection challenge by issuing multiple recommendations. One recommendation was for development of a pilot data project to track trafficking-related cases from investigation to disposition, with the goal of evaluating the feasibility and effectiveness of such tracking. That recommendation was not adopted.

Prosecuting human trafficking can be difficult. Law enforcement agencies do not prioritize human trafficking uniformly, which can decrease the number of cases referred. Additionally, some local prosecutors lack the expertise and resources necessary to prosecute effectively a trafficking case that is referred. Some prosecutors are more likely to prosecute a trafficking case as other charges that may be easier to prove in court and that carry a similar sentence. This prosecution for other charges contributes to the difficulty of tracking and reporting trafficking. OAG's HTTOC has trafficking-specific expertise and resources and is able to accept problematic cases with a high-risk threshold, but can do so only within the following circumstances:

- the district attorney with jurisdiction over the case recuses himself or herself, after which OAG, at its

discretion, can serve as an independent attorney pro tem; or

- the district attorney with jurisdiction over the case invites OAG to serve as a special assistant or to consult.

State law grants OAG concurrent jurisdiction with local prosecutors for certain offenses, such as an abuse of public office, civil racketeering related to the trafficking of persons, criminal offenses prescribed by state election law, and any offense pursuant to the Texas Penal Code involving state property. The extent of that jurisdiction varies, but often it requires the consent of the appropriate local attorney. To encourage the involvement of HTTOC in human trafficking cases and facilitate cooperative working arrangements between OAG and local prosecutors, Option 3 would amend statute to grant OAG concurrent jurisdiction in human trafficking cases with the consent of the appropriate county or district attorney.

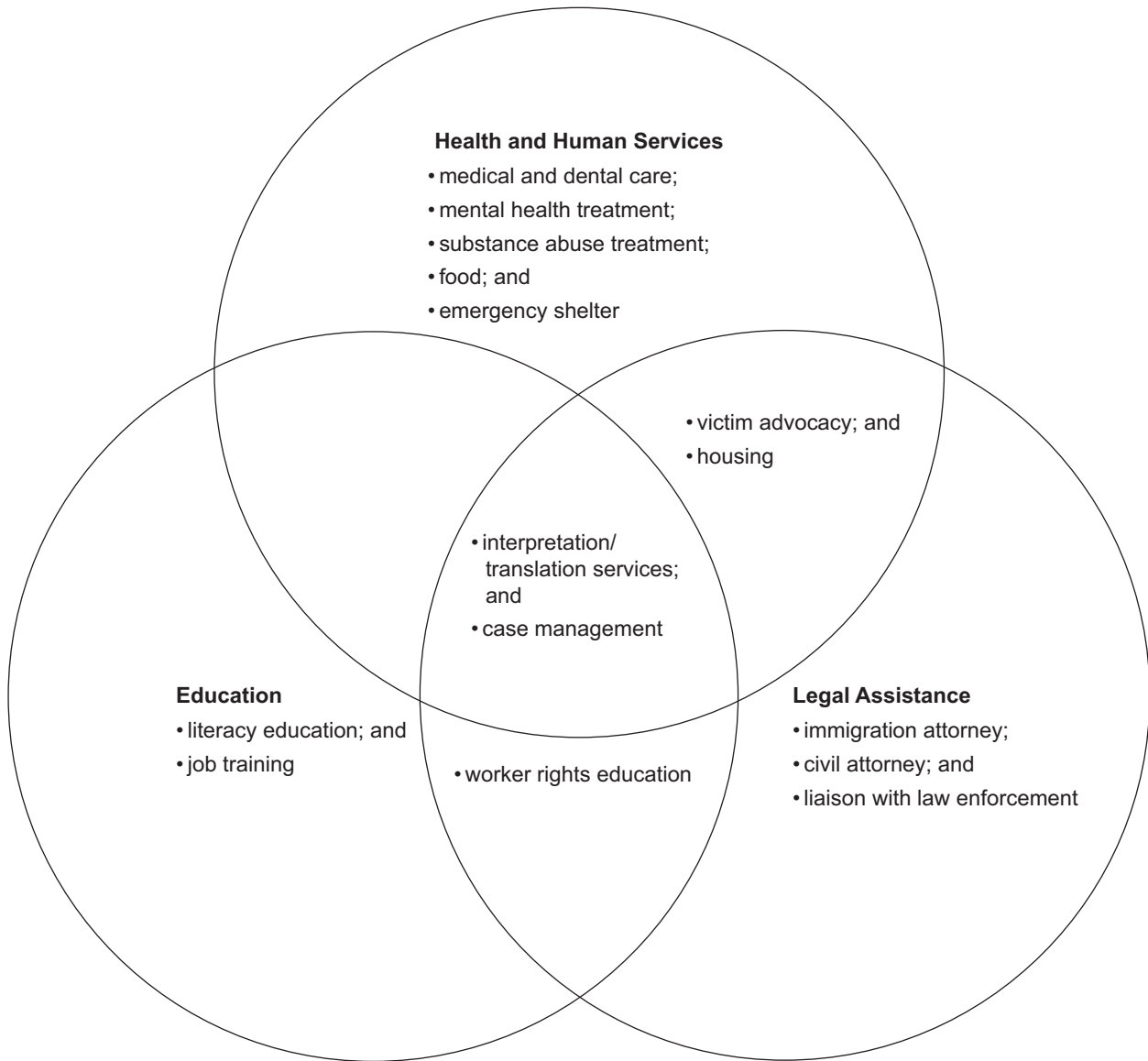
The provision of services to victims of human trafficking is another ongoing challenge. Although the Office of the Governor is advancing victim services for child sex trafficking victims, placement options overall are lacking, according to DFPS. Additionally, according to HTTOC, no structured resources specifically for child labor trafficking victims or adult victims of labor or sex trafficking are available. Trafficking victims require intensive services in multiple focus areas, and services can be disrupted if victims return to their traffickers, which is common. The number of focus areas and service disruptions can increase costs for service providers. **Figure 9** shows services commonly needed by human trafficking victims.

Option 4 would amend statute to direct the Texas Human Trafficking Prevention Task Force to consider recommendations that specifically address challenges relating to human trafficking data collection and the provision of services to trafficking victims, particularly adult victims and labor trafficking victims.

FISCAL IMPACT OF THE OPTIONS

Option 1 would amend the Texas Government Code to authorize OAG to set the membership of the Texas Human Trafficking Prevention Task Force and to include within that membership the current state agency members and any others at the Legislature's discretion. Option 2 would amend the 2020–21 General Appropriations Bill, Article I, OAG, Rider 29, to remove the requirement that the task force's

FIGURE 9
SERVICES COMMONLY NEEDED BY HUMAN TRAFFICKING VICTIMS
OCTOBER 2018



SOURCE: Legislative Budget Board staff analysis of information from various victim services stakeholders, including the federal Office of Justice, Office for Victims of Crime.

annual report includes recommendations to enhance efforts to prevent human trafficking, maintaining the provision of recommendations only in the biennial report required by statute. Option 4 would direct the Texas Human Trafficking Prevention Task Force to target data collection and victim services in its recommendations. No significant fiscal impact is anticipated as a result of any of these options.

Option 3 would amend statute to grant OAG concurrent jurisdiction in human trafficking cases with the consent of the appropriate county or district attorney. This option has the potential to increase human trafficking cases prosecuted by OAG, but it is assumed that caseloads could be adjusted within existing resources without resulting in a significant fiscal impact.

The introduced 2020–21 General Appropriations Bill implements Option 2.

IMPROVE STATE DEBT COLLECTION PRACTICES

The state of Texas accumulates debt owed to nearly all its agencies and institutions of higher education. When individuals and businesses do not repay a debt by its due date, the debt becomes delinquent. Types of delinquent debt owed to the state include unpaid fees, penalties, taxes, tuition, and medical bills; delinquent loans; overpayments for government benefits, such as Medicaid and the unemployment insurance program; and vendor overpayments. To ensure the proper funding and administration of state government, agencies and institutions attempt to collect delinquent debt.

Some agencies and institutions do not track certain measures of delinquent debt collection consistently, such as outstanding and collected delinquent debt. Without this information, the state cannot monitor the effectiveness of debt collection practices. Requiring agencies and institutions to report delinquent debt metrics to a central authority could improve agency accountability and enhance the transparency of collection efforts.

FACTS AND FINDINGS

- ◆ The Office of the Attorney General acts as the central authority on debt collection for the state. Some agencies and institutions of higher education refer delinquent debt that meets certain conditions to the Office of the Attorney General, and others pursue their own collection strategies as authorized in accordance with agreements with the Office of the Attorney General.
- ◆ Agencies and institutions of higher education must notify the Comptroller of Public Accounts when an individual or entity owes a debt to the state to place the debtor on warrant hold. This process prevents the debtor from receiving payments from the state, with certain exceptions.
- ◆ In fiscal year 2011, the Legislature repealed a requirement that each state agency and institution of higher education must submit an annual debt report summarizing the debt owed to the relevant agency or institution to the Office of the Attorney General, in part because at that time a rider in the General Appropriations Act required the Legislative Budget

Board to conduct an annual survey of agency fees, fines, and penalties. In 2014, however, the Legislature removed the rider requiring the survey, and no similar reporting requirement has replaced it.

CONCERNS

- ◆ Texas statute does not authorize participation in the federal Treasury Offset Program's State Reciprocal Program, which assists states in collecting debt.
- ◆ Agencies and institutions of higher education are not required to track the delinquent debt that they accrue and collect, and no central recordkeeping system or report records delinquent debt owed to agencies. A Legislative Budget Board staff review of 65 agencies and institutions of higher education found that some entities do not have adequate internal records of measures of delinquent debt. Without this information, agencies and institutions cannot be held accountable for their collection efforts.
- ◆ The Office of the Attorney General reports the amount of debt it collects for each state agency to the Legislative Budget Board and the Office of the Governor, but the agency does not report total outstanding delinquent debt or the amount of debt referred by agencies. The state could use this additional information to better understand state agency debt collection and referral practices.

OPTIONS

- ◆ **Option 1:** Amend statute to authorize, but not require, the Comptroller of Public Accounts to participate in the federal Treasury Offset Program's State Reciprocal Program. If the Comptroller of Public Accounts chooses to participate, this program would enable the federal government to offset federal vendor payments to recipients that have debts to Texas state agencies, increasing debt collected for the state.
- ◆ **Option 2:** Amend statute to require state agencies and institutions of higher education to submit to the Office of the Attorney General standardized reports regarding outstanding, collected, and uncollectible

delinquent debt, and other information as determined by the Office of the Attorney General. The Office of the Attorney General would use this information to monitor performance and identify potential improvements in collection efforts when necessary.

- ◆ **Option 3:** Expand the Office of the Attorney General’s debt-related reporting requirements in the 2020–21 General Appropriations Bill to include total outstanding delinquent debt, the amount of debt referred by each agency and institution, and debt deemed uncollectible. If Option 2 were implemented, the report also would include agency-level and institution-level metrics.

DISCUSSION

For this report, debt refers to any payment owed to the state. Typically, if a debt is not paid by its due date, the debt becomes delinquent. This report focuses on delinquent debt that individuals and companies owe to the state of Texas. **Figure 1** shows examples of debt owed to Texas state agencies and institutions of higher education.

Legislative Budget Board (LBB) staff collected information from select state agencies and institutions of higher education regarding outstanding debt and debt collection practices. **Figure 2** shows outstanding delinquent debt at the end of fiscal year 2017 for agencies that kept records of total outstanding delinquent debt owed and that had outstanding debt of at least \$0.5 million. For this report, outstanding delinquent debt is the total amount of delinquent debt owed to an agency, including debt from previous years and excluding any debt deemed uncollectible by the agency.

DEBT COLLECTION PRACTICES

To determine typical debt collection practices, LBB staff collected information from 65 state agencies and institutions of higher education considered likely to accrue delinquent debt. Debt collection strategies vary, but such efforts usually begin when state entities owed a delinquent debt notify the individual or entity that owes the debt through written correspondence or telephone calls. Some state entities offer payment plan options for debtors unable to immediately repay the full amount owed.

**FIGURE 1
EXAMPLES OF DEBT OWED TO STATE AGENCIES AND INSTITUTIONS OF HIGHER EDUCATION, FISCAL YEAR 2018**

DEBT	ENTITIES TO WHICH DEBT MAY BE OWED
Unpaid fees, fines, and penalties	Department of Public Safety
	Texas Alcoholic Beverage Commission
	Texas Commission on Environmental Quality
	Texas Department of Agriculture
	Texas Department of Licensing and Regulation
	Texas Department of Motor Vehicles
	Railroad Commission of Texas
Past due or underpaid taxes	Texas Workforce Commission
Past due or underpaid tuition	Comptroller of Public Accounts
Unpaid medical bills	All public institutions of higher education
	Medical and dental units, such as the University of Texas M.D. Anderson Cancer Center
Student loans with past-due balances	Texas Higher Education Coordinating Board
Overpayments of benefits, such as benefits from Medicaid and the unemployment benefits programs	Employee Retirement System of Texas
	Health and Human Services Commission
	Texas Workforce Commission
Overpayments to vendors for delivered goods or services	All agencies and public institutions of higher education
Overpayments of compensation to state employees	All agencies and public institutions of higher education

SOURCE: Legislative Budget Board survey.

FIGURE 2
REPORTED OUTSTANDING DELINQUENT DEBT FOR SELECT STATE AGENCIES, AS OF FISCAL YEAR 2017

AGENCY (1)	DEBT ACCRUED	OUTSTANDING DELINQUENT DEBT (2) (IN MILLIONS)
Department of Public Safety	Unpaid fees and penalties	\$1,757.3 (3)
Comptroller of Public Accounts	Unpaid taxes (4)	\$481.1 (5)
Health and Human Services Commission (6)	Claims overpayments, cost audits and settlements, criminal court-ordered restitution, incentive overpayments, provider and client benefit overpayments, salary overpayments, travel advance payments, vendor overpayments	\$300.6
Texas Higher Education Coordinating Board	Delinquent student loans	\$109.5
Texas Commission on Environmental Quality	Unpaid fees and penalties	\$39.9
Texas Department of Transportation	Benefit overpayments, damage claims, overpayments for goods and services, vendor overpayments	\$35.7
Department of State Health Services	Benefit overpayments, subrecipient recoupments, unpaid fees	\$6.0

NOTES:

- (1) Data shown includes agencies surveyed by Legislative Budget Board staff that kept records of outstanding delinquent debt owed to the entire agency and that had outstanding delinquent debt of at least \$0.5 million.
- (2) Outstanding delinquent debt amounts exclude debt deemed uncollectible by the agency.
- (3) For debt reported by the Department of Public Safety, 99.0% of debt is owed to the Driver Responsibility Program.
- (4) Although the Comptroller of Public Accounts accrues some nontax-related debt, this estimate includes delinquent tax debt only.
- (5) The Texas Tax Amnesty Program operated from May 1, 2018, to June 29, 2018, and enabled certain delinquent taxpayers to make accounts compliant with state tax law and avoid penalties and interest on tax due. This program did not affect outstanding delinquent taxes for fiscal year 2017, as shown.
- (6) The Health and Human Services Commission's outstanding delinquent debt includes debt owed to the federal government through Medicaid and other federal programs.

SOURCES: Legislative Budget Board; Department of Public Safety; Comptroller of Public Accounts; Health and Human Services Commission; Texas Higher Education Coordinating Board; Texas Commission on Environmental Quality; Texas Department of Transportation; Department of State Health Services.

If these initial steps are unsuccessful, some state entities seek to encourage debt payment by denying services, as shown in **Figure 3**.

If internal collection efforts are unsuccessful, some agencies refer certain delinquent debt accounts to the Office of the Attorney General (OAG). Agencies adopt thresholds subject to OAG's review to determine accounts to refer. Upon agency referral, OAG attempts to collect the delinquent accounts.

The Comptroller of Public Accounts (CPA), which collects taxes, fees, and assessments owed to the state, has more extensive collection measures than other state agencies. After generating billings for delinquent taxpayers, the agency contacts taxpayers to collect the amount due using its in-house call center. If the call center campaign is unsuccessful, CPA has multiple enforcement actions it can pursue, including suspending tax permits, freezing and levying bank accounts, conducting limited cash and inventory seizures, and filing applicable misdemeanor or felony charges depending on the type of tax and amount due. The Legislature also may authorize CPA to establish temporary tax amnesty

programs, as it has done recently during fiscal years 2012 and 2018.

CPA refers debt to OAG or private debt collection firms if its enforcement actions are unsuccessful, but CPA collects the bulk of its delinquent taxpayer debt through internal efforts.

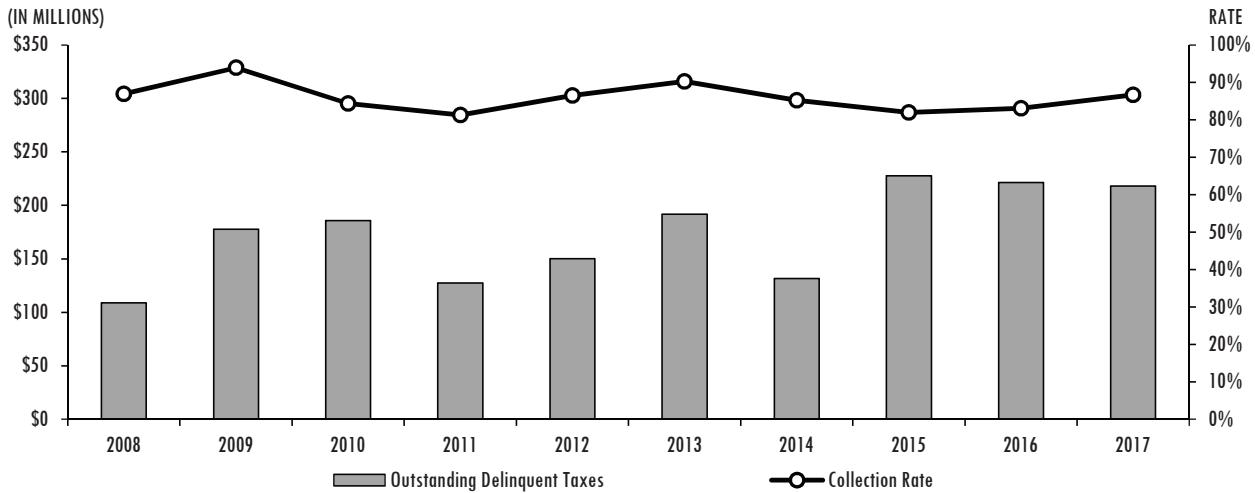
Figure 4 shows CPA's outstanding delinquent tax balance and internally calculated collection rate from fiscal years 2008 to 2017, excluding collections by private contractors. This collection rate includes only delinquent taxes that were not paid in full by their due dates. The agency's balance of outstanding delinquent taxes has increased overall since fiscal year 2007, but its collection rate has remained at greater than 80.0 percent. CPA collected \$930.3 million in delinquent taxes during fiscal year 2017 for a collection rate of 86.7 percent. This amount excludes delinquent taxes in legal status, such as taxes in active bankruptcy. According to CPA, outstanding delinquent taxes have been greater since fiscal year 2015 because of large audit liability assessments that are continuing through the collection process. The agency

**FIGURE 3
EXAMPLES OF AGENCIES THAT DENY SERVICES TO ENCOURAGE DEBT PAYMENT, FISCAL YEAR 2018**

AGENCY	METHOD OF SERVICE DENIAL
Department of Public Safety	Impounds and auctions vehicles operated by a motor carrier Suspends driver licenses for those that owe Driver Responsibility Program surcharge penalties
Department of State Health Services	Withholds test results from delinquent water systems Refuses to fulfill newborn screening kit orders for delinquent physicians, clinics, and hospitals
Institutions of higher education	Place holds on registration for classes, official transcripts, and diplomas
Texas Alcoholic Beverage Commission	Suspends permits or licenses
Texas Commission on Environmental Quality	Refuses authorization of registrations, licenses, or permit modifications
Texas Department of Agriculture	Denies license renewals
Texas Department of Motor Vehicles	Revokes licenses
Texas Parks and Wildlife Department	Suspends or revokes licenses or permits
Texas Workforce Commission	Offsets overpayments from subsequent claims or additional benefits

SOURCES: Legislative Budget Board; Department of Public Safety; Department of State Health Services; Texas Alcoholic Beverage Commission; Texas Commission on Environmental Quality; Texas Department of Agriculture; Texas Department of Motor Vehicles; Texas Parks and Wildlife Department; Texas Workforce Commission; Texas public institutions of higher education.

**FIGURE 4
OUTSTANDING DELINQUENT TAXES AND COLLECTION RATE FOR THE COMPTROLLER OF PUBLIC ACCOUNTS
FISCAL YEARS 2008 TO 2017**



NOTE: Outstanding delinquent taxes exclude those in legal status. Collection rate excludes collections by private contractors.
SOURCE: Comptroller of Public Accounts.

estimates that most of these outstanding debts will be collected in subsequent years.

The Office of the Attorney General, Child Support Division, which collects child support payments, engages in collection activities similar to those of CPA and other agencies.

However, unpaid child support payments are not considered a debt owed to the state. The Supreme Court of Texas has held that child support is not a debt but a legal duty that may be enforced through traditional debt remedies or other remedies established for child support enforcement. Child Support Division collection activities include: filing liens

against the noncustodial parent's property or other assets; suspending driver, professional, and hunting and fishing licenses; levying bank accounts and wages; reporting the amount of a child support obligation to consumer credit reporting agencies; filing a lawsuit against the noncustodial parent; and intercepting insurance claims. Judges also may sentence nonpaying parents to jail for past due child support. OAG collected \$4.2 billion, 64.6 percent of support due, for fiscal year 2017. Of that amount, 79.3 percent was collected through automatic income withholding orders issued directly to employers, which is authorized by federal law.

WARRANT HOLD PROCESS

The warrant hold process is another tool to recoup delinquent debt available to state agencies and some institutions of higher education. Junior and community colleges are excluded in statute from using the warrant hold process and do not process payments through CPA. The Texas Government Code, Section 403.055(f) and (g), requires eligible entities to report to CPA each individual that is indebted to the state or that has a tax delinquency. The state agency or institutions must provide the individual with an opportunity to exercise any constitutional or statutory protection before the agency or state may begin a collection action or procedure. Upon receipt of an application to report indebtedness, CPA issues a warrant hold, which prohibits any agency from issuing a state payment to a person who owes debt to the state. CPA then has the authority to offset state payments, such as lottery winnings, against an individual's debt. As part of the offset process, each week CPA deposits offset warrants into Treasury funds for each hold-source agency and sends reports to the agencies notifying them of the transfer of funds. CPA cannot withhold certain types of payments through the warrant hold process, such as state officer or employee compensation.

All state agencies are required to monitor the warrant hold status of potential vendors during competitive solicitation offerings. Vendors flagged with a hold status are ineligible to receive bid or contract awards from state agencies, with certain exceptions described in the Texas Government Code, Section 2252.903(b), and the Texas Procurement and Contract Management Guide.

In July 2018, 108 of 229 state agencies and institutions of higher education had active holds in the warrant hold system. According to CPA, some agencies do not use the system because they have no debt to report, and others may not have adequate staff to research and report debt. Three institutions

of higher education indicated that using the warrant hold system would be an unreasonable burden due to the large number of small account balances and frequent transactions that they handle.

Agencies that use the warrant hold system may not use it for all their delinquent debt or may use it only after the debt reaches a certain age. The Health and Human Services Commission, for example, reported using the warrant hold system for certain types of debt, such as travel debt and payroll overpayments, and only after the debt is more than 30 days old. Other agencies and institutions enter debt into the system only when they consider it to be uncollectible. Consequently, information in the warrant hold system represents only a portion of the total delinquent debt owed to the state.

The warrant hold system also does not provide a historical record of debt owed to the state. The system includes all outstanding warrants as of a certain date, but it does not record how debt may have changed historically. Source agencies are responsible for maintaining records of debts owed.

Approximately \$20.7 billion of outstanding debt was in the warrant hold system in July 2018, owed by 1,610,817 individuals and businesses. The majority of these holds were for individuals, and 37,928 (2.4 percent) were for businesses. Many of these individuals and businesses have been on hold for several years, including 1,094,123 (67.9 percent) that have been on hold for at least the previous three years.

OAG accounted for the majority of debt in the warrant hold system, mostly from delinquent child support payments, as shown in **Figure 5**. Less than 2.8 percent (\$574.2 million) of OAG's debt in the system relates to judgment liabilities and delinquent attorney fees, court costs, and civil penalties. The Trellis Company, a nonprofit corporation that manages federal student loans, accounted for a significant portion of the remaining debt. However, that debt, like child support, is not owed to the state government. The Texas Education Code, Chapter 57, requires the Trellis Company to report individuals with defaulted student loans to CPA.

OFFICE OF THE ATTORNEY GENERAL COLLECTION EFFORTS

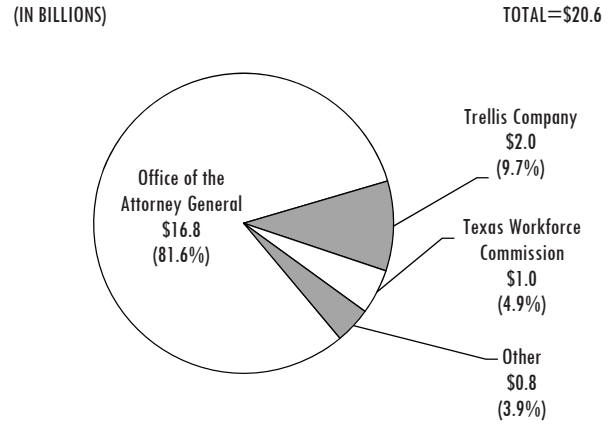
OAG acts as the central authority on debt collection, and state agencies must refer certain debt for collection to OAG. Before referring debt to OAG, agencies follow internal procedures for collecting debt that conform to OAG

guidelines and use the collection strategies discussed previously. If delinquent debt remains uncollected after those actions, and the delinquent accounts meet thresholds adopted by agencies and subject to review by OAG, agencies refer the debt to OAG. Agency and OAG considerations in determining thresholds include the expense of attempting to collect the debt, the number of accounts referred, the dollar amount of each account, and the nature of the delinquent debt. CPA, for example, refers delinquent tax debt after it deems that all appropriate collection actions have been taken and when, for most accounts, the balance reaches \$2,500, independent of penalty and interest. For smaller agencies, OAG might set a lower dollar threshold, such as \$500, considering the small impact that this limited number of referrals has on OAG’s inventory of referred debt. Most institutions of higher education do not refer delinquent debt to OAG, because they rely on internal collection systems and OAG-approved contracts with private debt collection firms.

State entities referred \$254.1 million in delinquent debt to OAG during fiscal year 2017, excluding accounts for debtors who have filed for bankruptcy. (Agencies refer bankruptcy cases separately from nonbankruptcy cases.) As shown in **Figure 6**, CPA was responsible for the majority, 64.1 percent, of debt referrals. The Texas Higher Education Coordinating Board (THECB) and the Railroad Commission of Texas (RRC) referred nearly one-quarter of the debt. THECB refers all student loans after they have defaulted. RRC has no internal collection process and immediately refers all of its debt to OAG. This debt consists of unpaid penalties for oil and gas industry rules violations and reimbursement costs for well plugging or site remediation.

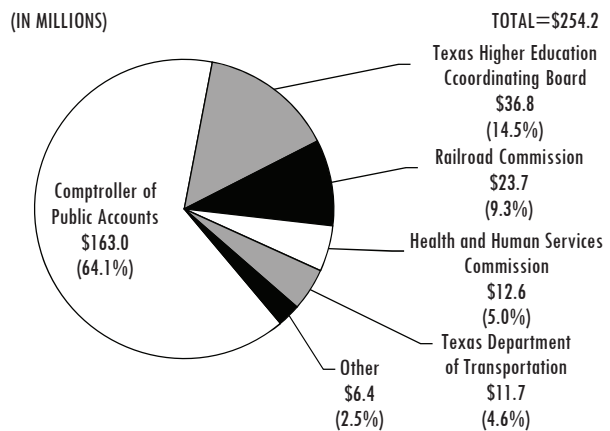
To collect debt for state agencies and institutions, OAG issues a demand letter and establishes contact with the parties responsible for the debt. The agency then attempts to reach an agreement on the amount owed and secures relevant records that may assist in collecting that amount. If OAG and the responsible parties agree on the amount of debt, the agency negotiates a payment plan with the debtor. If no agreement is reached, the agency investigates assets, bank accounts, and nonexempt property and files suit. If the state obtains a judgment, OAG gives notice of the judgment, via an abstract of the judgment, in counties where the defendants own property; identifies bank accounts that can be garnished; forecloses on any nonexempt property; and seeks appointment of a state court receiver with turnover authority to reach assets such as out-of-state property or stock ownership interests.

**FIGURE 5
OUTSTANDING DEBT IN THE COMPTROLLER OF PUBLIC
ACCOUNTS WARRANT HOLD SYSTEM
JULY 2018**



NOTE: Totals may not sum due to rounding.
SOURCE: Comptroller of Public Accounts.

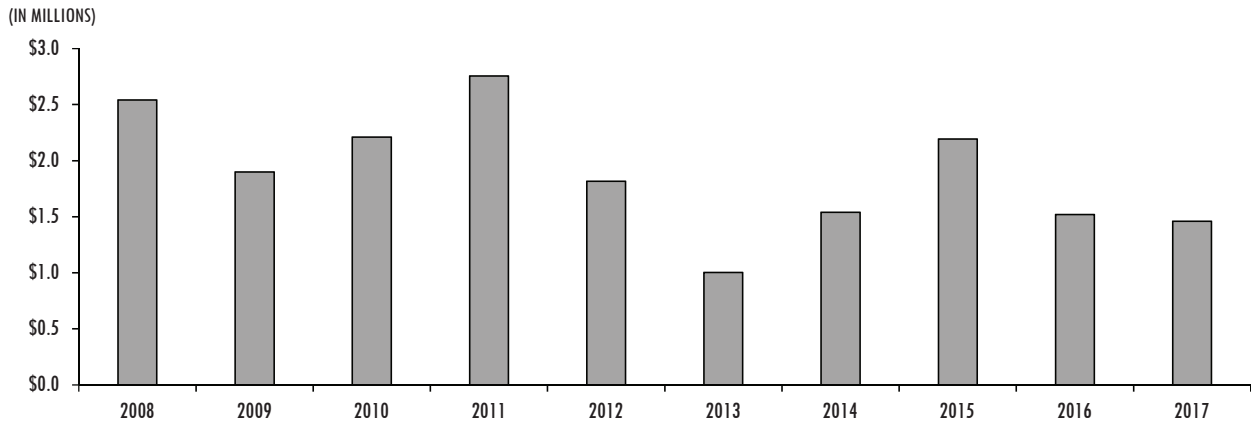
**FIGURE 6
DELINQUENT DEBT REFERRED TO THE OFFICE OF THE
ATTORNEY GENERAL, FISCAL YEAR 2017**



NOTES:
(1) Excludes bankruptcy referrals.
(2) Totals may not sum due to rounding.
SOURCE: Office of the Attorney General.

The Texas Government Code, Chapter 2107, authorizes OAG to recover reasonable attorney fees, investigative costs, and court costs in any proceeding in which the state seeks to collect or recover a delinquent obligation or damages. As shown in **Figure 7**, OAG recovered approximately \$1.5 million in court costs and attorney fees during fiscal year 2017. OAG typically recovers from \$1.0 million to \$2.8 million in these fees and costs per year.

FIGURE 7
ATTORNEY FEES, INVESTIGATIVE COSTS, AND COURT COSTS RECOVERED BY THE OFFICE OF THE ATTORNEY GENERAL
FISCAL YEARS 2008 TO 2017



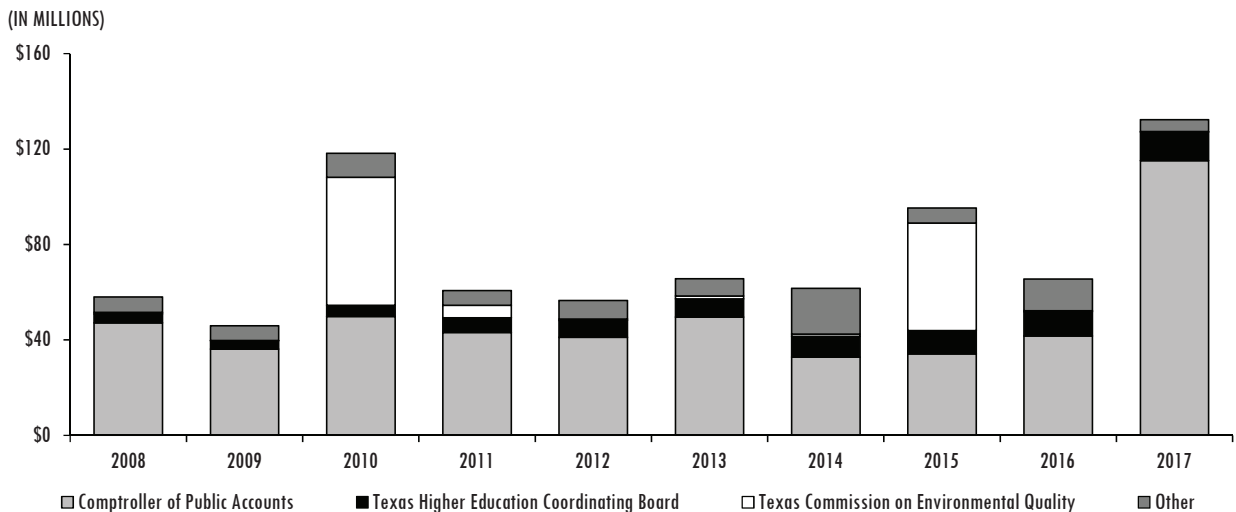
SOURCE: Office of Attorney General.

The Texas Government Code, Chapter 2107, also authorizes OAG to retain a fee for the agency’s use and benefit from the amount collected, provided by legislative appropriation. Since fiscal year 1992, OAG has been appropriated \$8.3 million per fiscal year in debt collection receipts. Any revenue from debt collection receipts that exceeds this amount is deposited to the General Revenue Fund or the relevant specified fund for the applicable agency fee or fine.

to 2017 to a 10-year high of \$132.3 million resulting from an increase in delinquent tax collections by CPA. This increase was driven primarily by significant collections from two major bankruptcy cases that totaled more than \$72.2 million. CPA referrals usually account for the majority of OAG’s collections, with the exceptions of fiscal years 2010 and 2015, when Texas Commission on Environmental Quality referrals constituted the majority. Increased collections during those years also resulted from two major bankruptcy cases of \$53.7 million in 2010 and \$44.4 million in 2015.

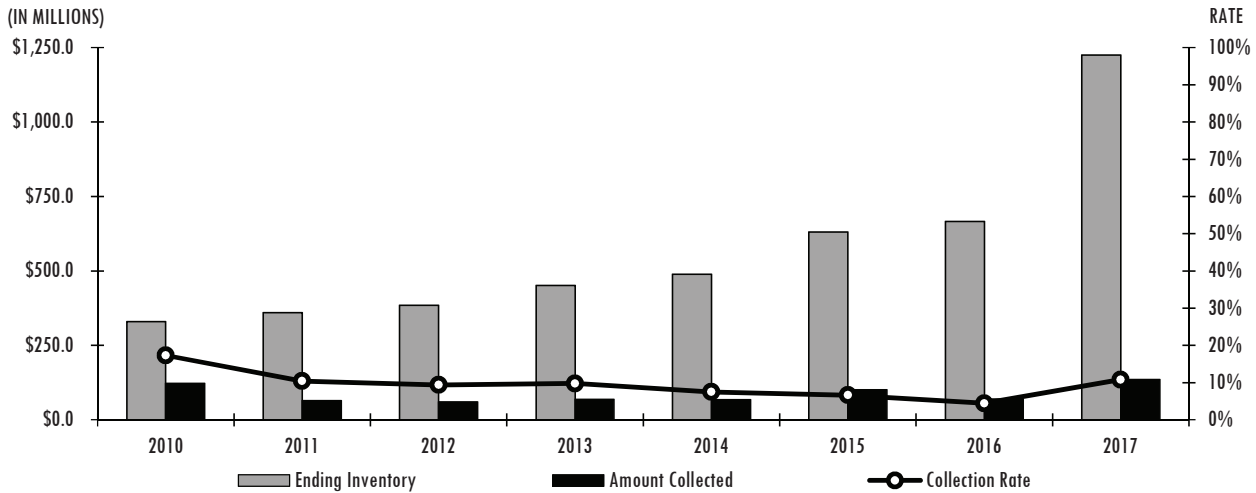
Figure 8 shows the amount of delinquent debt that OAG collected during the past 10 fiscal years, by referring agency. Collections increased by 101.8 percent from fiscal years 2016

FIGURE 8
DELINQUENT DEBT COLLECTED BY THE OFFICE OF THE ATTORNEY GENERAL, FISCAL YEARS 2008 TO 2017



SOURCE: Office of Attorney General.

FIGURE 9
ENDING INVENTORY, DEBT COLLECTED, AND COLLECTION RATE FOR THE OFFICE OF ATTORNEY GENERAL
FISCAL YEARS 2010 TO 2017



NOTE: Collection rate calculated by dividing the amount of delinquent debt collected in the relevant fiscal year by the sum of the ending inventory of debt owed in the previous fiscal year and the additional amount of debt referred in the current fiscal year. The Office of Attorney General (OAG) has noted that the inventory of debt collected at the end of each fiscal year is affected significantly by bankruptcy cases, some of the debt from which may not be practically or legally collectible. All calculations exclude debt determined by OAG to be uncollectible. SOURCE: Office of Attorney General.

Some states and private companies calculate a collection rate to measure debt collection performance: the amount of debt collected divided by the total amount of debt owed during a certain period. OAG does not calculate a collection rate for multiple reasons. One reason is that the size and amount of the agency’s portfolio changes daily. Another reason is that a significant portion of debts referred from CPA are estimated and subject to later decreases based on taxpayer records. To examine changes in OAG collections, LBB staff calculated the following collection rate for the agency:

$$\frac{\text{Amount of Delinquent Debt Collected During Relevant Fiscal Year}}{\text{Ending Inventory of Debt Owed During Previous Fiscal Year} + \text{Additional Amount of Debt Referred During Current Fiscal Year}}$$

Figure 9 shows this calculated collection rate for OAG from fiscal years 2010 to 2017, OAG’s ending debt inventory, and the amount of debt collected for each year. The ending debt inventory represents all outstanding delinquent debt that agencies have referred to OAG, including uncollected debt from previous years. This inventory has increased during this period, particularly during fiscal year 2017. The amount of

delinquent debt collected has been more stable. The collection rate reached 10.8 percent during fiscal year 2017, reversing what had gradually decreased during the previous seven years.

Although this collection rate is less than CPA’s rate, OAG manages a challenging portfolio of debt. CPA referrals constitute more than one-half of OAG’s annual portfolio, and those referrals are made after CPA has attempted to collect the debt through its call center and enforcement actions. Other agencies also refer debt to OAG after internal collection efforts have failed. As a result, OAG is tasked with collecting debt that has eluded previous collection efforts, including the CPA’s extensive efforts, in some cases.

OAG and some other state agencies deem debt uncollectible in certain circumstances. OAG, for example, determines that it is no longer cost-effective to pursue collection of a debt owed by an entity that has forfeited its corporate privileges, has no assets, or is located out of state and has no Texas-based assets. OAG also may make this determination if an individual debtor subsists primarily on Social Security or retirement income with no other visible means of support, meaning the individual is likely incapable of repaying the debt. OAG considered \$127.3 million from 2,831 cases as uncollectible during fiscal year 2017. From fiscal years 2012

to 2017, amounts of debt deemed uncollectible ranged from \$91.9 million to \$147.8 million.

PRIVATE DEBT COLLECTION SERVICES

The Texas Government Code, Chapter 2107, authorizes OAG to authorize state entities to contract for debt collection, subject to OAG approval. These contractors may charge collection fees capped at 30.0 percent of the full amount of the debt, but contractors may not file lawsuits on behalf of the contracting entity. Several agencies use private debt collection services for accounts that do not meet OAG's referral thresholds. According to OAG, it is more cost-effective for private collection firms to handle smaller dollar accounts that would not justify litigation.

In July 2018, state entities had 133 contracts for debt collection services with 40 vendors. All but six of these contracts were with 40 institutions of higher education; CPA, the Department of Public Safety (DPS), Texas Commission on Environmental Quality (TCEQ), Texas Parks and Wildlife Department (TPWD), and the Texas Department of Licensing and Regulation (TDLR) account for the remaining five. DPS and TDLR contract with the same vendor, Gila LLC (also known as the Municipal Services Bureau), and CPA and TCEQ each contract with different vendors.

CPA contracts with two debt collection vendors for what CPA classifies as Tier I and Tier II cases. Tier I cases include delinquent entities that were sent a billing 120 days before the contractor referral with debt and penalties amounting to at least \$25 and total tax due amounting to less than \$2,500. Tier II includes uncollected cases returned from OAG for amounts that exceed \$25. CPA's contractors, which, like OAG, manage a portfolio of debt that has not been resolved through previous collection efforts, had a collection rate of 2.3 percent during fiscal year 2017.

TCEQ and TDLR refer accounts with balances less than or equal to \$4,999 to their private collections contractors. TPWD refers accounts related to nonsufficient fund checks to a third-party collector after the deadline provided in its initial notice to the debtor expires. DPS refers all collections and deposits from its Driver Responsibility Program to the agency's private debt collection vendor.

Most institutions of higher education refer their delinquent debt (e.g., unpaid tuition and fees, parking fines, vendor overpayments) to one or more private debt collectors, typically after internal collection efforts spanning 90 days to

180 days. Some institutions contract with multiple private debt collection agencies and refer debt to different private agencies depending on the age of the account.

COLLABORATION WITH THE FEDERAL GOVERNMENT

At the federal level, the Treasury Offset Program (TOP) administered by the U.S. Department of the Treasury, Bureau of the Fiscal Service, collects delinquent debts owed to both federal agencies and states, including child support payments, Supplemental Nutrition Assistance Program (SNAP) overpayments, and unemployment insurance (UI) overpayments. During fiscal year 2017, Texas recovered \$307.7 million through the program: \$33.4 million in UI debt, \$255.5 million in child support obligations, and \$18.8 million in SNAP debt.

Texas does not participate in the TOP's State Reciprocal Program (SRP), which offsets federal vendor payments to payees that owe debt to state agencies. In return, states offset payments to payees with debt owed to federal agencies. Eleven states plus the District of Columbia—each of which levies its own income tax—participated during federal fiscal year 2017.

SRP excludes many types of Texas state debts, including Texas Workforce Commission unemployment benefits overpayments and UI tax liabilities, debts older than 10.0 years, debts less than \$25, and debts not certified by state agencies. CPA conducted preliminary analyses of the benefits of participating in SRP during calendar years 2011 and 2015. Using debt entered into the warrant hold system as an approximation of total state debt, CPA estimated that \$528,500, or 0.1 percent of its approximation of total state debt, could be collected through SRP participation in 2015. The 2011 analysis estimated that SRP participation could yield \$2.1 million in collections, 0.7 percent of its approximation of total state debt at that time.

Additionally, CPA estimated onetime SRP implementation costs of \$2.3 million, with ongoing annual costs of \$451,000. CPA has identified the following other concerns related to SRP participation:

- SRP includes a \$17 fee (as of 2015) per offset, thus decreasing the recovered offset amounts or increasing debtor fees;
- CPA found that TOP's reciprocal agreement is weighted in favor of the federal government;

- participating states have had negative results related to the lack of communication and written rules regarding the program;
- hold source agencies may fail to report state debts to the warrant hold system due to TOP certification requirements and internal costs (e.g., postage for notices to debtors);
- incompatibility between TOP and CPA systems' cycles may delay state payment generation, with potential increases in late payment interest and delays in critical, time-sensitive payments;
- hold source agencies could incur costs for changes in internal systems to comply with TOP requirements; and
- Texas must pass legislation to participate in SRP.

Notwithstanding these concerns, the long-term benefits of increased debt collection through SRP eventually may outweigh the initial implementation costs and administrative complexities of participation. In light of this possibility, Option 1 would amend statute to authorize, but not require, CPA to participate in the program. CPA could continue to monitor the program and conduct internal analyses to determine the cost effectiveness of SRP, but legislative authority no longer would present a barrier to participation.

DELINQUENT DEBT REPORTING

As of September 2018, the state has no central repository of or recordkeeping system for delinquent debt, and agencies are not required to track the delinquent debt they accrue or collect. Statute formerly required each state agency and institution of higher education to file an annual debt report with OAG, but the Legislature repealed this requirement in 2011. The Legislature repealed the requirement in part because at that time a rider in the General Appropriations Act required the LBB to conduct an annual survey of agency fees, fines, and penalties. The Legislature removed this rider in 2014, in part because the information in the survey was used infrequently. In addition, agency responses were not audited, and, therefore, the accuracy of the data was not verified.

In surveying select state entities, LBB staff determined that some entities do not maintain records regarding key measurements of delinquent debt collection. As shown in **Figure 10**, survey responses indicated that 20 state entities do not track the delinquent debt they collect each year, and

six do not track the outstanding delinquent debt owed. Without knowing the amounts of outstanding delinquent debt or delinquent debt collected each year, state entities cannot track the effectiveness of their collection efforts, and policy makers cannot measure the performance of those efforts.

Option 2 would amend the Texas Government Code, Chapter 2107, to require annual standardized reporting from state agencies and institutions of higher education to OAG regarding outstanding, collected, and uncollectible delinquent debt, and other information determined by OAG. OAG would collaborate with agencies and institutions to define these terms so that reported data are comparable. To avoid placing an excessive administrative burden on smaller agencies with lower levels of debt, the reporting requirement would exclude agencies and institutions with outstanding delinquent debt at less than a threshold to be determined by OAG. These reports would provide transparency in the state's system of collection practices.

Option 2 also would require OAG to monitor reported debt information to identify opportunities for improvement and to provide technical assistance to improve the effectiveness of collection practices. As the authority regarding debt collection for the state, OAG has extensive experience in collecting delinquent debt and could assist agencies and institutions in the following tasks: collecting outstanding delinquent debt; identifying new strategies for debt collection; and ensuring that agencies and institutions are using all collection tools at their disposal and referring uncollected debt to OAG when appropriate. As noted previously, OAG has the authority to contract with one or more collection firms on behalf of state agencies. OAG may do so if additional information from these reports indicates that such contracts would be cost effective and beneficial for state agencies.

EXPAND OAG REPORTING REQUIREMENTS

The Eighty-fifth Legislature, General Appropriations Act, 2018–19 Biennium, Article I, Office of the Attorney General, Rider 6, requires OAG to maintain a centralized recordkeeping system to account for various departmental and agency certification of debts owed to the state. The rider requires OAG to submit semiannual reports to the Office of the Governor and LBB regarding the type and amount of debt collected. The report does not include information regarding the total outstanding delinquent debt or the amount of delinquent debt referred by each agency.

FIGURE 10
SELECT STATE AGENCY AND TEXAS INSTITUTION OF HIGHER EDUCATION DELINQUENT DEBT TRACKING
FISCAL YEAR 2017

AGENCY OR INSTITUTION	TRACKS OUTSTANDING DELINQUENT DEBT	TRACKS DELINQUENT DEBT ACCRUED EACH FISCAL YEAR	TRACKS DELINQUENT DEBT COLLECTED (1)
Department of Public Safety (2)	✓	✓	X
Department of State Health Services	✓	X	X
Lamar University	✓	X	X
Midwestern University	✓	✓	X
Sam Houston State University	✓	✓	X
Tarleton State University	✓	✓	X
Texas Engineering Experiment Station	✓	✓	X
Texas A&M University – Central Texas	✓	✓	X
Texas A&M University – San Antonio	✓	✓	X
Texas Alcoholic Beverage Commission	X	✓	✓
Texas Department of Agriculture	✓	X	X
Texas Department of Insurance	X	X	✓
Texas Parks and Wildlife Department	X	X	X
Texas Workforce Commission (3)	X	X	X
University of Houston	✓	✓	X
University of Houston – Clear Lake	✓	✓	X
University of Houston – Downtown	✓	✓	X
University of Houston – Victoria	✓	✓	X
The University of Texas at Austin	✓	X	X
The University of Texas of the Permian Basin	X	✓	X
The University of Texas Southwestern Medical Center	✓	✓	X

NOTES:

- (1) Agency practices vary in defining and tracking collected delinquent debt.
- (2) Only one of the four divisions that reported delinquent debt at Department of Public Safety does not collect information on debt collected.
- (3) Texas Workforce Commission tracks collection of its receivables, but did not provide information on delinquent debt collected.
- (4) Check marks indicate that the agency or institution tracks debt; Xs indicate data is not tracked.

SOURCE: Legislative Budget Board.

Option 3 would amend the 2020–2021 General Appropriations Bill, Article I, OAG, Rider 6, to expand OAG’s existing debt-related reporting requirements to include OAG’s total outstanding delinquent debt, the amount of delinquent debt referred by each state agency and institution of higher education, and the amount of delinquent debt designated uncollectible. This information would facilitate a more complete understanding of the amount of outstanding debt owed to the state and better tracking of debt collection efforts. Option 3 also would amend Rider 6 to require OAG reports annually, rather than every six months, to better align with the timing of requirements in Option 2.

If Option 2 were implemented, Option 3 also would require OAG to report additional agency-level and institution-level metrics, including but not limited to the delinquent debt that each agency collects and the outstanding delinquent debt owed to each agency, excluding uncollectible debt.

FISCAL IMPACT OF THE OPTIONS

Option 1 would authorize CPA to participate in the federal State Reciprocal Program. This option would have no fiscal impact.

Option 2 would require state agencies’ and institutions’ standardized reporting to OAG regarding certain delinquent debt measures so that OAG can monitor performance and

improve the effectiveness of collection activities. Although Option 2 could require additional work for OAG and reporting agencies, it is assumed the work would not be significant and could be absorbed within existing resources. This option also could result in increased delinquent debt collections, but precise estimates of these revenue changes cannot be determined. Consequently, Option 2 would have no significant fiscal impact.

Option 3 would expand OAG's existing debt-related reporting requirements. This option would have no fiscal impact.

The introduced 2020–21 General Appropriations Bill does not include any adjustments as a result of these options.

ENCOURAGE STATE AGENCIES TO USE THE MASTER LEASE PURCHASE PROGRAM AND ENERGY SAVINGS PERFORMANCE CONTRACTS

The Master Lease Purchase Program and Energy Savings Performance Contracts are two means by which state agencies can obtain low-interest financing to purchase capital equipment and make energy upgrades. The Master Lease Purchase Program, administered by the Texas Public Finance Authority, was established in 1992 to enable state agencies and institutions of higher education to finance capital equipment acquisitions through the state. Purchasing capital equipment through the Master Lease Purchase Program benefits the state by enabling an agency to have consistent and predictable capital expenditures. The program offers a low-cost mechanism for agencies to finance capital equipment throughout its useful life. However, agency participation has decreased during the past 10 years.

An Energy Savings Performance Contract is a mechanism by which an organization pays for energy-saving improvement projects with money gained through decreased utility expenditures. This tool has been available to Texas agencies and institutions of higher education since 1997. Up-front financing for public projects through Energy Savings Performance Contracts is available through LoanSTAR at the State Energy Conservation Office and through the Master Lease Purchase Program. Although Energy Savings Performance Contracts provide a cost-neutral or cost savings method to decrease energy use and utility bills, only one state agency, the Texas Facilities Commission, has entered into an Energy Savings Performance Contract during the past 10 years.

FACTS AND FINDINGS

- ◆ The number of Master Lease Purchase Program contracts managed by the Texas Public Finance Authority has decreased by 24.1 percent and the value of such contracts has decreased by 72.5 percent from fiscal year 2007 to 2017.
- ◆ In March 2018, the Texas Facilities Commission completed the first Energy Savings Performance Contract for a state agency since 2008. The project had guaranteed annual savings of \$485,134 and resulted in a further \$289,771 in rebates from the Austin Energy utility.

CONCERNS

- ◆ State agencies are not required to consider the Master Lease Purchase Program when financing purchases of capital equipment. This lack of consideration may result in the state not using the most cost-effective method of financing available.
- ◆ The Texas Public Finance Authority does not provide training consistently for state agency staff regarding the Master Lease Purchase Program; therefore, agencies may not be aware of this financing option.
- ◆ The State Energy Conservation Office has no consistent outreach or training strategies for educating state agency staff regarding Energy Savings Performance Contracts.
- ◆ Although the Texas Facilities Commission was authorized to reinvest savings from Energy Savings Performance Contracts in additional energy-related projects, other state agencies do not have this authority, which would increase the benefits of such a contract to the agency and could encourage agency participation.

OPTIONS

- ◆ **Option 1:** Include a rider in the 2020–21 General Appropriations Bill to require state agencies to participate in the Master Lease Purchase Program if it represents the most cost-effective type of financing when using lease-purchase methods to acquire capital assets. An agency requesting to enter a contract for another lease-purchase method first would have to present an analysis to the Legislative Budget Board comparing the cost of the Master Lease Purchase Program to the alternate method.
- ◆ **Option 2:** Include a rider in the 2020–21 General Appropriations Bill to require the Texas Public Finance Authority to provide outreach and training to state agency staff regarding the Master Lease Purchase Program.
- ◆ **Option 3:** Include a rider in the 2020–21 General Appropriations Bill to require the State Energy Conservation Office to provide outreach and training

to state agency staff regarding Energy Savings Performance Contracts.

- ◆ **Option 4:** Include a rider in the 2020–21 General Appropriations Bill to authorize state agencies to reinvest savings generated from Energy Savings Performance Contracts into additional capital improvement or deferred maintenance projects.

DISCUSSION

The Seventy-first Legislature, Regular Session, 1989, authorized the Texas Public Finance Authority (TPFA) to develop a capital equipment financing program for state agencies based on recommendations from the Select Interim Committee on Capital Construction, which was charged with researching capital spending and financing options. The 15-member committee, which consisted of lawmakers, representatives from the legal and financial communities, and others, found that the state was paying too much for capital equipment financing through vendors. It recommended establishing a master lease purchase pool to combine capital purchases and finance them through the state to receive lower interest rates. Following authorization for the development of a capital equipment financing program, TPFA developed the Master Lease Purchase Program (MLPP), which began financing projects in 1992.

OVERVIEW OF MASTER LEASE PURCHASE PROGRAM

MLPP is available to state agencies and institutions of higher education. It can be used to finance capital equipment purchases that cost more than \$10,000 and have a useful life of at least 3.0 years. Equipment that costs less than \$1,000 can be purchased if it is bundled into a purchase of at least \$10,000, and each item must cost at least \$100. Common uses of MLPP include information technology and vehicle purchases.

MLPP is incorporated into the capital budgeting process for agencies. When agency staff have determined that they need to make a capital acquisition, they must request capital budget funding from the Legislature in the General Appropriations Act. Agencies most often request appropriations to purchase capital equipment outright. However, an agency may request appropriations for another method of obtaining equipment such as through a lease or a lease-purchase agreement, which means lease payments are made through a vendor toward the eventual acquisition of the item. Agencies also can request appropriations to use MLPP, which acts as a lease-purchase agreement through the

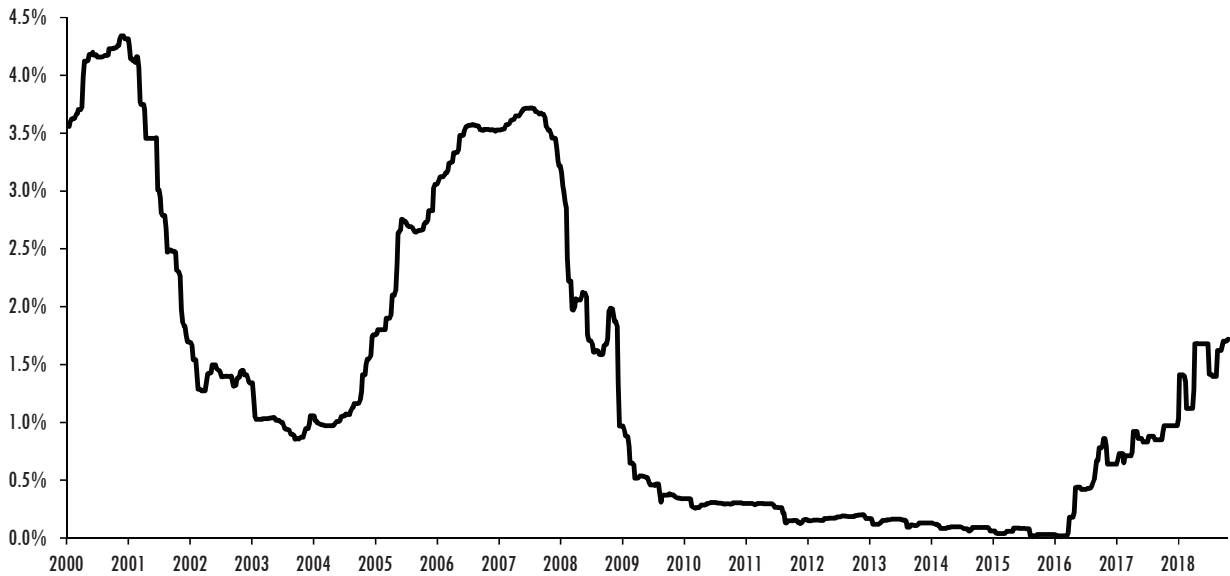
state. The Legislature determines appropriations for capital equipment and can decide whether the item is purchased outright or through MLPP.

When an agency has determined that it would like to finance a capital acquisition through MLPP, it follows a process prescribed by TPFA, which includes making a resolution authorizing the use of MLPP. If the planned purchase is more than \$250,000 or is for 5.0 years or more, the agency also must receive authorization from the Bond Review Board before it can use MLPP. After signing a Master Lease Purchase Agreement, the agency will use procurement procedures to acquire the equipment from a vendor. When the agency has completed the procurement process, it submits a lease supplement to TPFA, which provides the financing to pay the vendor and obtain the equipment's title. TPFA then returns the lease supplement to the agency, which obtains the equipment. The agency makes lease payments to TPFA each February 1 and August 1 until the equipment is fully paid, and then the agency receives the title.

TPFA finances this program through the issuance of commercial paper, which is a short-term note that can be issued for a maximum of 270 days, although most issuances are for a period of 30 days or less. TPFA uses commercial paper for MLPP financing because it has a lower interest rate than other financing mechanisms such as bonds. MLPP has a variable interest rate because it relies on commercial paper, which is reissued continuously with an interest rate that changes based on market conditions. **Figure 1** shows the interest rates for MLPP commercial paper since January 2000.

TPFA issues tax-exempt commercial paper, which has a lower interest rate than taxable commercial paper and can be used only for public projects based on Internal Revenue Service rules. As of fiscal year 2018, MLPP carries ratings from Standard & Poor's of A-1+, Moody's of P-1 (Prime-1), and Fitch's of F1+, which enables it to obtain the best rates for commercial paper. TPFA must have liquidity for MLPP, which means it must have a balance available to cover the value of outstanding commercial paper if new buyers were not available to cover reissuances. TPFA obtains this liquidity through the Comptroller of Public Accounts, which, as of fiscal year 2018, provides \$100.0 million in liquidity based on the program's needs. As of fiscal year 2018, TPFA estimated that it had \$34.4 million in outstanding MLPP contracts drawing on that liquidity.

FIGURE 1
MASTER LEASE PURCHASE PROGRAM COMMERCIAL PAPER INTEREST RATE
JANUARY 2000 TO OCTOBER 2018



SOURCE: Texas Public Finance Authority.

The cost to an agency for using MLPP is based on the interest rates available for commercial paper, although initial agency payments are for 6.0 percent interest, which is the sum of an assumed 5.0 percent interest rate and a 1.0 percent administrative fee. TPFA will rebate the difference between the 5.0 percent assumed interest rate and the actual interest rate and any interest earnings on the balance held by TPFA against the next biannual lease payment. Since fiscal year 2000, the actual interest rate has not exceeded 5.0 percent and frequently has been significantly lower. TPFA uses the 1.0 percent administrative fee to pay costs of issuance related to MLPP, including liquidity, credit rating, remarketing, and agent fees. A portion of the fee also may be used to cover associated agency administrative costs, including staff.

MASTER LEASE PURCHASE PROGRAM UTILIZATION

MLPP represents the most cost-effective option for agencies to obtain capital equipment in some instances. Using cash to pay for capital equipment often is preferred because it is administratively simple, does not result in debt, and does not generate additional costs such as interest or issuance fees. However, it may be advantageous to finance certain priority capital equipment purchases. Financing can enable agencies to obtain capital equipment when it is needed to provide critical public services within resource constraints. Significant up-front costs can impede the purchase of equipment. For

example, an agency that is self-funded through fees but needs to make a large acquisition can use MLPP to finance the equipment throughout its useful life without needing to change fees temporarily or decrease other expenditures to offset the purchase. Financing capital equipment also enables an agency to maintain a more consistent and predictable level of capital budget expenditure, as items are paid for throughout their useful lives instead of all at once in large sums whenever the need arises.

According to TPFA, and supported by a Legislative Budget Board (LBB) analysis of comparable private market rates, MLPP sometimes offers better interest rates than private financing. Because TPFA finances purchases with tax-exempt commercial paper, MLPP often has a more competitive rate than private sources and enables an agency to pay for equipment progressively with the lowest available interest rates. In addition, MLPP enables for prepayment with no additional fees, which may not be the case with private financing, according to TPFA. As a result, agencies that lease or lease-purchase capital equipment through a vendor without comparing the total costs to MLPP may be paying more than necessary. For example, the Texas Alcoholic Beverage Commission (TABCO) paid a private vendor \$29,970 for a three-year lease of computer equipment that would have cost \$29,280 before any rebates with MLPP.

After considering rebates to the agency based on the actual MLPP commercial paper interest rates, the equipment would have cost \$27,262, which is 9.0 percent less than the private vendor lease cost. TABC's lease agreement included return and disposal services, which are not covered by MLPP because the agency would own the assets following completion of MLPP payments.

Although MLPP can provide a lower interest rate than private options, that is not always the case. For example, the Texas Health and Human Services Commission (HHSC) entered into a contract for computer hardware acquisition and leasing services for health and human services agencies for a period of four years beginning September 1, 2015. This contract replaced the previous lease agreement and covered approximately 55,000 units, including desktop, laptop, and tablet computers. This lease agreement offered a number of benefits to the agencies, including flexibility in refresh schedules and optional return services from the vendor. Including these additional services, the contract offered a more cost-effective option than MLPP. For leases of three years, the total cost of leasing was less than the cost of the equipment. For leases of four years, the cost of a standard desktop computer was \$622.08 compared to \$682.93 that the agency would have paid using MLPP for four years with the initial 6.0 percent interest and administrative rate. After considering the rebates based on the actual MLPP interest rate for payments during the first three years of the lease-purchase agreement, one desktop computer would have cost \$627.16. This calculation does not include the rebate for the fourth year of the potential MLPP purchase that would occur during fiscal year 2019.

Despite the potential benefits of MLPP, its use has decreased during the past decade. **Figure 2** shows the decrease in MLPP by the number and value of new contracts that TPFA processes each fiscal year and the total number and value of contracts that TPFA manages, including new and ongoing contracts. The number of MLPP contracts that TPFA manages has decreased by 24.1 percent and the value of such contracts has decreased by 72.5 percent from fiscal year 2007 to 2017. The number of contracts that TPFA manages decreased to 310 during fiscal year 2015 and since has risen, but the total value of contracts continued to decrease. According to TPFA, the increase in the number of new contracts during fiscal years 2016 and 2017 does not represent a trend of increased use of MLPP but is due to projects at two institutions of higher education. TPFA managed 538 contracts with a total value of \$35.8 million

during fiscal year 2017. Seven agencies received appropriations for MLPP for the 2018–19 biennium, including HHSC, the Texas Department of Agriculture, and the Texas School for the Deaf. Institutions of higher education using MLPP include the Texas State Technical College System and Midwestern University.

Several factors have contributed to the decrease in participation. Before fiscal year 2008, the most common type of equipment financed through MLPP was for energy retrofit and construction projects. Since 2008, no state agency has used MLPP to finance a new Energy Savings Performance Contract (ESPC). Requirements for using MLPP also have changed. During the first biennium following its establishment, the Seventy-second Legislature, General Appropriations Act (GAA), 1992–93 Biennium, Article V, General Provisions, Section 144, directed the use of MLPP to its full extent, stating:

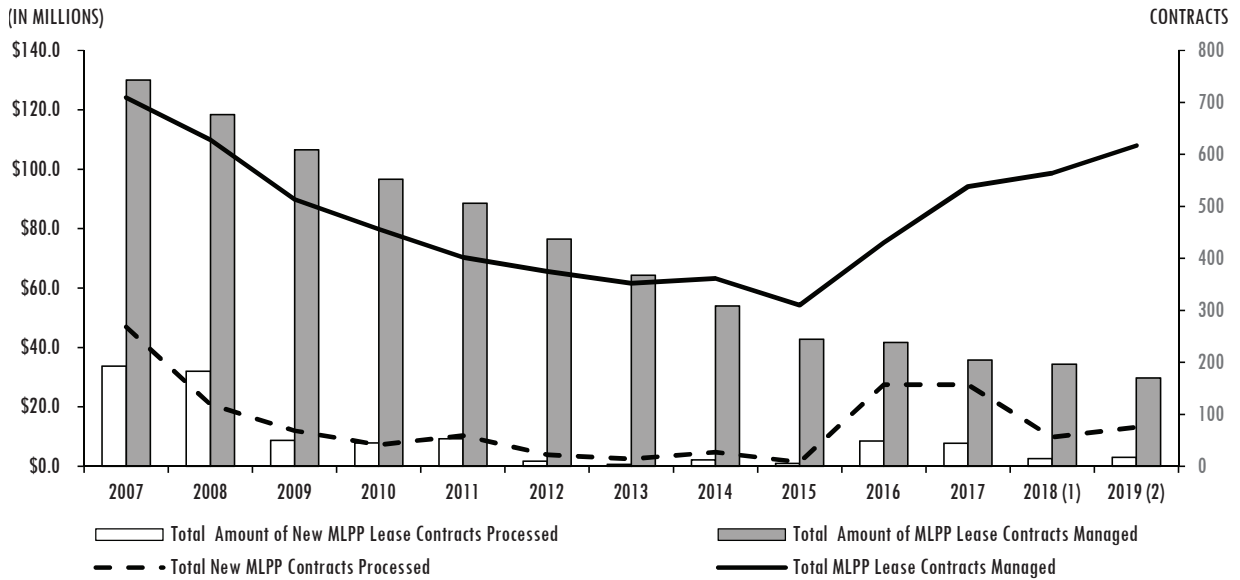
It is the intent of the legislature that master lease financing be used to the extent possible to replace general revenue funding. For that purpose, the Comptroller of Public Accounts is directed to reduce appropriations made in the Act from the General Revenue Fund for the acquisition of information resource technologies and capital equipment to the extent that master lease financing can be used for the purposes of the appropriation. Master lease proceeds are hereby appropriated in an amount equal to the general revenue reduction provided for under this provision.

The Seventy-third Legislature, GAA, 1994–95 Biennium, amended the rider to require agencies to use MLPP when it was the most cost-effective method of financing through a lease-purchase method for capital acquisition. The Seventy-sixth Legislature, GAA, 2000–01 Biennium, removed this rider.

Agencies may not be aware of MLPP as a financing option for capital equipment. Although TPFA sometimes communicates with state agencies regarding MLPP and responds to agency questions, it has not provided training consistently to agencies to inform them of how to use the program as a financing mechanism and when it is a good option. State agencies, therefore, may have chosen less cost-effective financing options because they were not aware of or familiar with MLPP when evaluating financing methods for capital equipment.

Option 1 would include a rider in the 2020–21 General Appropriations Bill to require state agencies to participate in

FIGURE 2
MASTER LEASE PURCHASE PROGRAM CONTRACTS
FISCAL YEARS 2007 TO 2019



NOTES:

- (1) Amounts for fiscal year 2018 are estimated.
- (2) Amounts for fiscal year 2019 are budgeted.
- (3) MLPP=Master Lease Purchase Program.

SOURCE: Texas Public Finance Authority.

MLPP to the extent that the program is the most cost-effective type of financing when using lease-purchase methods for acquiring capital assets. This rider would reinstate the requirement to use MLPP that was included in the GAAs from fiscal years 1994 to 1999. Adding this requirement would ensure that agencies are not using alternative financing mechanisms when the state could be saving money through TPFA’s program. To ensure that agencies are considering MLPP when seeking to make lease-purchase agreements, agencies would be required to present to LBB an analysis comparing the cost of their chosen lease-purchase contracts to MLPP before entering into contracts.

Option 2 would include a rider in the 2020–21 General Appropriations Bill to require TPFA to provide outreach and training to agencies about using MLPP for capital equipment financing. According to TPFA staff, state agency staff may not be aware of MLPP or may be reluctant to use the program due to the variable interest rate. The variable interest rate enables TPFA to maintain low interest rates, which means agencies that do not consider MLPP may be spending more than necessary for capital equipment purchases. TPFA has the financial knowledge and experience to know when MLPP

can be used effectively. Requiring TPFA to explain the program’s uses, benefits, and process to state agencies could help to ensure that capital equipment is being purchased in the most cost-effective manner. This option would equip agency staff with the knowledge to compare MLPP to other financing mechanisms and determine which is most cost-effective.

OVERVIEW OF ENERGY SAVINGS PERFORMANCE CONTRACTS

One type of project that can be funded through MLPP is an Energy Savings Performance Contract (ESPC). ESPCs are financing arrangements that enable organizations to pay for energy-saving or water-saving projects using money saved on utility bills due to the resulting efficiency improvements. Projects funded through ESPCs require the contractor to guarantee utility savings equal to or greater than the cost of completing the project during a specific period to ensure that resulting upgrades generate no cost to the state. By statute, ESPCs must have a payback period (i.e., the time it takes for the guaranteed savings to equal or exceed the project costs) of 20 years or less.

ESPCs have been available to institutions of higher education and state agencies since 1997. The State Energy Conservation Office (SECO), a division within the Comptroller of Public Accounts, oversees ESPCs for state agencies by providing guidelines and approving contracts, and the Texas Higher Education Coordinating Board (THECB) oversees ESPCs for institutions of higher education. Local governments and school districts are responsible for overseeing their own projects.

Although SECO administers the ESPC program for state agencies, it is up to each agency to determine whether to pursue an ESPC. Agencies follow SECO's guidelines to complete the ESPC, as do institutions of higher education, according to THECB. SECO's guidelines require the entity completing an ESPC to:

- form an internal selection process that includes staff from various departments to formulate a strategy;
- conduct a preliminary utility audit to identify viable projects;
- issue a request for qualifications (RFQ);
- select an energy services company (ESCO) to complete the project;
- negotiate and approve the utility assessment report (UAR);
- receive a completed UAR, a measurement and verification plan, a sample periodic utility savings report, and a proposed contract from the ESCO;
- have a third party review the submitted documents; and
- execute the contract, oversee construction and commissioning, review annual savings reports, and pay the contractor.

Agencies and institutions use the savings from decreased utility bills to pay the costs of ESPCs. However, such contracts require up-front financing to initiate the projects. Up-front financing for ESPCs can come from MLPP, bond proceeds, vendor financing, or any funding available to an agency. The Texas LoanSTAR (Saving Taxes and Resources) revolving loan program, administered by SECO, is available specifically to fund ESPCs and other energy-saving projects for governments in Texas. Funds available to the program come from the General Revenue–Dedicated Account No. 5005, Oil Overcharge, and federal funding and must equal

or exceed \$95.0 million at all times. State agencies, public school, public institution of higher education, local government, and publicly tax-supported hospital facilities are eligible to apply for LoanSTAR funding and to repay the loans, including interest, using energy savings from projects financed this way.

When the State Auditor's Office (SAO) audited the ESPC program during fiscal year 2008, it reported that seven institutions of higher education and two state agencies had entered into 15 ESPCs with a total cost of \$203.1 million. All nine entities had utilized MLPP to finance all or part of the ESPCs. Four entities had additional sources of financing, including LoanSTAR or funding from Proposition 8, 2001, which authorized TPFA to issue up to \$850.0 million in General Obligation bonds repayable from General Revenue Funds for construction and repair projects. The SAO report noted that ESPCs had decreased energy consumption, lowered utility costs, and financed needed capital improvements to state facilities. However, SAO found that contracting practices needed improvement to ensure that each contract includes the required amount of guaranteed savings from the contractor to cover the cost of the project. Of the 15 ESPCs that state agencies and institutions had entered into, 13 did not have the required amount of guaranteed savings from the contractor to repay project costs. Following this audit report, the guidelines for approving ESPCs were revised to require SECO and THECB to verify that ESPCs contain the required amount of guaranteed savings.

ENERGY SAVINGS PERFORMANCE CONTRACTING UTILIZATION

Since the SAO audit, only one state agency has participated in an ESPC. The Texas Facilities Commission (TFC) issued an RFQ for an ESPC during fiscal year 2015 and entered into an ESPC to perform upgrades to lighting, power conditioning, water systems, and other utility cost-reduction measures in four Austin buildings: Thomas Jefferson Rusk, William P. Hobby Jr., Central Services, and Brown-Heatly. These upgrades were completed in March 2018 at a total contract cost of \$3.6 million. According to TFC staff, the guaranteed savings built into the contract included \$349,563 per year in electricity, \$4,988 in natural gas, \$67,650 in water, and \$62,933 in other savings. The ESPC also led to \$289,771 in rebates from Austin Energy for light-emitting diode, known as LED, lighting installation. Not including the rebate or measurement and verification fees, the payback period for the project is 8.3 years, and most of the upgrades

have an estimated useful life of 20 years, providing the project an estimated yield of \$9.6 million in savings.

TFC's experience was unique because it was able to work with SECO to finance the ESPC with federal funding from the U.S. Department of Energy (DOE). This type of funding, which typically is not available to agencies, provided additional benefits to TFC. Because the project costs were covered by federal funding, the agency was authorized to reinvest its utility savings into other energy savings projects that were not included in the ESPC. TFC has used these savings to address deferred maintenance projects. Based on the success of the ESPC, TFC issued another RFQ in April 2018 for an ESPC in another nine buildings that will be financed using LoanSTAR funds.

ESPCs can offer a cost-neutral or cost savings method to upgrade energy and water systems and lower utility costs for participants. However, a number of factors may prevent state agencies from using this financing mechanism effectively. ESPCs can be technical, which requires a sufficient number of agency staff with the specialized skill set to oversee the contract, including that all calculations are correct and that the project is being executed properly. According to SECO staff, agencies also may be reluctant to enter into ESPCs because they believe they will not retain the savings that the project generates after covering the contract costs. Although all agencies are authorized to use utility savings to pay for an ESPC, none but TFC have been authorized to reinvest additional savings into other energy efficiency projects.

From fiscal year 2009 to September 2018, 11 institutions of higher education have entered into 16 ESPCs, and another institution submitted an ESPC for review in August 2018. At a total cost of \$189.8 million, these ESPCs are estimated to achieve \$252.3 million in savings achieved through building automation; upgrades to lighting, mechanical systems, heating, ventilation, and air conditioning; and other energy savings work. None of these projects were financed using MLPP; projects were paid for with available cash or financed through other means, such as bonds. According to THECB, institutions of higher education have little difficulty entering into ESPCs.

DOE offers resources intended to help state energy offices develop successful ESPC programs. DOE recommends best practices such as leadership through a state energy office, project oversight and technical assistance, and education and outreach. Texas' ESPC program follows some of these practices through the work of SECO, which offers support

and guidelines to agencies to complete an ESPC, but it remains the agency's responsibility to implement and oversee the projects. SECO staff network with agency utility managers at the State Agency Energy Advisory Group's monthly meetings, but they do not promote available ESPC resources consistently.

Option 3 would include a rider in the 2020–21 General Appropriations Bill to require SECO to provide outreach and training to agencies about ESPCs, which could increase the use of this method to help the state lower utility bills and complete needed upgrades. Outreach could be targeted to the best candidates for ESPCs, which include agencies with large utility bills that operate their own facilities and have more control over efficiency efforts and utility expenditures. This outreach would increase agencies' knowledge and access to technical assistance, in keeping with DOE best practices. In addition to providing information about ESPCs at State Agency Energy Advisory Group meetings, SECO could reach out to agencies that do not attend the meetings. Outreach also could focus on identifying deferred maintenance projects that could be addressed by ESPCs in a cost-neutral or cost savings method. SECO could provide outreach and training to the Department of Information Resources (DIR) to identify areas where energy savings resulting from an ESPC project could pay the cost of upgrading technology resources. Technology upgrades can lead to decreased energy use and lower utility bills, but SECO has not worked with DIR to evaluate such projects.

The Eighty-fifth Legislature, GAA, 2018–19 Biennium, Article I, TFC, Rider 10, authorized TFC to invest ESPC savings in additional energy savings projects, but other agencies do not have this authority. The Texas Government Code, Chapter 2166.406, governs agencies' entry into ESPCs. The statute stipulates that the Legislature bases the utility appropriations for an agency on the sum of the guaranteed savings provided in the ESPC and the agency's anticipated utility expenditures. Agencies do not have authority to use savings beyond those needed to pay for the ESPC to invest in additional projects. This limitation may decrease agencies' willingness to participate, because the current structure authorizes agencies to utilize savings only for the ESPC upgrades. Therefore, agencies do not benefit directly from savings that exceed project costs, and they must use agency administrative resources to manage the ESPC.

Option 4 would include a rider in the 2020–21 General Appropriations Bill to authorize all state agencies to reinvest savings generated from ESPC projects into additional capital

improvement projects during the biennium. This ability would align with DOE best practices that suggest authorizing agencies to include other capital improvement projects within the scope of an ESPC. This option would incentivize agency participation by authorizing them to use energy savings that exceed the contract cost to pay for additional capital improvement projects such as deferred maintenance. More agencies may be incentivized to utilize an ESPC to address energy-related and other capital projects.

FISCAL IMPACT OF THE OPTIONS

Option 1 would require agencies to participate in the MLPP to the extent that the program is the most cost-effective type of financing when using lease-purchase methods for acquiring capital assets. This option could be implemented using existing agency resources and could result in cost avoidance because it requires agencies to utilize the most cost-effective financing measure.

Option 2 would require TPFA to provide training and outreach regarding MLPP, and Option 3 would require SECO to provide training and outreach regarding ESPCs. No significant fiscal impact is anticipated from these options, because any additional workload could be managed within existing staff and resources.

Options 3 and 4 together could increase agency participation in ESPCs, which would result in decreased utility bills. Agencies could use these savings to address additional capital projects during the biennium. These options could result in cost savings to the state across the lifetime of these projects.

The introduced 2020–21 General Appropriations Bill does not include any adjustments as a result of these options.

INCREASE ACCESS TO STATE ASSISTANCE FOR DEFENSE COMMUNITIES

Defense communities in Texas may be eligible for two economic development programs administered by the Office of the Governor, the Defense Economic Adjustment Assistance Grant Program and Texas Military Value Revolving Loan Fund. The programs have similar missions: to assist in enhancing the military value of a military facility in the community or assist with the effects of a U.S. Department of Defense decision or a federal Base Realignment and Closure decision. However, the Texas Military Value Revolving Loan Fund has not been utilized during the past 10 years, and the applications for the Defense Economic Adjustment Assistance Grant Program have exceeded available funding in recent years. By implementing strategies to increase efficiency of the revolving loan fund application process, decrease reliance on the grant program, and provide an additional funding option for defense communities, the Legislature could help increase overall access to state assistance for defense communities.

FACTS AND FINDINGS

- ◆ Texas has more than 232,000 uniformed and U.S. Department of Defense civilian personnel at 15 military installations. In fiscal year 2015, the Comptroller of Public Accounts estimated the economic impact of Texas military installations to be approximately \$136.0 billion.
- ◆ A federal Base Realignment and Closure process has not occurred since calendar year 2005. The past two U.S. presidential administrations have requested the process, but it has not been authorized by the U.S. Congress. The Texas Military Preparedness Commission reports that, because of sequestration and the federal Budget Control Act, the U.S. Department of Defense is providing about 40.0 percent of funds needed for maintenance of military installations.
- ◆ Since its establishment by the Seventy-fifth Legislature, 1997, the Defense Economic Adjustment Assistance Grant Program has awarded approximately \$84.0 million in grants, with more than half awarded since fiscal year 2016. The grant program does not have a dedicated source of funding and has been funded

with General Revenue Funds and Other Funds from the Economic Stabilization Fund.

- ◆ Since the Texas Military Value Revolving Loan Fund was established in 2003, it has awarded three loans totaling approximately \$49.6 million, and no applications have been submitted since calendar year 2014. The program is financed through the sale of General Obligation bonds with an authority of approximately \$200.4 million.

CONCERN

- ◆ The Seventy-eighth Legislature, Regular Session, 2003, established the Texas Military Value Revolving Loan Fund, which has not been utilized during the past 10 years. By contrast, applications for projects in recent Defense Economic Adjustment Assistance Grant Program grant funding cycles have exceeded available funding. Decreasing reliance on the grant program and decreasing the time to process loan applications could increase the use of the loan fund and increase overall access to state assistance for defense communities.

OPTIONS

- ◆ **Option 1:** Amend statute to authorize the Texas Military Preparedness Commission's members to participate by telephone or other means of telecommunication or electronic communication in a meeting to consider an application for a loan from the Texas Military Value Revolving Loan Fund.
- ◆ **Option 2:** Amend statute to require the Texas Military Preparedness Commission to consider a Defense Economic Adjustment Assistance Grant Program applicant's eligibility for a loan program, specifically the applicant's credit-worthiness and ability to repay a loan, as part of the scoring matrix for awarding a grant.
- ◆ **Option 3:** Amend statute to provide defense communities with a more flexible loan option by establishing a commercial paper program that offers short-term, variable-rate option loans.

DISCUSSION

The military presence in Texas is among the largest in the United States. Texas has more than 232,000 uniformed and U.S. Department of Defense (DoD) civilian personnel at 15 military installations across the state. Missions at Texas installations include cybersecurity, basic training, land assault, pilot training, complex medical research, and intelligence, surveillance, and reconnaissance through remotely piloted aircraft. Texas consistently is among the top recipients of DoD contracts and has three of the largest active-duty military bases whether measured by organization, armored post, or training space. The Comptroller of Public Accounts (CPA) estimates that Texas military installations contributed approximately \$136.0 billion combined to the Texas economy during fiscal year 2015 and more than 800,000 total jobs. **Figure 1** shows the location and individual economic impact to the state, including total employment, of each of the 15 installations for fiscal year 2015.

FEDERAL DEFENSE BASE CLOSURE AND REALIGNMENT PROCESS

Texas military communities face ongoing challenges from prospective base closures, transfer of missions, and reductions of personnel. These challenges affect the economic vitality of communities and Texas as a whole. The U.S. Congress in 1988 and again in 1990 passed statutory provisions establishing a federal Defense Base Realignment and Closure (BRAC) process. Pursuant to these provisions, in 1988, 1991, 1993, 1995, and 2005, an independent BRAC Commission recommended the closure and realignment of more than 100 defense facilities throughout the U.S. According to the Texas Military Preparedness Commission (TMPC), Congress has not authorized recent requests for another round of BRAC. TMPC reports that another round of BRAC is possible, citing a 2016 DoD Infrastructure Capacity study that indicated that the department has 22.0 percent infrastructure excess.

From fiscal years 1988 to 1998, seven major Texas military installations and activities were closed, and four were realigned as a result of the BRAC process. The process removed approximately 35,000 active duty and direct-hire civilian jobs from Texas defense communities. Three military installations have been closed as a result of BRAC in 2005, and eight others were affected negatively by realignment actions. According to the BRAC 2005 report, approximately 23,000 direct and indirect jobs were removed by these actions. However, some communities, including Ft. Bliss and Ft. Sam Houston, were realigned in a positive manner

and scheduled to increase their work force authorizations by nearly 30,000 personnel. **Figure 2** shows a timeline of how BRAC has affected Texas military installations.

A military installation cannot be closed officially without a BRAC recommendation; however, DoD can decrease utility of an installation if it is not proving effective. Decreasing a military installation to minimal operations and staff is referred to as warm basing. To avoid warm basing and future BRAC closures and realignments, Texas has taken steps to address these challenges.

TEXAS MILITARY PREPAREDNESS COMMISSION

The Seventy-eighth Legislature, Regular Session, 2003, established the TMPC with a mission to preserve, protect, expand, and attract new military missions and assets into Texas installations. It also encourages defense-related businesses to expand or relocate to Texas. TMPC's goal is to make Texas the state of choice for military missions and defense contracts by ensuring the stability of defense communities.

TMPC is attached administratively to the Office of the Governor and is composed of 13 public members appointed by the Governor, and the following ex-officio members:

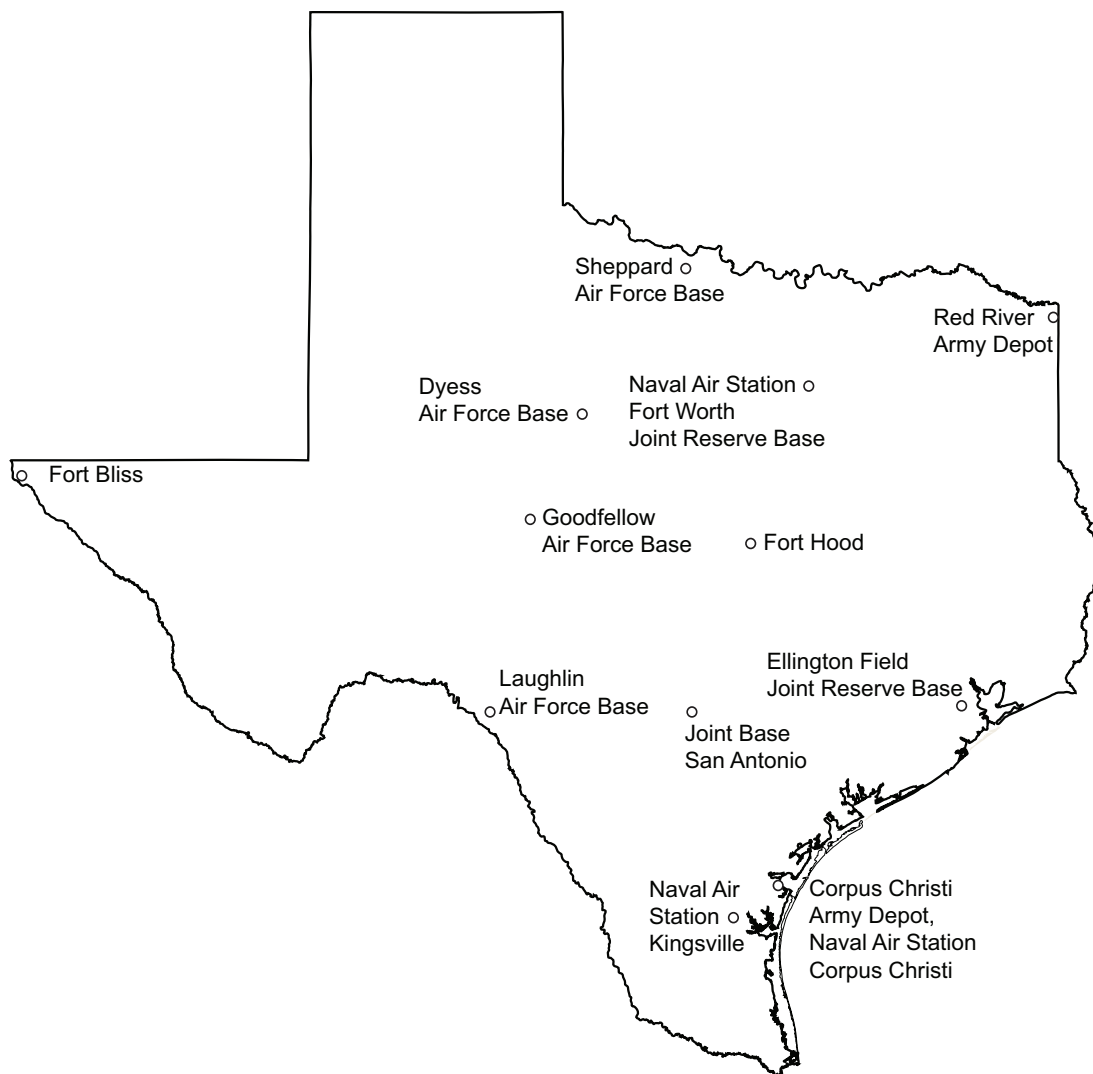
- the chairs of the committees of the Texas House of Representatives and the Texas Senate that have primary jurisdiction of matters concerning defense affairs and military affairs; and
- the Texas Adjutant General.

TMPC has a director to serve as the chief executive officer and one full-time staff to assist in performing the administrative duties of the position. TMPC administers two economic adjustment programs: the Defense Economic Adjustment Assistance Grant Program and the Texas Military Value Revolving Loan Fund.

DEFENSE ECONOMIC ADJUSTMENT ASSISTANCE GRANT PROGRAM

The Defense Economic Adjustment Assistance Grant Program (DEAAG) was established in 1997 and transferred in 2003 to TMPC. DEAAG is an infrastructure grant program intended to assist defense communities that have been affected positively or negatively by a federal BRAC, a change in defense contracts, or an announced change from DoD. DEAAG funding also can be used proactively to support installations in the event of a proposed or announced DoD decision.

FIGURE 1
TEXAS MILITARY INSTALLATION ECONOMIC IMPACT AND EMPLOYMENT, 2015



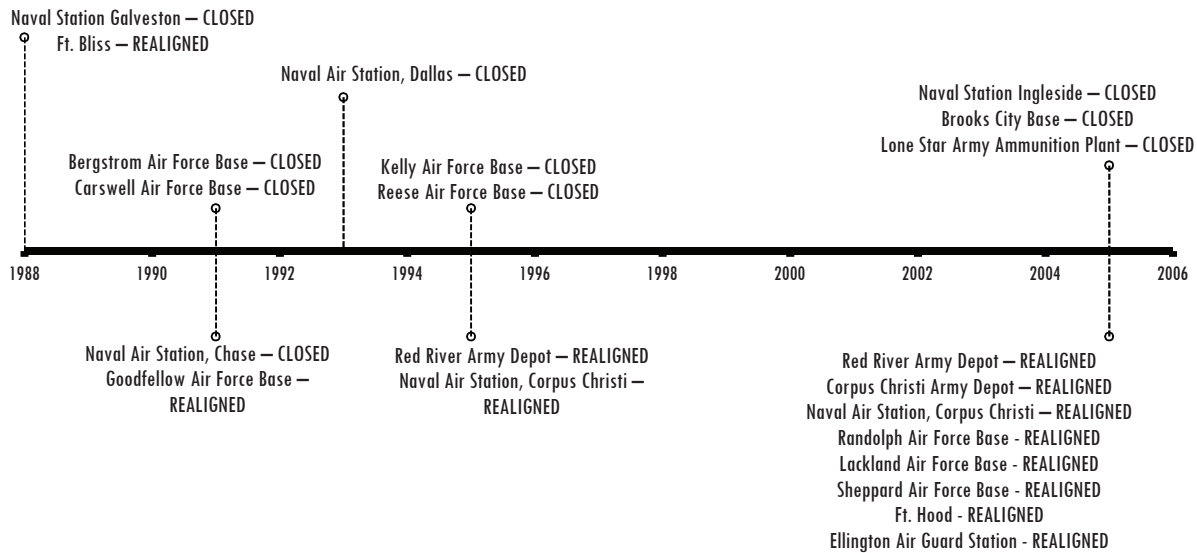
INSTALLATION	LOCATION	MISSION	ECONOMIC IMPACT (IN BILLIONS)	TOTAL EMPLOYMENT
Corpus Christi Army Depot	Corpus Christi	Helicopter Repair Center of Excellence	\$2.5	18,083
Dyess Air Force Base	Abilene	Bomb Wing and Airlift Group	\$3.7	20,208
Ellington Field Joint Reserve Base	Houston	Reconnaissance Wing	\$0.8	4,155
Ft. Bliss	El Paso	Ground Combat Maneuvering and Artillery Training	\$24.1	135,610
Ft. Hood	Killeen	Ground Combat-ready Force and Helicopter Training	\$35.4	201,538
Goodfellow Air Force Base	San Angelo	Firefighting and Intelligence Training	\$3.0	16,605
Joint Base San Antonio (Ft. Sam Houston, Lackland Air Force Base, Randolph Air Force Base)	San Antonio	Military Medicine; Basic and Technical Training; Instructor Pilot, Navigator, and Advanced Instrument Flight Training	\$48.7	282,995

FIGURE 1 (CONTINUED)
TEXAS MILITARY INSTALLATION ECONOMIC IMPACT AND EMPLOYMENT, 2015

INSTALLATION	LOCATION	MISSION	ECONOMIC IMPACT (IN BILLIONS)	TOTAL EMPLOYMENT
Laughlin Air Force Base	Del Rio	Specialized Undergraduate Pilot Training	\$1.4	7,835
Naval Air Station Corpus Christi	Corpus Christi	Primary Pilot Training	\$2.1	12,949
Naval Air Station Fort Worth Joint Reserve Base	Fort Worth	Fighter, Airlift, Refueling Missions	\$6.6	47,256
Naval Air Station Kingsville	Kingsville	Strike Pilot Training	\$0.7	4,545
Red River Army Depot	Texarkana	Mechanized Track Vehicle and Mine-resistant Ambush Protected Vehicle Repair	\$2.1	16,936
Sheppard Air Force Base	Wichita Falls	Allied/Specialized Flight Training and Technical Training	\$5.6	36,970

NOTE: Total employment includes direct and indirect employment.
 SOURCE: Texas Military Preparedness Commission; Comptroller of Public Accounts.

FIGURE 2
TEXAS MILITARY BASE REALIGNMENT AND CLOSURE TIMELINE, CALENDAR YEARS 1988 TO 2005



SOURCE: Texas Military Preparedness Commission.

DEAAG funding is available to local municipalities, counties, defense base development authorities, junior college districts and Texas State Technical College campuses, and regional planning commissions representing defense communities. DEAAG funding is available for the following uses:

- meeting matching requirements for federal funding;
- the purchase of DoD property, new construction, or rehabilitation of facilities in support of job-developing projects and opportunities;

- infrastructure projects directly supporting a new military mission in a community positively affected by a BRAC;
- infrastructure projects that assist in raising an installation's BRAC score or adding military value; and
- awards to public junior colleges or the Texas State Technical College System to purchase or lease capital equipment to train or retrain displaced defense workers.

Grants awarded range from \$50,000 to \$5.0 million per project. TMPC has awarded \$84.0 million since the program began in 1997. According to TMPC, these grants have acted as a catalyst for leveraging more than \$215.0 million in new investments in affected defense communities and have been an important factor in economic development in areas affected by a BRAC. **Appendix A** shows total DEAG awards through the 2018-19 biennial funding cycle in defense communities with an active military installation.

A review panel appointed by the TMPC director scores applications, and the chief of staff of the Office of the Governor approves all grants. Scoring criteria include the following factors:

- significance of the effect that the DoD action has upon the community;
- extent to which local resources are used for economic development;
- amount of previous DEAG awards received by the applicant;
- anticipated number of jobs to be developed and retained as a result of the grant; and
- effects of the grant on the region.

Applicants are encouraged to acquire financial assistance for eligible development projects from other sources, including federal, state, local, and public and private foundations. All DEAG grants are provided as a reimbursement upon project completion, and each community has two years from the award of the grant to complete its project. Communities are required to submit quarterly reports to TMPC until the projects are completed.

The DEAG program does not have a dedicated source of funding and is considered for appropriation by legislative session. The program historically has been appropriated General Revenue Funds and Other Funds from the Economic Stabilization Fund. Since fiscal year 2016, the Legislature has appropriated more than \$50.0 million to the program, including \$30.0 million for the 2016–17 biennium, the largest appropriated biennial amount to date. TMPC attributes the increase in funding to recent statutory changes expanding the program to award grants for proactive measures and projects.

TEXAS MILITARY VALUE REVOLVING LOAN FUND

The Seventy-eighth Legislature, Regular Session, 2003, established the Texas Military Value Revolving Loan Fund (TMVRLF) to perform the following functions:

- assist defense communities in enhancing the military value of facilities in their areas;
- provide financial assistance to defense communities for job and economic development projects that minimize the negative effects of a BRAC decision that occurred in 1995 or later; and
- provide financial assistance to defense communities for infrastructure projects to accommodate new or expanded military missions resulting from a BRAC decision that occurred in 1995 or later.

The TMVRLF is intended to provide a low-cost source of funding to eligible communities that meet the application criteria. The minimum amount of a loan is \$1.0 million, and the maximum amount is determined by the availability of funds. The state may provide up to 100 percent of project cost, depending on the creditworthiness of the applicant. State funding for the loan program is obtained through the sale of General Obligation bonds, which enables the defense community to receive a loan based on the state's AAA credit rating.

LOW UTILIZATION OF TMVRLF VERSUS HIGH DEMAND FOR DEAG GRANTS

Following its implementation in 2003, the TMVRLF has issued three loans totaling approximately \$49.6 million. The bond authority available for issuance is approximately \$200.4 million. According to TMPC, interest in the TMVRLF has been low in recent years. No applications have been submitted since 2014. Possible reasons for the lack of utilization include:

- defense communities having a credit rating equal to the state's credit rating, which enables them to seek equal or better loan terms on the commercial market;
- defense communities not having the revenue to repay a loan, as the majority of military value projects are not revenue-generating;
- reluctance of defense communities to enter into long-term loans considering an unpredictable BRAC process; and
- the lengthy application process required for a TMVRLF loan.

The TMVRLF has more than \$200.0 million in loan capacity; in contrast, the DEAG program has limited funds available because it does not have a dedicated source of funding. The applications for projects in recent DEAG

grant funding cycles have exceeded available funding. **Figure 3** shows the 2018–19 DEAAAG applications, which represent 13 projects totaling \$42.4 million. Of those applications, five projects totaling \$21.9 million did not receive funding. Two of the five communities’ projects had similar DEAAAG application scores as those that did receive funding. According to those two communities, the projects for which funding was sought are not moving forward because they do not have the funding to do so.

Three of the eight projects that received 2018–19 DEAAAG grant awards, totaling approximately \$11.0 million, are sponsored by the two defense communities that are past recipients of TMVRLF loans. These communities and projects did not go through the TMVRLF application process, so it cannot be determined that these projects were eligible for loans. However, if the TMVRLF or other state funding assistance were more accessible and utilized more often, communities could complete more military value

projects across the state. **Figure 4** shows the disparity between the issuance of loans and grant awards from the 1998–99 to 2018–19 biennia.

STRATEGIES TO INCREASE ACCESS TO STATE ASSISTANCE FOR DEFENSE COMMUNITIES

Due to low utilization of the TMVRLF combined with high demand for DEAAAG grant funding, increasing access to project funding, including through the TMVRLF, would decrease DEAAAG grant funding demand and increase overall access to state assistance for defense communities. The following three options are intended to increase access to state assistance for defense communities, none of which are mutually exclusive.

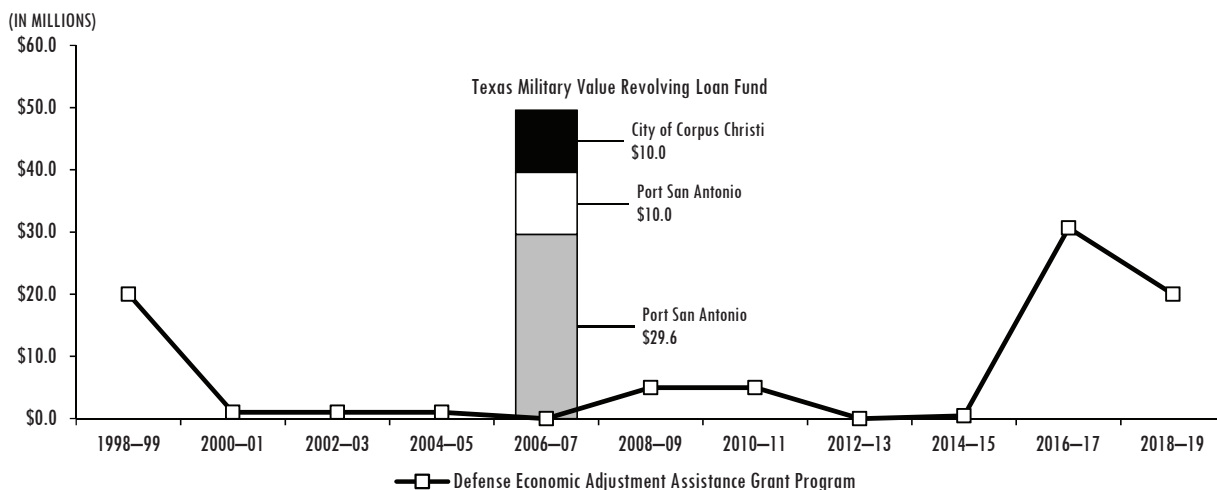
Option 1 addresses the lengthy application process required for the TMVRLF. Currently, a loan application requires the approval of TMPC’s commissioners at one of their quarterly meetings. Depending on the date the application is filed, the

**FIGURE 3
DEFENSE ECONOMIC ADJUSTMENT ASSISTANCE GRANT PROGRAM APPLICATION SCORING RANKED BY SCORE AVERAGE,
2018–19 BIENNIAL FUNDING CYCLE**

RANKING	APPLICANT	REQUESTED FUNDING (IN MILLIONS)	SCORE AVERAGE	PROJECT
Projects that received funding				
1	Bell County	\$3.1	61.39	Army Airfield Security Project
2	City of Corpus Christi	\$3.3	59.92	Corpus Christi Army Depot Industrial Security
3	City of Corpus Christi	\$2.7	58.46	Water Infrastructure at Naval Air Station, Corpus Christi
4	Tom Green County	\$4.6	57.00	Mission Expansion at Goodfellow Air Force Base
5	City of Kingsville	\$0.1	57.00	Purchase of Property at Naval Air Station, Kingsville
6	City of Abilene	\$0.3	56.31	Dyess Air Force Base Boundary Fence
7	Port San Antonio	\$5.0	55.69	Airfield Operations Improvements
8	City of Wichita Falls	\$1.5	54.77	Main Gate Upgrades at Sheppard Air Force Base
Projects that did not receive funding				
9	City of New Boston	\$3.0	54.54	Red River Army Depot Road Repavement
10	City of Del Rio	\$4.5	52.00	Sunshades at Laughlin Air Force Base
11	Coryell County	\$4.4	45.62	Geothermal Power Plant Flow Test
12	City of Fort Worth	\$5.0	42.31	Property Purchase at Naval Air Station, Fort Worth Joint Reserve Base
13	City of El Paso	\$5.0	41.31	Department of Defense Fire Station

SOURCE: Texas Military Preparedness Commission.

FIGURE 4
DEFENSE ECONOMIC ADJUSTMENT ASSISTANCE GRANT PROGRAM GRANTS AND TEXAS MILITARY VALUE REVOLVING LOAN FUND LOANS ISSUED BY THE TEXAS MILITARY PREPAREDNESS COMMISSION 1998–99 TO 2018–19 BIENNIA



NOTE: The Texas Military Value Revolving Loan Fund was not implemented until 2003.
 SOURCE: Texas Military Preparedness Commission.

time between submission and approval or denial of funding can be several months. The loan application process for a commercial market loan typically takes 45 days, but a TMVRLF loan may take up to six months. The 13 commissioners reside throughout the state, making it burdensome and inefficient for them to meet more often to consider loan applications.

To decrease the time to receive a TMVRLF loan, Option 1 would amend the Texas Government Code, Chapter 436, to authorize the TMPC’s members to participate by telephone or other means of telecommunication or electronic communication in a meeting to consider a loan application. House Bill 3895, Eighty-fifth Legislature, Regular Session, 2017, would have made this same authorization. It was reported favorably out of the House Committee on Economic and Small Business Development and placed on the General State Calendar, but ultimately did not make it to a vote on the House floor. TMPC would establish, by rule, a process to determine whether and when to meet using this method. Authorizing an alternative form of meeting solely to consider a TMVRLF loan application could decrease significantly the time to approve a loan and could make the TMVRLF more attractive to potential borrowers.

Option 2 would amend the Texas Government Code, Chapter 436, to require TMPC to consider a DEAAG applicant’s eligibility for a loan program as part of the scoring

matrix for awarding a grant. As part of this process, TMPC would consider the credit-worthiness of grant applicants and their abilities to repay loans. This approach would make scoring points available to applicants that do not have the credit worthiness and ability to repay a loan. TMPC could determine the amount of weight given to this scoring category. While adding such a consideration to the DEAAG scoring matrix would not preclude a project that was eligible for a loan from receiving a grant, it would assist in prioritizing for grant funding those projects that are not legitimate candidates for loans. While TMPC may work with communities to determine which program is best suited for their project, based in part on their finances, this strategy establishes an explicit process to consider the use of other means of finance to maximize the grant funds appropriated by the Legislature.

Option 3 would amend the Texas Government Code, Chapters 436 and 1232, to establish a commercial paper program to provide a more flexible loan option that may apply to a wider range of defense projects. Commercial paper is a short-term, unsecured promissory notes that mature within 270 days and are backed by a liquidity provider that will provide liquidity in the event the notes are not remarketed or redeemed at maturity. The Texas Public Finance Authority (TPFA) operates the following four commercial paper programs:

- the Master Lease Purchase Program, which is primarily for financing equipment acquisitions through a revenue commercial paper program;
- the General Obligation Commercial Paper Program, Series 2008, for certain general state government construction projects;
- the General Obligation Commercial Paper Program (Cancer Prevention and Research Institute of Texas Project), Series A (Taxable) and Series B (Tax-exempt), to fund operations and grants for the Cancer Prevention and Research Institute of Texas; and
- the Revenue Commercial Paper Program (Texas Facilities Commission Projects) Series 2016A (Taxable) and Series 2016B (Tax-exempt), to finance or refinance the construction and equipment of building projects by the Texas Facilities Commission.

According to TPFA, commercial paper is less expensive than a bond issuance that is required for a TMVRLF loan, and a commercial paper loan could be issued within a few days of application approval. A commercial paper loan would offer short-term, variable rate loans that would not be a debt of the state. Unlike the TMVRLF, there would be no minimum loan amount, so entities could receive loans for smaller projects. In addition, commercial paper loans may address TMVRLF concerns about long-term borrowing in conjunction with the uncertainty associated with BRAC. These short-term loans provide flexibility in how an entity finances a project without committing to a lengthy loan term. After enough commercial paper loans have been issued, they can be bundled together and issued as bonds carrying a lower interest rate. Making short-term, flexible loans available via a commercial paper program, would give defense communities another funding option for a broad scope of projects that could decrease reliance on the DEAAG program.

Options 1, 2, and 3, alone or implemented together, seek to increase access to state assistance for defense communities by making loan options more accessible and providing more opportunity for communities that are not eligible for a loan to receive DEAAG grant funding.

FISCAL IMPACT OF THE OPTIONS

It is assumed that TMPC could implement Option 1 with existing infrastructure to facilitate meeting by telephone or other means of telecommunication or electronic communication. Option 2 would require TMPC to consider

a DEAAG applicant’s eligibility for the TMVRLF as part of the scoring matrix for awarding a grant and also could be implemented with existing resources. Option 3 would amend statute to establish a commercial paper program that would involve an estimated onetime cost of \$250,000 for required legal services to be contracted by TPFA. **Figure 5** shows the five-year fiscal impact of Option 3.

**FIGURE 5
FIVE-YEAR FISCAL IMPACT OF OPTION 3
FISCAL YEARS 2020 TO 2024**

YEAR	PROBABLE SAVINGS/(COST) TO GENERAL REVENUE
2020	(\$250,000)
2021	\$0
2022	\$0
2023	\$0
2024	\$0

SOURCE: Legislative Budget Board.

The introduced 2020–21 General Appropriations Bill does not include any adjustments as a result of these options.

APPENDIX A

FIGURE A-1
DEFENSE ECONOMIC ADJUSTMENT ASSISTANCE GRANT (DEAAG) PROGRAM AWARDS
FISCAL YEARS 1997 TO 2019

DEAAG RECIPIENT	GRANT AMOUNT (IN MILLIONS)	PROJECT DESCRIPTION
Seventy-fifth Legislature, 1998–99 Biennium		
Beeville	\$1.3	Water and wastewater improvements
Bowie County	\$0.5	Water and wastewater improvements and access to property
Dallas	\$0.9	Reconstruction and upgrade of water and wastewater systems
Fort Worth	\$0.6	Redevelopment of school to serve as a Business Assistance Center
Lubbock	\$2.0	Purchase capital equipment necessary to renovate building
Lubbock	\$2.0	Renovate building
Lubbock	\$2.0	Purchase capital equipment for Texas Tech Winder Science Center
Marshall	\$0.5	Renovate interior and exterior of building
Marshall	\$0.5	Construct and purchase capital equipment
San Antonio – Kelly	\$2.0	Construct 80,000-square-foot administration building
San Antonio – Kelly	\$2.0	Construct potable water source system
San Antonio – Kelly	\$2.0	Construct 386,000-square-foot building for aircraft maintenance
San Antonio – Kelly	\$2.0	Modernize building
South Plains Council of Governments	\$0.1	Leverage local and federal funding to recapitalize revolving loan fund
Westworth Village	\$1.2	Predevelopment preparations for a Business Assistance Center
Total	\$19.4	
Seventy-sixth Legislature, 2000–01 Biennium		
Bowie County	\$1.0	Demolition and renovation of buildings for industrial manufacturing
Total	\$1.0	
Seventy-seventh Legislature, 2002–03 Biennium		
San Antonio – Brooks	\$0.2	Replace undersized and substandard water lines
San Antonio – Kelly	\$0.2	Replace rail and rail bed
Bowie County	\$0.2	Purchase insurance for Red River Army Depot buildings
Lubbock	\$0.1	Build an access road and eight-inch waterline to industrial park
Jefferson	\$0.3	Replace rail and rail bed
Marshall	\$0.1	Capital equipment purchase for retooling
Total	\$1.0	
Seventy-eighth Legislature, 2004–05 Biennium		
San Antonio – Kelly	\$0.2	Upgrade building to provide indoor engine testing capabilities
San Antonio – Brooks	\$0.2	Replace water pipeline to provide water flow for fire protection
Dallas	\$0.5	Repair and rehab of aircraft operating area
Bowie County	\$0.2	Repair and rehab of three buildings
Total	\$1.0	
Seventy-ninth Legislature, 2006–07 Biennium		
No funds awarded	\$0.00	Not applicable

FIGURE A-1 (CONTINUED)
DEFENSE ECONOMIC ADJUSTMENT ASSISTANCE GRANT (DEAAG) PROGRAM AWARDS
FISCAL YEARS 1997 TO 2019

DEAAG RECIPIENT	GRANT AMOUNT (IN MILLIONS)	PROJECT DESCRIPTION
Eightieth Legislature, 2008–09 Biennium		
Beeville	\$0.4	Hangar construction
Beeville	\$0.1	Infrastructure improvements to warehouse
Bowie County	\$0.3	Street repairs
El Paso	\$0.2	Infrastructure improvements to warehouse
Gatesville	\$0.6	Lab building construction and berm repair
Ingleside (1)	\$0.4	Waste water plant repair
Ingleside (2)	\$0.1	Continuing improvements to waste water plant
Robstown (3)	\$0.1	Sewer line installation
San Antonio – Brooks	\$1.4	Extension of New Braunfels Avenue to Brooks City Road
San Antonio – Brooks	\$0.1	Building heating, ventilation, and air-conditioning installation
San Antonio – Kelly	\$1.3	Infrastructure improvements and construction
Total	\$5.0	
Eighty-first Legislature, 2010–11 Biennium		
Beeville (4)	\$0.7	Construct a 38,000-square-foot warehouse and helicopter maintenance building
Brazos County	\$2.0	Purchase and installation of plant growing equipment
Bryan	\$2.0	Construction and installation of two clean rooms
Texarkana	\$0.5	Upgrade electric distribution infrastructure and water distribution system
Blinn College (5)	\$0.1	Purchase virtual training equipment in welding and machine technology
Texas State Technical College – Harlingen	\$0.1	Develop engineering labs to provide training for Department of Defense contract workers
Texarkana College	\$0.3	Train Red River Army Depot workers and third party contractors
Total	\$5.1	
Eighty-second Legislature, 2012–13 Biennium		
No funds awarded	\$0.00	Not applicable
Eighty-third Legislature, 2014–15 Biennium		
Texarkana College	\$0.2	Fund training programs to support Level I and Two-Year Associate Degree Workforce Programs in diesel technology, welding, auto body, electronics, industrial maintenance, electrical technology, air conditioning/heating and refrigeration, and automotive technology at Red River Army Depot
Southwest Texas Junior College	\$0.2	Aviation Maintenance Level 1 Certificate in order to support aircraft maintenance at Laughlin Air Force Base
Total	\$0.5	

FIGURE A-1 (CONTINUED)
DEFENSE ECONOMIC ADJUSTMENT ASSISTANCE GRANT (DEAAG) PROGRAM AWARDS
FISCAL YEARS 1997 TO 2019

DEAAG RECIPIENT	GRANT AMOUNT (IN MILLIONS)	PROJECT DESCRIPTION
Eighty-fourth Legislature, 2016–17 Biennium		
Alamo Area Council of Governments	\$5.0	Additional and reliable water infrastructure to Joint Base San Antonio
Bexar County	\$4.7	Purchase of land to prevent encroachment at Randolph Air Force Base
City of Del Rio	\$3.3	Construction of aircraft protection shades
City of El Paso	\$2.0	Infrastructure at KBH Desalination Plant
City of Houston	\$3.1	Construction of a new air traffic control tower
City of Killeen	\$3.5	Construction of a new Army radar approach control facility
City of Wichita Falls	\$1.8	Perimeter Security – land acquisition and demolition
Tom Green County	\$2.0	Expansion of the intelligence mission at Goodfellow Air Force Base
Val Verde County	\$4.6	Construction of a defense control center
Howard College	\$0.3	Purchase mobile fire pumps and EMT dummy to support fire/EMT training at Goodfellow Air Force Base
Southwest Texas Junior College	\$0.2	Purchase equipment to support aircraft maintenance training program supporting Laughlin Air Force Base
Texarkana College	\$0.1	Purchase of equipment to support training programs supporting Red River Army Depot
Total	\$30.7	
Eighty-fifth Legislature, 2018–19 Biennium		
Bell County	\$3.1	Army airfield security project supporting Fort Hood
City of Corpus Christi	\$3.3	Corpus Christi Army Depot industrial security
City of Corpus Christi	\$2.7	Water infrastructure at Naval Air Station Corpus Christi
Tom Green County	\$4.6	Mission expansion at Goodfellow Air Force Base
City of Kingsville	\$0.1	Purchase of property to prevent encroachment at Naval Air Station Kingsville
City of Abilene	\$0.3	Dyess Air Force Base boundary fence correction
Port San Antonio	\$5.0	Airfield operations improvements supporting Joint Base San Antonio
City of Wichita Falls	\$1.5	Security gate upgrades at Sheppard Air Force Base
Total (6)	\$20.6	

NOTES:

- (1) Due to cost savings, only \$382,590.30 of the \$386,000 Ingleside award was distributed.
- (2) The Ingleside grant agreement for the amount \$100,000 was completely rescinded. This constitutes a \$3,409.70 difference in award and total disbursement.
- (3) Due to cost savings, only \$48,051.59 of the \$64,800 Robstown award was distributed.
- (4) The Beeville grant agreement for the amount \$645,613.86 was completely rescinded.
- (5) Funding for Blinn College, Texas State Technical College – Harlingen, and Texarkana College grants was provided from the rescinded Beeville grant. These grant numbers are not included in the total to avoid double counting.
- (6) Some grantees did not spend their entire grant during the previous round. The remainder was applied to the next round to fund additional projects.
- (7) Totals may not sum due to rounding.

SOURCE: Texas Military Preparedness Commission and Office of the Governor, Texas Defense Economic Adjustment Assistance Grant Program, 2018 Program Status Report.

OVERVIEW OF THE EFFECTIVENESS OF TARGETED PAY RAISES

Targeted pay raises affect a small, defined subset of Texas state employees. The Legislature has used these types of pay raises to improve retention in certain high-turnover jobs and to maintain a competitive salary relationship between state agency positions and similar positions in a relevant labor market. Since the 2010–11 biennium, 15 General Appropriations Act provisions or other actions by the Legislature have provided funding for targeted pay raises.

Legislative Budget Board staff analyzed targeted pay raises enacted during three recent biennia. This analysis indicated that the positions targeted for raises typically had higher voluntary separation rates before the targeted pay raise than positions not targeted for pay raises. Voluntary separation rates for most of these positions decreased during the year following the pay raise.

FACTS AND FINDINGS

- ◆ Since the 2010–11 biennium, there have been 15 General Appropriations Act provisions or other actions that provide funding for targeted pay raises. These raises have affected 16 agencies (counting the 14 Courts of Appeal as a single entity) and 144,794 state employees. The pay increases had a combined value of approximately \$747.8 million in All Funds, including approximately \$612.1 million in General Revenue Funds. These totals represent the marginal cost increase during the year the raises were authorized and not the ongoing cost to maintain them.
- ◆ Legislative Budget Board staff analysis indicates that lower-paid workers are the most likely employees to voluntarily separate and to involuntarily separate from employment. During fiscal year 2017, the voluntary separation rate for employees who earned less than \$30,000 per year was 22.2 percent, compared to 11.3 percent for all state employees.
- ◆ Most of the positions targeted for pay raises from fiscal years 2010 to 2017 had relatively higher rates of voluntary separation than positions not targeted for pay raises. In most cases, the positions that received targeted pay raises had decreases in the voluntary separation rates relative to the nontargeted positions.

- ◆ The targeted pay raises that were not associated with a decrease in a position's voluntary separation rate were in child welfare and corrections. Targeted raises do not address working conditions or caseloads. Research indicates that job satisfaction, work environment, and stress are important factors in voluntary separations in these disciplines.
- ◆ Voluntary separations from the Department of Family and Protective Services for staff who received a targeted pay raise decreased substantially relative to nontargeted positions during calendar year 2017 following a critical needs package approved in December 2016. Unlike previous targeted pay raises for workers at the agency, the critical needs package included components to improve both the work environment and increase quality of service by decreasing caseloads.

DISCUSSION

Targeted pay raises differ from across-the-board pay raises in that they affect a small, defined subset of state employees. The Legislature has used targeted pay raises to improve retention in certain high-turnover positions and to maintain a competitive salary relationship between state agency positions and similar positions in a relevant labor market. For instance, the Legislature has appropriated funds specifically for pay raises for direct care staff at State Supported Living Centers and for commissioned law enforcement (State Salary Schedule C) employees.

Provisions that provided funding for targeted pay raises were included in the 2010–11, 2014–15, and 2016–17 biennial General Appropriations Acts (GAA). In addition, the critical needs funding approved for the Department of Family and Protective Services (DFPS) in December 2016 included pay raises for certain employees. In total, these provisions have affected 16 agencies (counting the 14 Courts of Appeal as a single entity) and 144,794 state employees. The pay increases had a combined value of approximately \$747.8 million in All Funds, including approximately \$612.1 million in General Revenue Funds. These totals represent the marginal cost increase during the year the raises were authorized and not the ongoing cost to maintain them. **Appendices A, B, and C** show the agencies, employees, and appropriations for these

**FIGURE 1
TARGETED PAY RAISES FOR STATE EMPLOYEES IN THE GENERAL APPROPRIATIONS ACTS, 2010–11, 2014–15, 2016–17 BIENNIA, AND CRITICAL NEEDS FUNDING APPROVED DECEMBER 2016**

AGENCY	STAFF	ALL FUNDS	GENERAL REVENUE FUNDS AND GENERAL REVENUE–DEDICATED FUNDS	BIENNIUM OF TARGETED PAY RAISE(S)
Texas State Library and Archives Commission	69	\$400,000	\$400,000	2016–17
Department of Family and Protective Services	14,465	\$82,293,917	\$80,070,058	2014–15; 2016–17
Health and Human Services Commission (1)	16,105	\$60,770,508	\$35,816,909	2014–15
Supreme Court of Texas	25	\$289,000	\$289,000	2014–15
Court of Criminal Appeals	46	\$482,439	\$482,439	2014–15
14 Courts of Appeal	299	\$4,052,516	\$4,052,516	2014–15
Office of Court Administration, Texas Judicial Council	59	\$204,642	\$105,884	2014–15
Texas Alcoholic Beverage Commission	725	\$5,184,750	\$5,184,750	2010–11; 2014–15; 2016–17
Texas Department of Criminal Justice	94,818	\$441,443,935	\$441,443,935	2010–11; 2014–15; 2016–17
Texas Juvenile Justice Department	4,032	\$10,263,804	\$10,263,804	2014–15
Department of Public Safety	10,925	\$95,157,696	\$878,254	2010–11; 2014–15; 2016–17
Texas Commission on Environmental Quality	266	\$2,000,000	\$2,000,000	2016–17
Parks and Wildlife Department	2,646	\$24,591,018	\$24,310,286	2010–11; 2014–15; 2016–17
Railroad Commission of Texas	314	\$3,600,000	\$3,600,000	2014–15
Total	144,794	\$747,755,316	\$612,119,484	

NOTES:

(1) The Health and Human Services Commission amounts include provisions affecting positions previously at the Department of Aging and Disability Services and Department of State Health Services.

(2) Allocations for additional benefits were included in the provision affecting State Salary Schedule C employees.

SOURCES: Legislative Budget Board; Texas State Library and Archives Commission; Department of Family and Protective Services; Health and Human Services Commission; Supreme Court of Texas; Court of Criminal Appeals; Courts of Appeal; Office of Court Administration, Texas Judicial Council; Texas Alcoholic Beverage Commission; Texas Department of Criminal Justice; Department of Public Safety; Texas Commission on Environmental Quality; Parks and Wildlife Department; Railroad Commission of Texas.

targeted pay raises by biennium. Legislative Budget Board (LBB) staff analysis excludes provisions that authorized pay raises that included expansions of responsibilities or working hours, such as a provision in the Eighty-fourth Legislature, GAA, 2016–17 Biennium, that authorized funding to attain a 50.0-hour work week for Department of Public Safety (DPS) commissioned law enforcement officers. **Figure 1** shows, in GAA order, the agencies, employee counts, and appropriations associated with these provisions.

EFFECTS OF TARGETED PAY RAISES

Each state agency reports personnel actions to the Comptroller of Public Accounts (CPA) using one of three systems:

- the Standardized Payroll/Personnel Reporting System;
- the Human Resource Information System; or
- the Centralized Accounting and Payroll/Personnel System.

FIGURE 2
CHANGE IN VOLUNTARY SEPARATION RATE FOR SALARY GROUPS OF STATE EMPLOYEES
FISCAL YEARS 2008 AND 2017

SALARY RANGE	VOLUNTARY SEPARATION RATE		
	2008	2017	PERCENTAGE CHANGE
Less than \$30,000	18.2%	22.2%	21.8%
\$30,000 to \$40,000	8.9%	16.1%	80.9%
\$40,000 to \$50,000	5.6%	7.1%	27.4%
\$50,000 to \$60,000	4.5%	6.1%	37.2%
\$60,000 to \$70,000	4.0%	4.9%	22.2%
\$70,000 to \$80,000	3.5%	3.5%	(0.8%)
\$80,000 to \$90,000	2.7%	2.8%	3.8%
\$90,000 to \$100,000	3.8%	3.9%	4.4%
More than \$100,000	4.5%	3.1%	(31.0%)
Total	10.7%	11.3%	5.5%

SOURCE: Legislative Budget Board.

Agencies report wages paid, salary actions, changes in employment information, and reasons for employee separation from the agency. CPA provides this information to the State Auditor's Office, Classification Team, which provided LBB staff with a deidentified version of this data. LBB staff used this data to analyze trends in separation from employment for all employees and for those who work in positions that the Legislature targeted for pay raises. LBB staff compared those trends to trends in the positions that did not receive pay raises.

During fiscal year 2017, the state averaged approximately 155,399 employees, excluding employees of Institutions of Higher Education, and had 17,498 voluntary separations from state agency employment and 6,649 involuntary separations. Involuntary separations include termination at will, dismissal for cause, decrease in workforce, and resignation in lieu of involuntary separation. Based on this analysis, lower-paid workers are the most likely employees to voluntarily separate and to involuntarily separate from employment.

During fiscal year 2017, the voluntary separation rate (total voluntary separations divided by total number of employees) for employees who earned less than \$30,000 per year was 22.2 percent. The voluntary separation rate for all state employees was 11.3 percent. During 2017, 81.6 percent of state employees who voluntarily separated earned less than \$50,000 per year.

From fiscal years 2008 to 2017, the voluntary separation rate increased for all salary groups included in this analysis (by \$10,000 increments, starting with less than \$30,000) except for two groups. The rate for employees who earned from \$70,000 to \$80,000 decreased less than 1.0 percent, and the rate for employees who earned more than \$100,000 per year decreased by 31.6 percent. For every salary group, the voluntary separation rate was lowest during either fiscal years 2009 or 2010. At the end of fiscal year 2009, the Legislature provided a onetime payment of \$800 for state employees who had been in continuous employment with their state agencies from March 2009 to August 2009. **Figure 2** shows the change in voluntary separation rate for different salary groups from fiscal years 2008 to 2017. Salaries include direct compensation only and exclude benefits.

TARGETED PAY RAISES

With the exception of the positions targeted by the Eighty-first Legislature, Regular Session, 2009, the positions that the Legislature targeted for pay raises from fiscal years 2010 to 2017 had relatively higher voluntary separation rates before the targeted pay raises than positions that were not targeted for pay raises. One way to identify whether an effect was likely from the targeted pay raise on voluntary separation rates is to use the positions that were not targeted for a pay raise as a control group.

Figure 3 shows a comparison of the voluntary separation rates of targeted positions and all other positions during the year before and the year after a targeted pay raise. The data

FIGURE 3
VOLUNTARY SEPARATION RATES AMONG STATE EMPLOYEES DURING THE YEAR BEFORE AND AFTER A TARGETED PAY RAISE, 2010–11 TO 2016–17 BIENNIA

BIENNIUM	POSITIONS	VOLUNTARY SEPARATION RATE		
		YEAR BEFORE TARGETED PAY RAISE	YEAR AFTER TARGETED PAY RAISE	PERCENTAGE POINT CHANGE
2010–11	Targeted Pay Raise	8.4%	7.7%	(0.7%)
	Nontargeted Pay Raise	8.4%	8.2%	(0.2%)
	Difference	0.0%	(0.5%)	(0.5%)
2014–15	Targeted Pay Raise	13.3%	13.0%	(0.3%)
	Nontargeted Pay Raise	8.7%	8.4%	(0.3%)
	Difference	4.6%	4.6%	0.0%
2016–17	Targeted Pay Raise	14.0%	12.9%	(1.1%)
	Nontargeted Pay Raise	9.3%	9.2%	(0.1%)
	Difference	4.7%	3.7%	(1.0%)
Department of Family and Protective Services Critical Needs, December 2016	Targeted Pay Raise	18.3%	10.4%	(7.8%)
	Nontargeted Pay Raise	10.3%	11.4%	(1.1%)
	Difference	7.9%	(1.0%)	(8.9%)

NOTE: Legislative Budget Board staff analysis compared the difference between the voluntary separation rates of targeted positions to nontargeted positions during the year before and after a targeted raise. A negative percentage-point change of the differences indicates that the targeted pay raise contributed to a decrease in the voluntary separation rate of targeted positions relative to nontargeted positions after the raise was implemented. If the percentage-point change of the differences is positive, then the voluntary separation rate of the targeted positions increased relative to the nontargeted positions. Values have been rounded.
 SOURCE: Legislative Budget Board.

shows the percentage-point change of the differences for the two populations. A more negative percentage-point change in the differences indicates a greater relative change in the separation rates. **Figure 3** shows that in all but the 2014–15 biennium, the percentage-point change of the differences is negative. This change indicates that those targeted pay raises may have contributed to decreases in the voluntary separation rates of the targeted positions relative to nontargeted positions. Typically, the relative decrease in the voluntary separation rates of the targeted positions lasts one year. Further analysis of all these pay raises, including those during the 2014–15 biennium, is shown in **Figure 3**.

2010–11 BIENNIA

The Eighty-first Legislature, GAA, 2010–11 Biennium, included four targeted pay-raise provisions. These provisions

included one affecting State Salary Schedule C employees at Texas Alcoholic Beverage Commission (TABC), Texas Department of Criminal Justice (TDCJ), Texas Parks and Wildlife Department (TPWD), and Department of Public Safety (DPS) and provisions targeting other positions at TPWD and TDCJ. **Appendix A** shows the agencies, employees, and appropriations for each of the targeted pay raises during the 2010–11 biennium. **Figure 4** shows the combined totals for these provisions in GAA order.

The targeted pay raises authorized by the 2010–11 GAA went into effect September 1, 2009. During fiscal years 2008 and 2009, the targeted pay raise positions had similar voluntary separation rates to the positions that did not receive pay raises. After the pay raises went into effect, the separation rates for both groups decreased during fiscal year 2010, with larger decreases for the targeted pay raise

**FIGURE 4
PROVISIONS INCLUDED IN THE GENERAL APPROPRIATIONS ACT, 2010–11 BIENNIUM, REGARDING TARGETED PAY RAISES FOR STATE EMPLOYEES**

AGENCY	STAFF	ALL FUNDS	GENERAL REVENUE FUNDS AND GENERAL REVENUE–DEDICATED FUNDS
Texas Alcoholic Beverage Commission	272	\$1,395,570	\$1,395,570
Texas Department of Criminal Justice	37,714	\$128,621,250	\$128,621,250
Department of Public Safety	3,612	\$19,335,454	\$0
Parks and Wildlife Department	1,614	\$14,936,576	\$14,655,844
Additional Benefits		\$3,768,000	\$688,260
Total	43,212	\$168,056,850	\$145,360,924

NOTE: Allocations for additional benefits were included in the provision affecting State Salary Schedule C employees.
SOURCES: Texas Alcoholic Beverage Commission; Texas Department of Criminal Justice; Department of Public Safety; Parks and Wildlife Department.

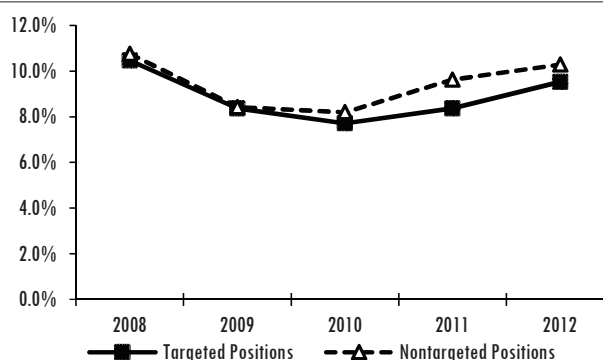
positions. **Figure 5** shows voluntary separation rates for both groups of positions from fiscal years 2008 to 2012.

2014–15 BIENNIUM

The Eighty-third Legislature, GAA, 2014–15 Biennium, included a provision authorizing pay raises for Salary Schedule C employees and a provision authorizing targeted pay raises at 10 agencies. **Appendix B** shows the agencies, employees, and appropriations for each of the targeted pay raises during the 2014–15 biennium. **Figure 6** shows the combined totals for these provisions.

The targeted pay raises authorized in the 2014–15 GAA included positions that employed approximately one-third of the state’s workforce. The 2014–15 GAA also included across-the-board salary increases of 1.0 percent for fiscal year 2014 and 2.0 percent for fiscal year 2015 for employees who did not receive targeted pay raises. The targeted pay raises went into effect at the beginning of fiscal year 2014. During the year before the targeted pay raise, the voluntary separation rate for employees in the targeted pay raise positions was 4.6 percentage points higher than for employees in nontargeted positions. After the implementation of the targeted pay raise, the difference in voluntary separation rates was unchanged at 4.6 percentage points. During fiscal year 2015, the voluntary separation rate of the targeted positions increased relative to nontargeted positions. During fiscal year 2015, the nontargeted positions received a 2.0 percent across-the-board salary increase, which might partially explain the relative increase in voluntary separation rate of the targeted positions in that year. **Figure 7** shows voluntary separation rates for both groups of positions from fiscal years 2011 to 2016.

**FIGURE 5
VOLUNTARY SEPARATION RATES FOR STATE EMPLOYEE POSITIONS TARGETED FOR PAY RAISES DURING THE 2010–11 BIENNIUM COMPARED TO NONTARGETED POSITIONS FISCAL YEARS 2008 TO 2012**



SOURCE: Legislative Budget Board.

These targeted pay raises occurred at a time when the voluntary separation rate of the targeted positions at DFPS had been increasing. From fiscal years 2011 to 2016, voluntary separations increased by 145.4 percent at DFPS and increased by 2.5 percent for the targeted positions at other state agencies. The voluntary separation rate of the targeted positions at DFPS increased by 6.4 percentage points during the same period, compared to a 1.0 percentage-point increase among state targeted positions.

LBB staff analyzed the effects of the pay raise on the targeted positions at DFPS and other state targeted positions separately to determine any effect on the positions at other agencies. During the year before the targeted pay raise, the voluntary separation rate of the targeted positions at DFPS

**FIGURE 6
TARGETED PAY RAISES FOR STATE EMPLOYEES INCLUDED IN THE EIGHTY-THIRD LEGISLATURE, GENERAL APPROPRIATIONS ACT, 2014–15 BIENNIUM**

AGENCY	STAFF	ALL FUNDS	GENERAL REVENUE FUNDS AND GENERAL REVENUE–DEDICATED FUNDS
Department of Aging and Disability Services	6,366	\$32,721,362	\$13,751,152
Department of Family and Protective Services	7,666	\$20,711,836	\$18,487,977
Department of State Health Services	2,863	\$14,790,336	\$14,790,336
Supreme Court of Texas	25	\$289,000	\$289,000
Court of Criminal Appeals	46	\$482,439	\$482,439
14 Courts of Appeal	299	\$4,052,516	\$4,052,516
Office of Court Administration, Texas Judicial Council	59	\$204,642	\$105,884
Texas Alcoholic Beverage Commission	452	\$3,784,402	\$3,784,402
Texas Department of Criminal Justice	27,824	\$122,564,693	\$122,564,693
Texas Juvenile Justice Department	1,420	\$5,988,086	\$5,988,086
Department of Public Safety	3,583	\$74,889,097	\$0
Parks and Wildlife Department	521	\$9,111,332	\$9,111,332
Railroad Commission of Texas	314	\$3,600,000	\$3,600,000
Additional Benefits (2)		\$13,020,073	\$2,308,961
Total	51,438	\$306,209,814	\$2,308,961

NOTES:

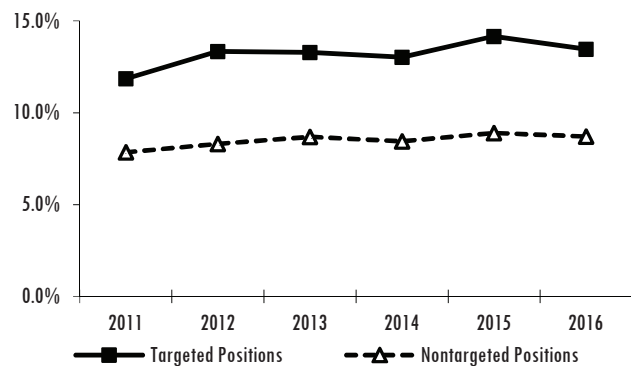
- (1) A targeted pay raise for nonstate employees at the University of Texas Medical Branch at Galveston and Texas Tech University Health Sciences Center was included in the Eighty-third Legislature, General Appropriations Act, 2014–15 Biennium, but excluded from this analysis.
- (2) Allocations for additional benefits were included in the provision affecting State Salary Schedule C employees.

SOURCES: Legislative Budget Board; Department of State Health Services; Department of Family and Protective Services; Supreme Court of Texas; Court of Criminal Appeals; Courts of Appeal; Office of Court Administration, Texas Judicial Council; Texas Alcoholic Beverage Commission; Texas Department of Criminal Justice; Texas Juvenile Justice Department; Department of Public Safety; Parks and Wildlife Department; Railroad Commission of Texas.

was 2.2 percentage points higher than for the nontargeted positions. During the year after the targeted pay raise, the voluntary separation rate of the targeted positions was 4.4 percentage points higher than for the nontargeted positions. This result suggests that the pay raise did not decrease the rate at DFPS. This result is consistent with research showing that stress, burnout, and a lack of job satisfaction can be more important than income as factors contributing to turnover in child welfare and social work positions.

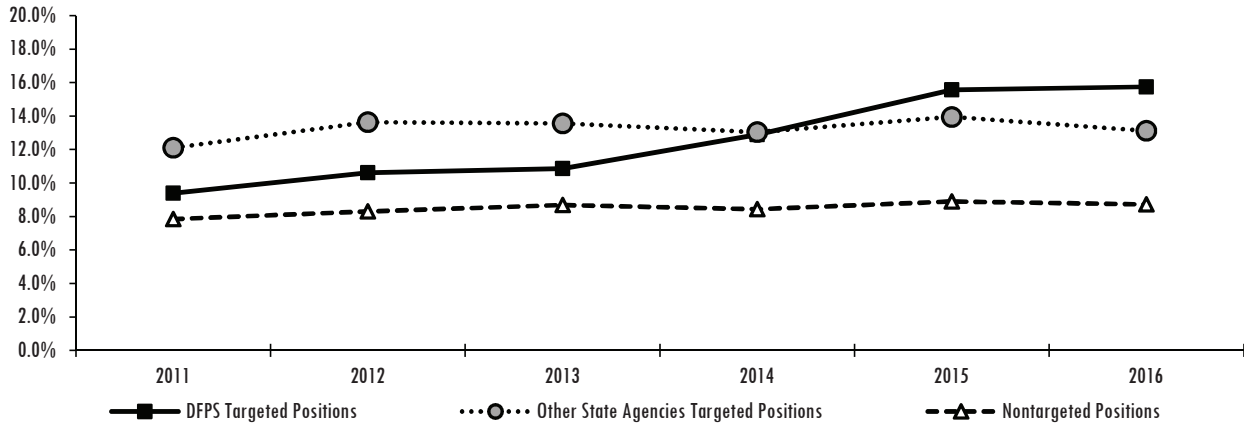
However, the voluntary separation rate among the targeted positions at other state agencies was 4.9 percentage points higher than the nontargeted positions during the year before the pay raise and 4.6 percentage points higher than the nontargeted positions during the year after the pay raise. The decrease in the differences indicates that the pay raise may have had the effect of decreasing voluntary separations rates among targeted positions relative to nontargeted positions.

**FIGURE 7
VOLUNTARY SEPARATION RATES FOR STATE EMPLOYEE POSITIONS TARGETED FOR PAY RAISES DURING THE 2014–15 BIENNIUM COMPARED TO NONTARGETED POSITIONS, FISCAL YEARS 2011 TO 2016**



SOURCE: Legislative Budget Board.

FIGURE 8
VOLUNTARY SEPARATION RATES OF POSITIONS AT THE DEPARTMENT OF FAMILY AND PROTECTIVE SERVICES TARGETED FOR PAY RAISES DURING THE 2014–15 BIENNIUM, TARGETED POSITIONS AT OTHER STATE AGENCIES, AND NONTARGETED POSITIONS, FISCAL YEARS 2011 TO 2016



SOURCE: Legislative Budget Board.

Figure 8 shows the annual voluntary separation rates for targeted positions at DFPS, all other targeted positions, and all state nontargeted positions from fiscal years 2011 to 2016.

2016–17 BIENNIUM

The 2016–17 GAA included targeted pay raises for positions at 11 agencies. Appendix C shows the agencies, employees, and appropriations for each of the targeted pay raises during the 2016–17 biennium. Figure 9 shows the combined totals for these provisions.

The 2016–17 GAA included targeted pay raises for positions that employ approximately one-third of the state’s workforce. The 2016–17 GAA also included an across-the-board salary increase for state employees during fiscal year 2016 to offset an increase to the member retirement contribution. The targeted pay raises went into effect at the beginning of fiscal year 2016. During the year before the targeted pay raise, the voluntary separation rate for employees in the targeted pay raise positions was 4.7 percentage points higher than for employees in nontargeted positions. After the implementation

FIGURE 9
TARGETED PAY RAISES FOR STATE EMPLOYEES INCLUDED IN THE EIGHTY-FOURTH LEGISLATURE, GENERAL APPROPRIATIONS ACT, 2016–17 BIENNIUM

AGENCY	STAFF	ALL FUNDS	GENERAL REVENUE FUNDS AND GENERAL REVENUE–DEDICATED FUNDS
Library and Archives Commission	69	\$400,000	\$400,000
Health and Human Services Commission	6,876	\$13,258,810	\$7,275,421
Texas Alcoholic Beverage Commission	1	\$4,778	\$4,778
Texas Department of Criminal Justice	29,280	\$190,257,992	\$190,257,992
Texas Juvenile Justice Department	2,612	\$4,275,718	\$4,275,718
Department of Public Safety	3,730	\$933,145	\$878,254
Texas Commission on Environmental Quality	266	\$2,000,000	\$2,000,000
Parks and Wildlife Department	511	\$543,110	\$543,110
Additional Benefits (1)		\$233,018	\$224,428
Total	43,345	\$211,906,571	\$205,859,701

NOTE: Allocations for Additional Benefits were included in the provision affecting Salary Schedule C employees.

SOURCES: Legislative Budget Board; Library and Archives Commission; Health and Human Services Commission; Texas Alcoholic Beverage Commission; Texas Department of Criminal Justice; Texas Juvenile Justice Department; Department of Public Safety; Texas Commission on Environmental Quality; Parks and Wildlife Department.

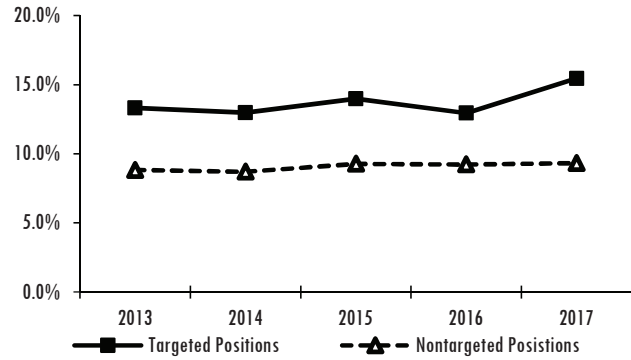
of the targeted pay raise, voluntary separation rates for the targeted positions and nontargeted positions each decreased during fiscal year 2016, with greater decreases among the targeted pay raise positions. During the year after the pay raise, the voluntary separation rate for the targeted positions was 3.7 percentage points higher than for the nontargeted positions. The 1.0 percentage point decrease in the differences indicates that the targeted pay raise may have been effective at decreasing the voluntary separation rate of the targeted positions. During fiscal year 2017, the voluntary separation rates of the targeted positions increased relative to nontargeted positions, primarily as a result of increased voluntary separation rates in targeted positions at the Department of Aging and Disability Services, Department of State Health Services, TDCJ, and the Texas Juvenile Justice Department (TJJD). **Figure 10** shows voluntary separation rates for both groups of positions from fiscal years 2013 to 2017.

One notable exception to the improvement in the turnover rate among targeted positions is the group of targeted positions at TJJD. During the year before the raise, the positions at TJJD had a voluntary separation rate that was 10.3 percentage points higher than the rate for nontargeted positions. During the year after the pay raise, the difference increased to 14.2 percentage points. The 3.9 percentage-point increase in the differences suggests that the pay raise did not decrease the voluntary separation rate of the targeted positions at TJJD relative to the nontargeted positions. Similarly to the increase in voluntary separation rates among the positions at DFPS following a targeted pay raise, research indicates that nonfinancial factors, including overall job satisfaction, degree of burnout, and the work environment, are important factors in whether employees choose to separate from positions in correctional institutions.

DFPS CRITICAL NEEDS FUNDING

The Critical Needs funding for DFPS approved by the Legislative Budget Board on December 1, 2016, included funding for salary increases for current employees in Child Protective Services (CPS) Direct Delivery Staff and Program Support. This funding differed from the previous DFPS targeted pay raise because it also included funding for

FIGURE 10
VOLUNTARY SEPARATION RATES FOR STATE EMPLOYEE POSITIONS TARGETED FOR PAY RAISES DURING THE 2016–17 BIENNIUM COMPARED TO NONTARGETED POSITIONS, FISCAL YEARS 2013 TO 2017



SOURCE: Legislative Budget Board.

approximately 810 new CPS staff members. **Figure 11** shows the amounts and employee counts affected by the targeted pay raise for existing employees.

In December 2016, the LBB approved a package of funding for DFPS that included targeted pay raises for certain child and family protective service employees. During fiscal year 2016, the voluntary separation rate of employees for the targeted positions was 8.0 percentage points higher than for nontargeted positions. This rate was at least 6.5 percentage points higher than for nontargeted positions each year from fiscal years 2008 to 2016. The targeted pay raise went into effect during the second quarter of fiscal year 2017. During fiscal year 2017, the voluntary separation rate for the targeted positions was 0.4 percentage points higher than for the nontargeted positions. **Figure 12** shows the voluntary separation rates for the agency’s targeted and nontargeted positions from fiscal years 2008 to 2017.

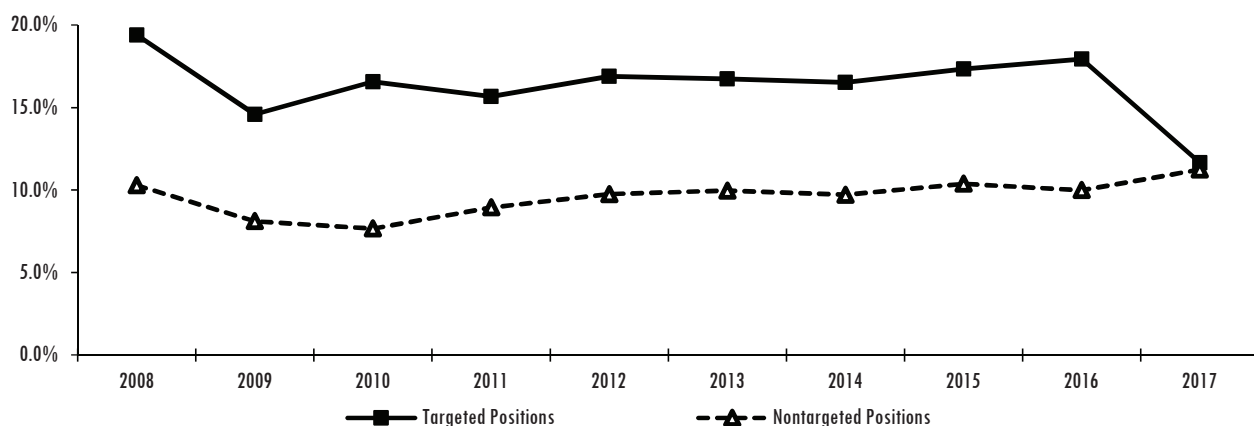
To analyze the effects of this targeted pay raise, LBB staff compared the difference between the voluntary separation rates of the targeted positions and the nontargeted positions during the four fiscal quarters before the implementation of the pay raise—from the second quarter of fiscal year 2016 to the first quarter of fiscal year 2017—to the difference of the

FIGURE 11
DEPARTMENT OF FAMILY AND PROTECTIVE SERVICES CRITICAL NEEDS FUNDING, APPROVED DECEMBER 1, 2016

AGENCY	STAFF	ALL FUNDS	GENERAL REVENUE FUNDS AND GENERAL REVENUE—DEDICATED FUNDS
Department of Family and Protective Services	6,799	\$61,582,081	\$61,582,081

SOURCE: Department of Family and Protective Services.

FIGURE 12
VOLUNTARY SEPARATION RATES OF DEPARTMENT OF FAMILY AND PROTECTIVE SERVICES POSITIONS TARGETED FOR PAY RAISES IN DECEMBER 2016 AND NONTARGETED POSITIONS, FISCAL YEARS 2008 TO 2017



SOURCE: Legislative Budget Board; State Auditor's Office.

rates during the four fiscal quarters after the implementation—from the second quarter of fiscal year 2017 to the first quarter of fiscal year 2018. During the four quarters before the pay raise, the voluntary separation rate for the targeted positions was 7.9 percentage points higher than for the nontargeted positions. During the four quarters after the pay raise, the voluntary separation rate for the targeted positions was 1.0 percentage point less than for the nontargeted positions. The 8.9 percentage-point decrease in the difference indicates that the critical needs funding package that included the targeted pay raise was effective at decreasing voluntary separation for the targeted positions. Unlike previous targeted pay raises for workers at DFPS, the critical needs package included components to improve both the work environment and quality of service by decreasing caseloads.

ADDITIONAL DETAIL REGARDING TARGETED PAY RAISES

The Legislature has used targeted pay raises to address turnover and equity issues among state employees. In most of these cases, the pay increases were associated with a short-term decrease in the turnover rate.

Appendices A, B and C show the targeted pay raise provisions from the 2010–11, 2014–15, and 2016–17 biennial GAAs that are shown in **Figure 1**.

APPENDIX A – 2010–11 BIENNIUM

The Eighty-first Legislature, General Appropriations Act (GAA), 2010–11 Biennium, included four provisions authorizing targeted pay raises.

Figure A–1 shows a provision affecting State Salary Schedule C employees.

FIGURE A–1
APPROPRIATION FOR A SALARY INCREASE FOR STATE EMPLOYEES IN SALARY SCHEDULE C, EIGHTY-FIRST LEGISLATURE, GENERAL APPROPRIATIONS ACT, 2010–11 BIENNIUM, ARTICLE IX, SECTION 17.01

AGENCY	STAFF	ALL FUNDS	GENERAL REVENUE FUNDS AND GENERAL REVENUE–DEDICATED FUNDS
Texas Alcoholic Beverage Commission	272	\$1,395,570	\$1,395,570
Texas Department of Criminal Justice	112	\$433,292	\$433,292
Parks and Wildlife Department	499	\$2,835,684	\$2,554,952
Department of Public Safety	3,612	\$19,335,454	\$0
Additional Benefits		\$3,768,000	\$688,260
Total	4,513	\$27,768,000	\$5,072,074

SOURCE: Legislative Budget Board.

The 2010–11 GAA, Article VI, Parks and Wildlife Department, Rider 27, provided \$12.1 million in General Revenue–Dedicated funds “to address salary and equity compensation issues for staff in wildlife, fishery, law enforcement and support divisions.” Figure A–2 shows the All Funds and General Revenue–Dedicated Funds appropriations for this provision, and the number of employees affected by it.

FIGURE A–2
EIGHTY-FIRST LEGISLATURE, GENERAL APPROPRIATIONS ACT, 2010–11 BIENNIUM, ARTICLE VI, PARKS AND WILDLIFE DEPARTMENT, RIDER 27, APPROPRIATION OF RECEIPTS FROM GENERAL REVENUE–DEDICATED ACCOUNTS

AGENCY	STAFF	ALL FUNDS	GENERAL REVENUE–DEDICATED FUNDS
Parks and Wildlife Department	1,115	\$12,100,892	\$12,100,892

SOURCE: Legislative Budget Board.

The 2010–11 GAA, Article V, Department of Criminal Justice, Rider 84, appropriated \$15.2 million in General Revenue Funds for a 3.5 percent pay increase during each year of the biennium for TDCJ Other Unit Staff. Staff included industrial specialists, unit clerical and maintenance staff, and substance abuse treatment staff. This increase was in addition to a pay raise for correctional officers. Figures A–3 and A–4 show the All Funds and General Revenue Funds appropriations to the agency for these pay raises.

FIGURE A–3
EIGHTY-FIRST LEGISLATURE, GENERAL APPROPRIATIONS ACT, 2010–11 BIENNIUM, ARTICLE V, TEXAS DEPARTMENT OF CRIMINAL JUSTICE, RIDER 84, SALARY INCREASE FOR CERTAIN DEPARTMENT EMPLOYEES

AGENCY	STAFF	ALL FUNDS	GENERAL REVENUE FUNDS
Texas Department of Criminal Justice	5,413	\$15,150,515	\$15,150,515

SOURCE: Legislative Budget Board.

FIGURE A-4
EIGHTY-FIRST LEGISLATURE, GENERAL APPROPRIATIONS ACT, 2010-11 BIENNIUM, ARTICLE V, TEXAS DEPARTMENT OF CRIMINAL JUSTICE, CORRECTIONAL OFFICER PAY RAISE

AGENCY	STAFF	ALL FUNDS	GENERAL REVENUE FUNDS
Texas Department of Criminal Justice	32,189	\$113,037,443	\$113,037,443

SOURCE: Legislative Budget Board.

APPENDIX B – 2014–15 BIENNIUM

The Eighty-third Legislature, General Appropriations Act (GAA), 2014–15 Biennium, included provisions authorizing targeted pay raises for certain state employees.

Figure B–1 shows a provision authorizing a pay raise for employees in State Salary Schedule C.

FIGURE B–1
EIGHTY-THIRD LEGISLATURE, GENERAL APPROPRIATIONS ACT, 2014–15 BIENNIUM, ARTICLE IX, SECTION 17.07,
APPROPRIATION FOR SALARY INCREASE FOR STATE EMPLOYEES IN SALARY SCHEDULE C

AGENCY	STAFF	ALL FUNDS	GENERAL REVENUE FUNDS, GENERAL REVENUE-DEDICATED FUNDS, AND OTHER FUNDS
Texas Alcoholic Beverage Commission	452	\$3,784,402	\$3,784,402
Texas Department of Criminal Justice	124	\$1,952,893	\$1,952,893
Parks and Wildlife Department	521	\$9,111,332	\$9,111,332
Department of Public Safety	3,583	\$74,889,097	\$0
Additional Benefits		\$13,020,073	\$2,308,961
Total	4,680	\$102,757,797	\$17,157,588

SOURCE: Legislative Budget Board.

In addition to the Salary Schedule C provision, the 2014–15 GAA, Article IX, Section 17.11, appropriated \$203.5 million in All Funds, including \$182.2 in General Revenue Funds and General Revenue–Dedicated Funds, for state employee pay raises targeted at various positions in 11 agencies. Provisions in this rider affected approximately 47,000 state employees. **Figure B–2** shows the agencies included in this section, excluding provisions that did not affect state employees.

FIGURE B–2
CERTAIN TARGETED SALARY INCREASES FOR STATE EMPLOYEES PROVIDED IN THE EIGHTY-THIRD LEGISLATURE, GENERAL APPROPRIATIONS ACT, 2014–15 BIENNIUM, ARTICLE IX, SECTION 17.11

AGENCY	STAFF	ALL FUNDS	GENERAL REVENUE FUNDS AND GENERAL REVENUE-DEDICATED FUNDS
Department of Aging and Disability Services	6,366	\$32,721,362	\$13,751,152
Department of Family and Protective Services	7,666	\$20,711,836	\$18,487,977
Department of State Health Services	2,863	\$14,790,336	\$14,790,336
Supreme Court of Texas	25	\$289,000	\$289,000
Court of Criminal Appeals	46	\$482,439	\$482,439
14 Courts of Appeal	299	\$4,052,516	\$4,052,516
Office of Court Administration, Texas Judicial Council	59	\$204,642	\$105,884
Texas Department of Criminal Justice	27,700	\$120,611,800	\$120,611,800
Texas Juvenile Justice Department	1,420	\$5,988,086	\$5,988,086
Railroad Commission	314	\$3,600,000	\$3,600,000
Total	46,758	\$203,452,017	\$182,159,190

SOURCE: Legislative Budget Board.

APPENDIX C – 2016–17 BIENNIUM

Figure C–1 shows a salary increase included in the Eighty-fourth Legislature, General Appropriations Act (GAA), 2016–17 Biennium, for employees in State Salary Schedule C.

**FIGURE C–1
EIGHTY-FOURTH LEGISLATURE, GENERAL APPROPRIATIONS ACT, 2016–17 BIENNIUM, ARTICLE IX, SECTION 17.05,
APPROPRIATIONS FOR SALARY INCREASES FOR CERTAIN STATE EMPLOYEES IN SALARY SCHEDULE C**

AGENCY	STAFF	ALL FUNDS	GENERAL REVENUE FUNDS AND GENERAL REVENUE–DEDICATED FUNDS
Texas Alcoholic Beverage Commission	1	\$4,778	\$4,778
Texas Department of Criminal Justice	9	\$7,906	\$7,906
Texas Parks and Wildlife Department	511	\$543,110	\$543,110
Department of Public Safety	3,730	\$933,145	\$878,254
Additional Benefits		\$233,018	\$224,428
Total	4,251	\$1,721,957	\$1,658,476

SOURCE: Legislative Budget Board.

In addition to the provision affecting Salary Schedule C employees, the 2016–17 GAA included four other provisions that gave pay raises to certain state employees. The 2016–17 GAA, Article I, Library and Archive Commission, Rider 11, allocated \$200,000 for each year of the biennium to the agency’s strategies to “provide competitive wages for parity with other state agencies and libraries.” **Figure C–2** shows the amount included in and employees affected by this provision.

**FIGURE C–2
EIGHTY-FOURTH LEGISLATURE, GENERAL APPROPRIATIONS ACT, 2016–17 BIENNIUM, ARTICLE I, LIBRARY AND ARCHIVES COMMISSION, RIDER 11**

AGENCY	STAFF	ALL FUNDS	GENERAL REVENUE FUNDS
Library and Archives Commissions	69	\$400,000	\$400,000

SOURCE: Legislative Budget Board.

The 2016–17 GAA, Article II, Special Provisions, Section 48, directed the Department of Aging and Disability Services and the Department of State Health Services to spend approximately \$6.6 million in All Funds, including approximately \$4.4 million in General Revenue Funds, to provide wage increases for registered nurses (RN) and licensed vocational nurses (LVN) at State Supported Living Centers (SSLC) and State Hospitals with the highest turnover rates. Client services of both agencies were transferred to the Health and Human Services Commission (HHSC) pursuant to Senate Bill 200, Eighty-fourth Legislature, 2015. **Figure C–3** shows the LVNs and RNs affected by the provision by institution.

**FIGURE C–3
LICENSED VOCATIONAL NURSES AND REGISTERED NURSES AFFECTED BY EIGHTY-FOURTH LEGISLATURE, GENERAL APPROPRIATIONS ACT, 2016–17 BIENNIUM, ARTICLE II, SPECIAL PROVISIONS, SECTION 48**

ENTITY	LICENSED VOCATIONAL NURSES	REGISTERED NURSES	TOTAL
State Hospitals	228	311	539
State Supported Living Centers	176	76	252
Total	404	387	791

SOURCE: Health and Human Services Commission.

Figure C–4 shows the total number of employees affected and the All Funds and General Revenue Funds costs of the provision.

**FIGURE C-4
TARGETED WAGE INCREASES PROVIDED IN THE EIGHTY-FOURTH LEGISLATURE, GENERAL APPROPRIATIONS ACT, 2016-17 BIENNIUM, ARTICLE II, SPECIAL PROVISIONS, SECTION 48**

AGENCY	STAFF	ALL FUNDS	GENERAL REVENUE FUNDS
Department of Aging and Disability Services and Department of State Health Services	791	\$6,607,056	\$4,404,298

SOURCE: Legislative Budget Board.

The 2016-17 GAA, Article V, Department of Criminal Justice, Rider 63, included six provisions providing funding increases for multiple programs and positions. **Figure C-5** shows the provisions providing 8.0 percent wage increases to state employees.

**FIGURE C-5
FUNDING INCREASES PROVIDED IN THE EIGHTY-FOURTH LEGISLATURE, GENERAL APPROPRIATIONS ACT, 2016-17 BIENNIUM, ARTICLE V, DEPARTMENT OF CRIMINAL JUSTICE, RIDER 63(A) AND (F)**

SECTION	STAFF	ALL FUNDS	GENERAL REVENUE FUNDS
(a) Correctional and Parole Officers	28,961	\$188,000,218	\$188,000,218
(f) Board of Pardons and Paroles parole officers	310	\$2,249,868	\$2,249,868
Total	29,271	\$190,250,086	\$190,250,086

SOURCE: Legislative Budget Board.

The 2016-17 GAA, Article VI, Commission on Environmental Quality, Rider 31, provided \$1.0 million for each year of the biennium for salary increases for specialized job classifications, including accountants, chemists, engineers, and administrators, among others. **Figure C-6** shows the amounts and employees affected by this provision.

**FIGURE C-6
SALARY INCREASE PROVIDED IN THE EIGHTY-FOURTH LEGISLATURE, GENERAL APPROPRIATIONS ACT, 2016-17 BIENNIUM, ARTICLE VI, COMMISSION ON ENVIRONMENTAL QUALITY, RIDER 31**

AGENCY	STAFF	ALL FUNDS	GENERAL REVENUE FUNDS
Texas Commission on Environmental Quality	266	\$2,000,000	\$2,000,000

SOURCE: Legislative Budget Board.

In addition to these provisions, the 2016-17 GAA included items that allocated funds for targeted pay raises for direct support professionals working in SSLCs at HHSC and for juvenile correctional and parole officers at the Texas Juvenile Justice Department. **Figure C-7** shows the employees and amounts affected by these items.

**FIGURE C-7
PAY RAISES PROVIDED TO THE HEALTH AND HUMAN SERVICES COMMISSION AND JUVENILE JUSTICE DEPARTMENT IN THE EIGHTY-FOURTH LEGISLATURE, GENERAL APPROPRIATIONS ACT, 2016-17 BIENNIUM**

AGENCY	STAFF	ALL FUNDS	GENERAL REVENUE FUNDS
Health and Human Services Commission	6,085	\$6,651,754	\$2,871,123
Texas Juvenile Justice Department	2,612	\$4,275,718	\$4,275,718
Total	8,697	\$10,927,472	\$7,146,841

SOURCE: Legislative Budget Board.

OVERVIEW OF STATE AGENCY AND EMPLOYEE USE OF CERTAIN NONMONETARY BENEFITS

Nonmonetary benefits, including wellness programs, flexible scheduling and telecommuting, and employer-sponsored training and professional development, enhance the package of direct and indirect compensation offered to state employees in Texas. Various sections of the Texas Government Code authorize agencies to offer a range of these benefits.

Legislative Budget Board staff collected information from 13 state agencies that collectively employed approximately 56.3 percent of all state employees during fiscal year 2017. The data collected showed how often agencies offer statutorily authorized nonmonetary benefits, how the implementation of benefits varies among agencies, and which benefits employees use the most.

Most of the agencies responding to the information request have adopted nonmonetary benefits authorized by statute. Seven made use of most or all of the wellness benefits pursuant to the Texas Government Code, Chapter 664. Most of the 13 responding agencies authorize some degree of telecommuting or flexible scheduling pursuant to the Texas Government Code, Chapter 658. Agencies have used the authorization in the Texas Government Code, Chapter 656, to offer a range of training and educational support to employees.

The nonmonetary benefits authorized in the Texas Government Code are similar to those offered in private sector and other public sector employment. Typically, state agencies have used these authorizations to adapt benefits to their cultures and workforces and have adopted policies that limit potential abuse.

FACTS AND FINDINGS

- ◆ Throughout the United States economy, employee compensation packages have evolved to include nonmonetary benefits as a standard part.
- ◆ The ability to report participation rates in wellness activities varied among agencies, especially at those in which wellness, telecommuting, and flexible scheduling participation is tracked and managed at the employee-supervisor level.
- ◆ Of the agencies contacted, most offered at least some of the wellness benefits pursuant to the Texas

Government Code, Chapter 664. Seven agencies made use of most or all of the benefits, and two agencies did not offer any of these benefits.

- ◆ Most responding agencies authorized telecommuting or flexible scheduling. More than half the employees at four agencies either telecommuted or worked an alternate schedule.
- ◆ All responding agencies provide some degree of staff development training. Eight agencies offer tuition reimbursement for employees seeking a general equivalency diploma (GED) or taking college or graduate courses related to their jobs, and five offer assistance to employees in maintaining job-related professional licenses or certifications.

DISCUSSION

Since the middle of the twentieth century, U.S. employee compensation packages typically have consisted of salaries and packages of benefits that provide indirect compensation, including retirement and health benefits. Recently, the costs of providing health insurance have risen faster than the costs of wages and salaries, resulting in more cost sharing between employers and employees. A similar concern about costs has driven a shift away from defined-benefit retirement plans and toward defined-contribution plans. At the same time, employee compensation packages increasingly include as a standard part some degree of nonmonetary benefit, such as family-friendly and career-related benefits.

The Employees Retirement System (ERS) provides benefits to Texas state employees, retirees, and eligible family members. ERS retirement benefits continue to be defined-benefit, although state employee salaries typically have lagged private-sector salaries and some federal employee salaries. When the state economy does well, turnover among state employees increases. Among workers younger than age 50 who left state employment during fiscal year 2017, the most common reason was better pay and benefits.

The State Auditor's Office's (SAO) biennial report *State Employee Benefits as a Percentage of Total Compensation* includes the estimated average value of the compensation package provided to state employees. For fiscal year 2017, the SAO estimated the average value of a classified, full-time

employee's compensation package at \$72,205, of which annual direct compensation accounted for \$46,475, or 64.4 percent, and benefits made up \$25,730, or 35.6 percent. SAO estimated average values for the following benefits:

- federally required payroll expenses, including those for Social Security, Medicare, unemployment compensation, and workers' compensation;
- paid time off, including for holidays, vacation, and sick leave;
- health insurance;
- retirement contributions; and
- longevity pay.

SAO excluded from its analysis state compensatory time and certain types of conditional or situational leave, including court-appointed special advocates volunteer leave, educational activities leave, military leave, and emergency leave. The agency also excluded from its calculations benefits set forth in various sections of the Texas Government Code that agencies are authorized, although not required, to provide their employees, but whose value may be difficult to quantify. These benefits include wellness policies, alternative work sites and schedules, and state-sponsored professional development.

Although some private employers offer a wider range of benefits, including on-site recreation, consumer services, and dog-friendly policies, the nonmonetary benefits authorized in the Texas Government Code are similar to those offered by the private sector and by the City of Austin.

STATE AGENCY BENEFITS IMPLEMENTATION

Legislative Budget Board (LBB) staff collected information from 13 state agencies that together had an average fiscal year 2017 headcount of 92,233.8 employees, representing approximately 56.3 percent of all state employees that year, excluding those in higher education institutions. The following responding agencies are diverse in function, size, average employee salary, turnover rates, and geographic distribution of employees:

- Comptroller of Public Accounts (CPA);
- Department of Family and Protective Services (DFPS);
- Department of Information Resources (DIR);

- Health and Human Services Commission (HHSC);
- State Preservation Board (SPB);
- Texas Department of Agriculture (TDA);
- Texas Department of Criminal Justice (TDCJ);
- Texas Department of Housing and Community Affairs (TDHCA);
- Texas Department of Licensing and Regulation (TDLR);
- Texas Department of Transportation (TxDOT);
- Texas School for the Blind and Visually Impaired (TSBVI);
- Texas Veterans Commission (TVC); and
- Texas Workforce Commission (TWC).

In an effort to better understand how often agencies offer statutorily authorized nonmonetary benefits, how the implementation of benefits varies among agencies, and which benefits employees use most, the LBB asked for the following information:

- whether the agency had implemented any of the wellness policies pursuant to the Texas Government Code, Section 664.061;
- whether the agency offered telecommuting, flexible scheduling, or compressed work week options pursuant to the Texas Government Code, Chapter 658;
- whether the agency provided employee training or education benefits pursuant to the Texas Government Code, Chapter 656; and
- other questions related to the agency's participation rates, rules or policies governing the benefit, and relevant expenditure codes.

WELLNESS

The goal of workplace wellness programs is to help individuals reduce health risk and prevent disease. Wellness programs typically include a health-screening component to identify risks and interventions to reduce risks and promote healthy lifestyles. These employee benefits are increasingly common in compensation packages. A 2012 RAND Corporation survey of 3,000 public-sector and private-sector entities estimated that 80.0 percent of all U.S. employers with more

than 1,000 employees offered a wellness program. Additionally, a 2011 survey of employers by the management consulting firm Aon Hewitt found that almost half of employers without a wellness program planned to add one within three years to five years. The RAND survey found that wellness programs are associated with a decrease of health risks but were unlikely to decrease healthcare costs.

In its 2013 response to the RAND report, however, the Society for Human Resource Management (SHRM) stated that the cost effectiveness and return on investment of wellness programs is contingent on their design and implementation. SHRM's report cites several studies by nonpartisan coalitions of industry leaders, consultants, and health policy advocates that describe factors that contribute to successful workplace wellness programs, including:

- a program customized to suit the culture and situation of a particular workplace;
- the extent to which senior leadership supports the program and sets an example;
- effective, ongoing communication from either dedicated staff or informal wellness program advocates; and
- a program structure that offers activities that appeal to the individual needs and preferences of employees within a diverse workforce.

One of the studies also notes that no single industry standard estimates the return on investment for a wellness program. The Texas Government Code, Chapter 664, authorizes state agencies to designate an employee to serve as a wellness liaison and to implement a wellness program consisting of the benefits described in statute or other benefits determined by the agency. The statutory language is consistent with the best practices outlined above.

The Texas Government Code, Section 664.061, authorizes state agencies to offer the following wellness-related benefits for state employees:

- 30 minutes during normal working hours for exercise three times a week;
- attending onsite wellness seminars, when available;
- 8.0 hours of additional leave time each year for employees who receive physical examinations and complete an online health risk assessment tool;

- financial incentives for participating in a wellness program developed by the Department of State Health Services (DSHS);
- onsite clinic or pharmacy services; and
- additional wellness policies, as determined by the agency.

The Texas Government Code, Chapter 664, grants agencies discretion regarding whether or to what degree they implement employee wellness programs. This discretion enables each agency to adopt policies that would be practical and appealing for its workforce. Authorizing agencies to customize their programs is consistent with the principles of a successful workplace wellness program defined by SHRM.

Additional wellness benefits are available to state employees through state health insurance plans, including HealthSelect, Consumer Directed HealthSelect, or regional health maintenance organizations. These wellness programs generally complement, rather than duplicate, the options authorized in the Texas Government Code, Chapter 664. Depending on the plan, these additional benefits may include interactive online courses on nutrition, tobacco cessation, and stress management; health or activity trackers; a nurse call line; and discounts at certain fitness centers. The wellness benefits offered as part of a state employee's health plan are available for employees of all agencies and are subject to change.

WELLNESS INFORMATION REQUEST RESULTS

Most of the responding agencies indicated that they offer some combination of authorized wellness benefits. Seven agencies (DFPS, DIR, TDCJ, TDLR, TVC, TWC, and TxDOT) offer most or all of the wellness benefits authorized in statute. The benefit most frequently offered was an incentive for participating in a statewide wellness program developed by DSHS. All agencies offering that benefit cited participation in the annual Get Fit Texas! State Agency Challenge. The incentive for completing an agency-sponsored or agency-endorsed fitness challenge was additional hours of leave time, ranging from 4.0 at TWC to 16.0 at TDHCA and TVC. Most agencies surveyed also offer employees three periods of 30 minutes each week for exercise and award additional leave time to employees who complete a physical examination and health assessment. Five agencies (DFPS, DIR, TDA, TDCJ, and TDLR) use the authorization for onsite clinic or pharmacy services to provide flu shot clinics for their employees. **Figure 1** shows agency responses about

FIGURE 1
WELLNESS BENEFITS AUTHORIZED BY THE TEXAS GOVERNMENT CODE, SECTION 664.061, BY AGENCY
FISCAL YEAR 2017

AGENCY	30 MINUTES FOR EXERCISE, THREE TIMES PER WEEK	ATTENDING ONSITE SEMINARS	ADDITIONAL LEAVE HOURS FOR PHYSICAL EXAMINATION AND RISK ASSESSMENT	INCENTIVES FOR PARTICIPATING IN A STATEWIDE WELLNESS PROGRAM	ONSITE CLINIC OR PHARMACY SERVICES	ADDITIONAL WELLNESS POLICIES, DETERMINED BY AGENCY
Comptroller of Public Accounts	X		X	X		
Department of Family and Protective Services	X	X	X	X	X	X
Department of Information Resources	X	X	X	X	X	
Health and Human Services Commission	X	X				X
State Preservation Board						X
Texas Department of Agriculture		X		X	X	X
Texas Department of Criminal Justice	X	X	X	X	X	X
Texas Department of Housing and Community Affairs	X		X	X		
Texas Department of Licensing and Regulation		X		X	X	X
Texas Department of Transportation	X	X	X	X		X
Texas School for the Blind and Visually Impaired						
Texas Veterans Commission	X	X	X	X		
Texas Workforce Commission		X	X	X		X

SOURCE: Legislative Budget Board information request to agencies.

wellness benefits offered to employees pursuant to the Texas Government Code, Section 664.061.

Some agencies were unable to provide participation rates for their wellness programs, typically because an employee’s use of a particular benefit was managed by supervisors or because the agency does not maintain that information. Nevertheless, some agencies were able to estimate the portions of their workforce that participated in their wellness programs overall, and others calculated rates of participation for individual wellness benefits. **Figure 2** shows overall wellness program participation reported by three agencies as of February 2018.

Figure 3 shows fiscal year 2017 participation rates at another group of three agencies for certain individual wellness initiatives, as reported by the agencies.

Several agencies identified additional wellness-related benefits they had implemented. DFPS provides critical incident stress debriefings to help staff cope with work-related trauma or stress. In addition to the statewide challenge, TDCJ and DFPS coordinate their own fitness challenges throughout the year. Although an employee assistance program (EAP) is not exclusively a wellness program, DFPS, HHSC, SPB, and TWC each referenced its EAP in its response. Agencies identified the following additional benefits and policies:

- critical incident stress debriefings – DFPS;
- employee assistance program – DFPS, HHSC, SPB, TWC;
- employee walk time during the last Friday of each month – DFPS;

**FIGURE 2
OVERALL WELLNESS PROGRAM PARTICIPATION AT SELECT TEXAS AGENCIES
AS OF FEBRUARY 2018**

AGENCY	OVERALL WELLNESS PROGRAM PARTICIPATION RATE
Department of Information Resources	28.0%
Texas Department of Housing and Community Affairs	35.0%
Texas Workforce Commission	51.0%

SOURCE: Legislative Budget Board information request to agencies.

- agencywide fitness challenges – DFPS, TDCJ;
- fee-based onsite yoga and massage therapy – TDLR;
- smoking cessation services – HHSC;
- mother-friendly workplace policies – HHSC; and
- biometric health screenings – TxDOT.

WORKING HOURS AND LOCATION

Telecommuting and flexible scheduling also are increasingly common benefits in the private and public sectors. Flexible scheduling can include authorizing employees to vary the beginning and end of their working hours; for example, from 7:00 AM to 4:00 PM, rather than the 8:00 AM to 5:00 PM workday prescribed by the Texas Government Code, Section 658.005. An employee with a flexible schedule also might work a compressed work week; for example, working four 10.0-hour workdays instead of five 8.0-hour workdays. A 2017 Gallup report, *State of the American Workplace*, found that the number of people working remotely increased from 39.0 percent to 43.0 percent since 2012, and that the time

**FIGURE 3
WELLNESS PARTICIPATION RATES BY BENEFIT AMONG EMPLOYEES AT CERTAIN TEXAS AGENCIES, FISCAL YEAR 2017**

AGENCY	30 MINUTES FOR EXERCISE, THREE TIMES PER WEEK	ATTENDING ONSITE SEMINARS	ADDITIONAL LEAVE HOURS FOR PHYSICAL EXAMINATION AND RISK ASSESSMENT	INCENTIVES FOR PARTICIPATING IN A STATEWIDE WELLNESS PROGRAM	ONSITE CLINIC OR PHARMACY SERVICES	ADDITIONAL WELLNESS POLICIES, DETERMINED BY AGENCY
Comptroller of Public Accounts	21.5%		27.9%			
Texas Department of Agriculture				20.0%		
Texas Veterans Commission			4.9%	18.4%		

SOURCE Legislative Budget Board information request to agencies.

they spent working remotely also increased. The U.S. Bureau of Labor Statistics published similar findings in 2007, noting that the proportion of the U.S. wage and salary workers with flexible schedules more than doubled, to about 30.0 percent, from 1985 to 2004.

The Texas Government Code, Chapter 658, authorizes state agencies to offer alternative work schedules, including compressed workweeks and flexible schedules, and alternative work locations via telecommuting. The statute authorizes the administrative head of an agency to use discretion in implementing policies for alternative work schedules and locations. This discretion is demonstrated in the agency responses, which described a range of policies and participation rates across agencies.

TELECOMMUTING AND FLEXIBLE SCHEDULING INFORMATION REQUEST RESULTS

All responding agencies indicated that they offered some degree of telecommuting or alternate work scheduling. Some agencies could not provide participation rates, typically because an employee’s use of the benefit was managed at the supervisor level.

Statute does not specify how often state employees may telecommute during a work week, but agencies minimize abuse of the policy and maintain network security in several ways. For instance, eligibility is linked to outcomes on performance evaluations at TDHCA, TDLR and TWC. HHSC requires employees to complete telework training successfully to become eligible for the agency’s telework program. DIR prohibits its telecommuting employees from using a public wireless network to access the agency’s network. All responding agencies authorize managers and supervisors to use discretion to alter or revoke telecommuting agreements.

Rates of participation in telecommuting varied from 0.5 percent at TDA to 27.4 percent at CPA. However, the LBB did not ask agencies to estimate the portions of their workforces eligible to telecommute or work alternate schedules. TSBVI and TDA offer telecommuting options they characterized as being “very limited” or reserved for “extraordinary circumstances.” Among the agencies that reported alternate work schedule participation rates, all reported at least half their employees working hours other than 8:00 AM to 5:00 PM. In calculating their alternate work schedule participation rates, several agencies did not distinguish between employees working a compressed work

week and those working atypical hours during a five-day work week.

Figure 4 shows employee participation rates in telecommuting or alternate work schedules, as reported by the responding agencies.

EDUCATION AND TRAINING

The Texas Labor Code, Section 21.010, requires state agencies to provide employment discrimination training to all employees within 30 days of hiring. In addition, the Texas Government Code, Chapter 656, Subchapter C, authorizes state agencies to provide training and education for their administrators and employees. As with the previous benefits, an agency has discretion in how it structures its training and education program. An agency’s training and education policies may include the following objectives:

- preparing for technological and legal developments;
- increasing work capabilities;
- increasing the number of qualified employees in certain areas; and
- increasing the competence of state employees.

Agencies also have discretion to determine how to train or educate their employees. The statute authorizes an agency to require attendance at a training and to reimburse employees for training or education provided by an institution of higher education.

The Texas Government Code, Section 656.047, authorizes agencies to spend public funds to pay the salary, tuition and other fees, expense of education materials, and other expenses related to being an instructor, student, or other participant in a training or education program. These expenses include reimbursing the costs to administrators and employees who seek relevant education or training at an accredited institution of higher education.

EDUCATION AND TRAINING INFORMATION REQUEST RESULTS

All responding agencies provide staff development training, and three agencies—CPA, TxDOT, and TWC—provide mandatory annual training regarding certain topics specific to the agency’s operations or mission. For instance, CPA requires employees to attend trainings related to ethics, open records, and information security. Its employees also must attend a minimum amount of continued training each fiscal

**FIGURE 4
TELECOMMUTING AND ALTERNATE WORK SCHEDULE PARTICIPATION RATES BY AGENCY, FISCAL YEAR 2017**

AGENCY	TELECOMMUTING	COMPRESSED WORK WEEK	FLEXIBLE SCHEDULING
Comptroller of Public Accounts	27.4%	Offered (1)	Offered (1)
Department of Information Resources	64.0% combined rate for all three categories		
State Preservation Board		Offered (1)	Offered (1)
Texas Veterans Commission	10.0%		
Texas Department of Family and Protective Services	3.8%	Offered (1)	Offered (1)
Health and Human Services Commission	3.9%	Offered (1)	Offered (1)
Texas School for the Blind and Visually Impaired	Offered (1)		
Texas Department of Criminal Justice			Offered (1)
Texas Department of Agriculture	0.5%	8.0%	37.0%
Texas Department of Housing and Community Affairs	17.5%		62.0% (3)
Texas Department of Transportation	7.0%	21.0%	Offered (1)
Texas Workforce Commission	24.0% (2)		52.0% (3)
Texas Department of Licensing and Regulation	13.0%		56.0% (3)

NOTES:

- (1) Agencies responded that the benefit is offered but did not have participation rates available
- (2) The Texas Workforce Commission’s telecommuting participation rate includes 13.0 percent of its employees who telecommute occasionally and 11.0 percent who participate on a scheduled basis.
- (3) The Texas Department of Housing and Community Affairs, Department of Licensing and Regulation, and Texas Workforce Commission provided combined rates for compressed work week and flexible scheduling options.

SOURCE: Legislative Budget Board information request to agencies.

year. TWC requires all employees to attend training regarding customer complaint resolution and fraud detection and prevention, among other topics. TWC employees also attend additional trainings related to topics that include hazardous chemicals and migrant and seasonal farmworkers.

Eight of the responding agencies (CPA, DIR, HHSC, TDA, TDCJ, TDHCA, TDLR, and TWC) provide access to external or web-based training in addition to onsite or on-the-job training. Five agencies (DIR, SPB, TDHCA, TDLR, and TxDOT) support or include continuing education for certification related to a professional license.

Eight agencies (CPA, DFPS, DIR, HHSC, TDHCA, TDLR, TxDOT, and TWC) have policies related to tuition reimbursement for employees seeking GEDs or enrolling in job-related college or graduate courses. For example, HHSC provides an academic stipend to employees attending courses to be licensed or certified in certain critical shortage occupations. These policies establish criteria for eligibility and define successful completion of the coursework. They also limit the amount of the benefit that a single employee may realize or that the agency will offer. Limits on the amount an employee may receive range from \$500 to \$5,000

per year, depending on the agency. Agencies that impose program limits include TxDOT, which offers a competitive program capped at 10 slots per year, and TWC, which requires employees seeking the benefit to continue in employment with the agency for at least six months.

Senate Bill 255, Eighty-fifth Legislature, Regular Session, 2017, amended the Texas Government Code to require state agencies and institutions of higher education to report spending on educational courses and professional trainings that exceeds \$5,000 per state employee or administrator.

Figure 5 shows agency responses regarding their training and education policies. The LBB also asked agencies which Comptroller of Public Accounts object codes they used to record their employee training and education expenditures. **Figure 6** shows All Funds agency spending in the three most commonly cited object codes by responding agencies and by all state agencies for the 2012–13, 2014–15, and 2016–17 biennia.

**FIGURE 5
STATE EMPLOYEE EDUCATION AND TRAINING POLICIES BY AGENCY, FISCAL YEAR 2017**

AGENCY	STAFF/ PROFESSIONAL/ LEADERSHIP DEVELOPMENT	MANDATORY ANNUAL TRAINING	EXTERNAL OR WEB-BASED TRAINING	CONTINUING EDUCATION, PROFESSIONAL LICENSE, OR CERTIFICATION SUPPORT	EDUCATIONAL LEAVE	ACADEMIC STIPEND	TUITION
Comptroller of Public Accounts	X	X	X				X
Department of Family and Protective Services	X				X		X
Department of Information Resources	X		X	X			X
Health and Human Services Commission	X		X		X	X	X
State Preservation Board	X			X			
Texas Department of Agriculture	X		X				
Texas Department of Criminal Justice	X		X				
Texas Department of Housing and Community Affairs	X		X	X			X
Texas Department of Licensing and Regulation	X		X	X			X
Texas Department of Transportation	X	X		X			X
Texas School for the Blind and Visually Impaired	X						
Texas Veterans Commission	X						
Texas Workforce Commission	X	X	X				X

SOURCE: Legislative Budget Board information request to agencies.

FIGURE 6
EMPLOYEE TRAINING AND EDUCATION-RELATED SPENDING IN ALL FUNDS BY COMPTROLLER OF PUBLIC ACCOUNTS OBJECT CODE
2012–13 TO 2016–2017 BIENNIA

(IN MILLIONS)	2012–13		2014–15		2016–17	
	INFORMATION REQUEST AGENCIES	ALL STATE AGENCIES	INFORMATION REQUEST AGENCIES	ALL STATE AGENCIES	INFORMATION REQUEST AGENCIES	ALL STATE AGENCIES
7202 – Tuition – Employee Training	\$2.1	\$4.0	\$1.1	\$2.8	\$0.8	\$2.8
7203 – Registration Fees – Employee Attendance at Seminars and Conferences	\$6.5	\$26.5	\$6.7	\$27.3	\$9.7	\$33.2
7243 – Educational/ Training Services	\$12.4	\$27.9	\$16.1	\$28.8	\$24.6	\$45.9
Total	\$21.1	\$58.5	\$23.9	\$58.9	\$34.1	\$81.9

NOTE: Totals may not sum because of rounding.

SOURCES: Legislative Budget Board information request to agencies; Comptroller of Public Accounts' Cash Drilldown and Manual of Accounts.

DECREASE STATE AGENCIES' CUSTOMER CALL WAIT TIMES

Texas agencies use a number of contact centers to receive and convey information to the public. A contact center may utilize multiple communication methods, including telephone, fax, email, text messaging, online chat, or other capabilities. No state entity collects data regarding the total number of contact centers. Legislative Budget Board staff collected information from a sample of state agencies and institutions with significant related telecommunications expenditures to evaluate contact center practices and performance.

Based on information provided by agencies, certain contact centers have excessive call wait times. These contact centers also have high rates of call abandonment and employee turnover. Contact center performance can improve either by decreasing call volume or by better equipping agencies to address customers in a timely manner. Methods to improve performance include using other methods to communicate with the public, such as virtual assistants, aligning staff and administrative process improvements at contact centers with industry best practices, and increasing the number of staff available to answer telephones.

FACTS AND FINDINGS

- ◆ Among a sample of eight state agencies, public callers were placed on hold for more than 1.0 million hours, or the equivalent of approximately 132.0 years, during the 2016–17 biennium.
- ◆ Contact center wait times vary by agency and individual program. During the 2016–17 biennium, the shortest average hold time of 10.0 seconds was at the Health and Human Services Commission's Texas Information and Referral Network. The longest average hold time of more than 15.0 minutes was at the Department of Public Safety, Driver License Division.
- ◆ Primary drivers of contact center wait times include high call volumes relative to staffing levels and improperly calibrated technology to guide callers and program staff through the communication process efficiently.

CONCERNS

- ◆ During the 2016–17 biennium, certain contact centers had relatively long average customer wait times of approximately 10.0 minutes or more. Rates of call abandonment of more than 20.0 percent were reported for this period at the Department of Family and Protective Services, Department of Public Safety, and Parks and Wildlife Department. Long call wait times present an inconvenience to callers, demonstrate inefficient use of state resources, and delay the response time to process business requests or to provide vital health and safety services.
- ◆ Agencies lack readily available staff augmentation options to help address large call volumes. Resources successfully used in other states include preapproved, private vendor contracts or incarcerated offenders to provide contact center services.
- ◆ Five of eight agencies indicated that they do not record or monitor data typically used to evaluate contact center performance, such as the number of calls received, hold times and talk times, and post-call administrative completion time.
- ◆ Most of the eight agencies surveyed indicated that they do not use readily available technology to decrease call wait times or call volumes, such as providing estimated wait times, callback options, or live chat and virtual assistant functionality.

OPTIONS

- ◆ **Option 1:** Amend statute to define the phrase contact center and require agencies to collect relevant performance data and report it to the Department of Information Resources. Upon review, the Department of Information Resources would collaborate with agencies that have relatively poor contact center performance to develop a plan to remediate identified issues, culminating in a report to the Legislature detailing accomplishments and additional steps to achieve performance targets.
- ◆ **Option 2:** Include a rider in the 2020–21 General Appropriations Bill to require the Department of Information Resources, with the assistance of

state agencies and institutions of higher education, to determine the need for statewide contracts for relevant contact center technology and consulting and staff augmentation services. If the department determines a sufficient need, it should be authorized to enter into such contracts.

- ◆ **Option 3:** Amend statute to establish a technology innovation fund, which could be funded with a direct appropriation of General Revenue Funds or by dedicating a portion of fee payments from the state website Texas.gov. This fund would be awarded competitively through grants by the Department of Information Resources to agencies with proposals intended to produce the greatest increase to contact center efficiency or other methods that could increase customer service delivery.
- ◆ **Option 4:** Increase General Revenue Funds appropriations in the 2020–21 General Appropriations Bill to provide a salary increase to the Department of Family Protective Services' Statewide Intake program staff.
- ◆ **Option 5:** Include a rider in the 2020–21 General Appropriations Bill directing the Texas Department of Criminal Justice, through its Correctional Industries program, and the Department of Public Safety to pilot the use of inmates to provide contact center assistance and to report jointly to the Legislature regarding program findings and accomplishments.
- ◆ **Option 6:** Increase the number of authorized full-time-equivalent positions in the 2020–21 General Appropriations Bill to decrease call wait times at the Teacher Retirement System of Texas regarding benefits counseling.

DISCUSSION

State agencies communicate with the public every day to provide information and assist in processing administrative requests. Much of this communication is performed on the phone, although other functions can be provided via email or through an agency website. A call center employs full-time, dedicated staff to communicate with the public. This communication includes voice interactions using a switched telephone network or voice over Internet protocol (VoIP) for calls. Similarly, a contact center communicates through voice interactions and other capabilities, such as email, text chat, and web interfaces.

According to a 2014 survey conducted for American Express by the data research company Ebiquity, consumers who call a customer service center are willing to wait, on average, a maximum of 13.0 minutes on hold before hanging up. However, approximately 22.0 percent of customers placed on hold will hang up in less than 5.0 minutes, and an additional 27.0 percent will hang up within 10.0 minutes.

MEASURING CONTACT CENTER PERFORMANCE

Multiple methods are used to measure contact center performance. Calculating the average handle time (AHT), or the average duration of a customer transaction, provides one indicator of contract center effectiveness. AHT is measured from the time a call is initiated through the conclusion of any related tasks that followed the interaction. A primary purpose of calculating AHT is to help make decisions for staffing levels and administrative processes. The standard formula to calculate AHT is:

$$\frac{\text{Talk Time} + \text{Hold Time} + \text{Wrap-up Time}}{\text{Number of Calls Handled}}$$

This calculation can be performed annually or hourly to track call-handling trends throughout the day. Many factors can increase AHT, including high call volume relative to available staff and the complexity of issues or services being addressed. AHT also is influenced by the administrative setup of the contact center, including slow computer systems, lack of a unifying technology platform among databases, and high employee turnover, which requires additional time to train new staff. A long AHT also can signify increased hold time.

Contact center wait times are subject to decisions that consider the efficient and effective use of resources to manage interactions with customers. Best practices for contact center structuring and management are based on measuring multiple performance metrics. The International Finance Corporation, a member of the World Bank Group development bank, published a set of global best practices related to this subject that mirrors many components used by other organizations. **Figure 1** shows contact center performance metrics.

TECHNOLOGIES TO ASSIST IN CUSTOMER INTERACTIONS

Multiple technologies are available to assist agencies to communicate and conduct business with the public efficiently. These technologies include customer relationship management (CRM) software, telecommuting software and

**FIGURE 1
BENCHMARKS IN MEASURING CONTACT CENTER CALL MANAGEMENT, FISCAL YEAR 2016**

METRIC	DESCRIPTION
Service Level	A percentage of calls received by the center that are answered by an agent within a certain time frame, which represents the amount of time the customer is on hold.
Abandonment Rate	The number of calls that are abandoned while the customer is waiting for an agent, measured as a percentage of all calls received.
Accuracy of Call Forecasting	Properly balancing staff levels to meet call volume demands. If the number of actual calls is greater than predicted, not enough staff will be available to respond. If fewer calls occur than are forecast, staff will be underutilized.
Call Duration	The amount of time spent speaking to customers on the telephone.
Call Wrap-up Time	The time required for an agent after the call has finished to complete the case, which includes administrative tasks such as updating the computer system files and completing forms.
Attrition	A measure of annual staff turnover, expressed as a percentage.

SOURCE: International Finance Corporation.

equipment, virtual queuing (callback feature), live chat, and chatbot virtual assistants.

CUSTOMER RELATIONSHIP MANAGEMENT SOFTWARE

CRM software helps contact center personnel access multiple information sets, including databases related to individual customer information. This software expedites processing and improves accuracy in handling inquiries. Contact center CRM typically is desktop software that is integrated into existing telecommunication, database, and administrative applications. Multiple variables determine the total cost to develop a CRM solution. Monthly prices can range from \$9 to \$300 per customer service representative for standard packages. Developing a customized CRM can involve up-front costs from \$0.1 million to \$0.7 million. CRM can be structured to integrate other technology types.

TELECOMMUTING SOFTWARE AND EQUIPMENT

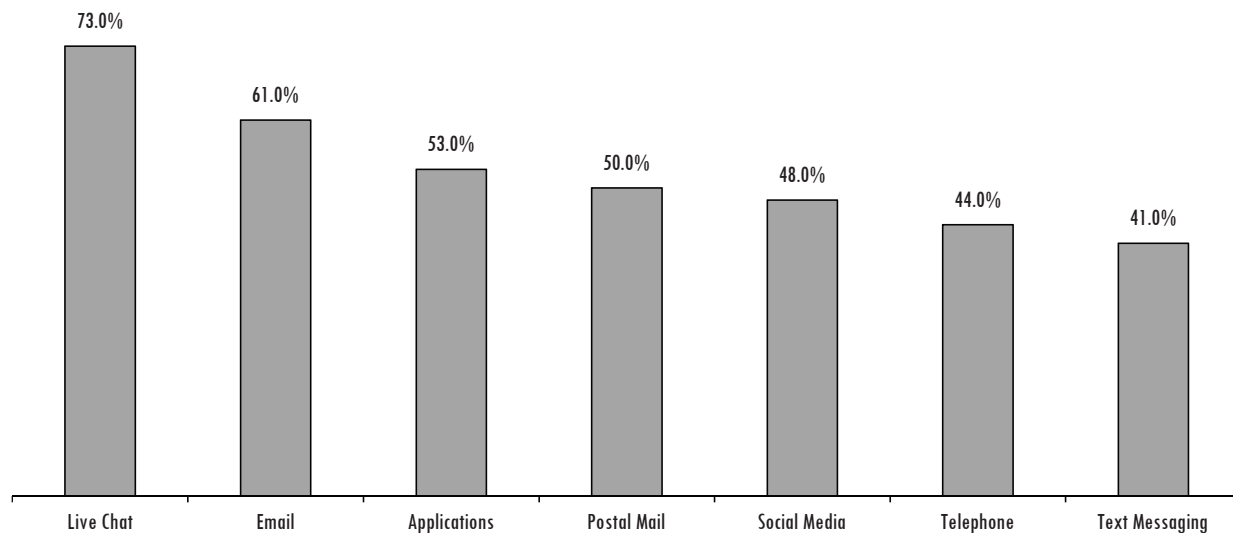
Providing the opportunity for contact center staff to work from home can lead to increased productivity. Telecommuting can provide contact center administrators the ability to expand hours of operation and better align staffing levels to peak demand periods. Staff typically must meet or exceed position performance metrics to be eligible for this benefit. The Department of Public Safety (DPS), Regulatory Services Division, reported that telecommuters are able to produce 30.0 percent or greater volume than their in-office peers. Telecommuters also report relatively greater levels of job satisfaction, which can lead to greater rates of employee retention. Agencies that do not authorize their contact center staff to work from home, such as the Office of the Attorney General, have greater turnover rates for these staff compared

to the agency as a whole. The software and equipment necessary to establish a telecommuting program depends on the technical requirements of the particular contact center. Employees may be able to perform these functions using personal computers, or agencies may need to supply the appropriate hardware and software required for employees to perform job functions and interact with program systems and the public.

VIRTUAL QUEUING AND CALLBACK

This technology offers customers the option of receiving a call back from a customer service representative instead of waiting on hold. Callbacks can be provided at an estimated time or scheduled for a specific time. In addition to its convenience, this feature could decrease costs for telephone service contracts or VoIP data usage that the agency and customers normally would incur by remaining on the line. For example, in calendar year 2008, the Washington State Employment Security Department (ESD) decreased its phone bill by \$0.5 million during the first year of implementing a virtual queuing option. Approximately 75.0 percent of callers chose the option to receive a callback without losing their places in line. According to analysis performed by Virtual Hold Technology, a customer service software company, the ESD's implementation of callback technology also decreased its abandonment rate from 41.0 percent to 21.0 percent. Texas agencies that have implemented callback technology, such as the Department of Motor Vehicles (DMV), also have observed decreased call wait times and have received positive feedback from customers. Depending on system configurations, adding a virtual queuing feature could cost about \$50 per month per user.

FIGURE 2
CUSTOMER SATISFACTION LEVELS BY COMMUNICATION METHOD, CALENDAR YEAR 2013



SOURCE: eDigital Customer Service Benchmark Survey, 2013.

However, some contact center software platforms have callback features built into their products.

LIVE CHAT

Live chat refers to the process of at least two parties communicating through a chat-enabled service on the Internet. Live chat can employ either desktop or mobile applications. Live chat has been shown to decrease contact center costs by decreasing the average cost of interaction with a customer. This service also can increase the efficiency of contact center staff by enabling staff to handle multiple chats simultaneously. According to a 2013 eDigital Customer Service Benchmark survey of 2,000 participants, live chat has the greatest satisfaction levels for any customer service method, as shown in **Figure 2**. Similarly to identified costs for virtual queuing technology, live chat features can be adopted into an existing website for marginal costs of approximately \$50 per user per month or may be integrated in contact center or CRM software packages.

CHATBOTS

A chatbot, also known as a virtual assistant or conversational assistant, is a computer program that communicates with a user through text, mobile, desktop, or voice. The chatbot replies using the same method with which it is contacted to continue the conversation. The goal for the chatbot's functionality determines the level of development needed to make one. A script-based chatbot can provide answers to

simple, frequently asked questions and requires a simple structure. An artificial intelligence (AI) structure is more complex and can include elements of machine learning and natural language processing for speech recognition. This chatbot may be able to work with human staff when it needs help addressing customer inquiries. For example, by asking staff for help or connecting the customer to staff, the chatbot can monitor the interaction and adapt to better answer similar inquiries subsequently. Additionally, chatbots can be developed to provide customer-specific information by accessing personally identifiable account information.

Chatbots have been used in private sector and public sector applications. In 2017, the City of Los Angeles collaborated with Microsoft Corporation to develop a chatbot within three days. The chatbot assists approximately 180 customers per day and has led to a 50.0 percent decrease in emails that require staff attention and response. Other case studies show that more complex chatbots can be developed and implemented within weeks and can address greater call volumes, accounting for up to 99.0 percent of interactions for some applications.

Approximating the potential costs of maintaining chatbot technology varies by vendor and the specifications of how it would be integrated into each contact center's information technology (IT) structure. In April 2018, one private vendor estimated that implementing and managing a comprehensive chatbot system for a contact center with 50.0 full-time-

equivalent (FTE) positions could cost \$50,000 per year. Another company provided an estimate of \$60,000 in onetime development costs for a CRM-compatible chatbot with integrated AI and language functionality. Other examples include an initial development range of \$6,000 to \$12,240, followed by \$100 per month for 50 chatbots and 50,000 messages conveyed. The state of Montana recently implemented chatbots during calendar year 2018 to address commonly asked questions and to assist in processing administrative requests at its Department of Justice, Motor Vehicle Division. Although no Texas agency reports using chatbots, DMV staff stated that the agency is researching and interested in utilizing online chatting and chatbots.

STATE CONTACT CENTER PERFORMANCE

The number of Texas' state agency contact centers is not known, and statute does not define what a contract center is. Some contact center services may be included in the scope of managed services contracts awarded by the Department of Information Resources (DIR). However, DIR is not able to determine to what extent an agency may be using contact center services. Legislative Budget Board (LBB) staff collected information from selected agencies regarding the efficiency of their contact centers. Each of these agencies had relatively large amounts of telecommunications-related expenditures during the 2016–17 biennium. Each of the 16 programs at the eight agencies shown in **Figure 3** has a public-facing contact center that received more than 100,000 calls (approximately 150 calls per day) during the 2016–17 biennium.

The contact centers in **Figure 3** received 57.8 million total phone calls during the 2016–17 biennium, or 55 calls per minute. These calls yielded approximately 1.2 million accumulated hours of hold time by the public and agency personnel, the equivalent of 132.0 years. The information was reported by state agencies and contracted vendors. Some agencies did not have a complete listing of related data for the biennium. Regarding AHT, some agencies did not report all of the variables necessary to complete the calculation.

When comparing state-operated and vendor-contracted contact centers, it is important to consider the varying levels of subject matter complexity across each, and the relative performance of those centers. For example, among state-operated contact centers, the average cost per call was \$9.31, compared to \$14.53 for vendor-contracted centers. However, the average hold time for state-run centers was approximately 4.5 minutes, compared to 24 seconds for vendor-contracted

centers. This difference may result from vendor-contracted centers having a greater number of FTE positions on average, or from state-operated centers engaging with the public on more complex inquiries. According to staff at the Office of the Attorney General, the specificity of subject matter addressed by some of its contact centers might make those services ill suited to contracting for third-party administration.

Although many evaluation methods are available, the AHT calculation is particularly useful in measuring contact center performance. Failure to measure the amount of time that customers are on hold or interacting with customer service representatives or the time for representatives to perform related administrative tasks after calls are concluded may diminish the agency's ability to perform other types of performance calculations. Other such calculations include callers' average time in the hold queue, staff's average after-call work time, or staff's average speed to answer a call. For nine of the 16 programs shown in **Figure 3**, or 56.3 percent, agencies could not provide data typically used to perform the AHT calculation. This lack of information limits the abilities of the agency and the state to measure and track performance and to ensure that resources are utilized effectively. An agency's ability to capture and measure key performance indicators could provide insights regarding staffing levels, employee performance, and other areas where improvement is needed (e.g., excessive call wrap-up time). Optimizing these areas can lead to decreased hold times and greater customer satisfaction.

To improve the information available to agencies to assess contact center performance, Option 1 would amend the Texas Government Code, Chapter 2054, to require DIR to define contact center in rule. In establishing a definition, DIR should consider the ways in which agencies deliver contact center services with staff or with affiliates, minimum call volume, and the use of technological enhancements such as email, virtual queuing, and chatbots. Option 1 also would amend the Texas Government Code, Chapter 2054, to require an agency with a contact center meeting DIR's criteria to report performance information to DIR each biennium. Reported information could include service level, abandonment rate, accuracy of call forecasting, call duration, call wrap-up time, employee attrition, and other criteria.

DIR's mission is to provide technological leadership, solutions, and value to entities of state government, education, and local government to help them fulfill their core missions. Option 1 also would require agencies that report significant hold times or other performance metrics

**FIGURE 3
SUMMARY OF PERFORMANCE METRICS FOR SELECTED STATE AGENCY CONTACT CENTERS, 2016–17 BIENNIUM**

AGENCY AND PROGRAM	ALLOCATION (IN MILLIONS)	FULL-TIME-EQUIVALENT POSITIONS	STAFF ATTRITION RATE	CALLS RECEIVED	COST PER CALL	CALL TIME (IN MINUTES:SECONDS)				ABANDONMENT RATE
						AVERAGE HOLD TIME	AVERAGE CALL DURATION	AVERAGE WRAP-UP TIME	AVERAGE HANDLE TIME	
Office of the Attorney General										
Child Support Division	\$18.7	255.0	24.1%	7,741,952	\$2.42	NC (5)	4:49	0:20	NC	12.1%
Department of Family Protective Services										
Statewide Intake	\$38.5	420.0	15.8%	1,231,181	\$31.24	9:30	14:45	31:03	45:56	26.7%
Health and Human Services Commission (HHSC)										
Access and Eligibility Services Vendor Operations – Eligibility Services (1)	\$94.3	1089.0	NC	15,629,224	\$6.04	00:35	09:12	00:40	10:00	9.0%
Access and Eligibility Services Vendor Operations – Enrollment Broker (1)	\$41.1	423.5	4.9%	1,246,581	\$33.01	00:28	09:58	00:09	10:35	4.4%
Department of Aging and Disability Services Consumer Rights	\$3.2	31.0	NC	173,016	\$18.73	02:18	9:53	04:03	NC	7.9%
HHSC Ombudsman	\$2.1	23.1	8.7%	185,744	\$11.22	02:58 (3)	7:53	00:19	31:23	13.4%
Medical Transportation Program	Vendor contract (4)	18.0	NC	363,093	Vendor contract (4)	0:11	3:07	0:02		6.2%
Texas Information and Referral Network (1)	\$22.8	NC	NC	5,004,072	\$4.55	0:10	2:52	0:30	NC	13.7%

**FIGURE 3 (CONTINUED)
SUMMARY OF PERFORMANCE METRICS FOR SELECTED STATE AGENCY CONTACT CENTERS, 2016–17 BIENNIUM**

AGENCY AND PROGRAM	ALLOCATION (IN MILLIONS)	FULL-TIME-EQUIVALENT POSITIONS	STAFF ATTRITION RATE	CALLS RECEIVED	COST PER CALL	CALL TIME (IN MINUTES:SECONDS)					ABANDONMENT RATE	
						AVERAGE HOLD TIME	AVERAGE CALL DURATION	AVERAGE WRAP-UP TIME	AVERAGE HANDLE TIME	AVERAGE RATE		
HHSC (continued)												
Women, Infants, and Children Program	\$1.3	21.0	11.9%	414,012	\$3.03	1:11	2:01	1:09	42:50			17.2%
Department of Public Safety												
Driver License Division	\$15.3	124.0	35.4%	12,947,269	\$1.18	15:34	6:34	NC	NC			21.7%
Regulatory Services Division	\$2.2	27.0	4.0%	1,641,897	\$1.35	11:26	3:02	NC	NC			13.8%
Texas Parks and Wildlife Department												
State Parks Call Center	\$2.2	18.0	NC	720,103	\$3.06	NC	04:16	NC	NC			32.5% (2)
Department of Motor Vehicles												
Motor Carrier Division	\$9.9	145.0	15.4%	510,566	\$19.44	1:42	6:03	NC	NC			6.8%
Consumer Relations Division	\$9.9	93.0	24.1%	1,321,417	\$7.51	6:11	5:26	NC	NC			18.6%
Texas Department of Transportation												
Toll-related customer service and collections (1)	Vendor contract (4)	134.0	17.0%	2,691,351	U (5)	NC	NC	NC	NC			0.9%
Texas Workforce Commission												
Unemployment Insurance Program	\$18.7	316.1	28.6%	5,761,985	\$3.23	0:28	9:18	0:17	16:05			17.3%

NOTES:
 (1) Contracted service.
 (2) Texas Parks and Wildlife Department abandonment rate based on fiscal year 2016 data; data was not collected for fiscal year 2017.
 (3) Average hold time for Health and Human Services Commission Ombudsman based on fiscal year 2017 data; applicable data was not collected for fiscal year 2016.
 (4) Component of a larger vendor contract.
 (5) U=unknown data; NC=not collected.
 SOURCE: Legislative Budget Board, Agency Survey Submissions.

during their most recent reporting periods to collaborate with DIR and any approved vendors who provide services for contact centers to establish remediation plans to improve contact center performance. DIR would set specific thresholds in rule, such as having an average hold time greater than 5.0 minutes, which would activate the remediation plan process. The plan would be based on best practices for contact center organization and management, solutions to address inefficiencies in either staff or technology usage, and an estimated timeline to remediate the concerns identified. Agencies that operate contact centers, as defined in rule, that do not track hold times or other important performance metrics properly also would be required to participate in this process. DIR would prescribe how often this process must be repeated for agencies with habitually poor performance, such as every four years. Each contact center serves a different function and may interact with different segments of the population. Agency contact center staff, collaborating with DIR and relevant vendors, should establish goals for service levels that are informed by properly captured performance data. For example, analysis could determine when hold times significantly affect abandonment rates.

None of the agencies providing information about state-run contact center operations indicated that they use online live chat, chatbots, or other innovative forms of technology to communicate with the public. Most contact centers do not offer callback options. These methods can help decrease call wait times and improve customer service. Depending on a program's IT configuration, these methods also can provide long-term cost avoidance by decreasing telephone or VoIP data charges and the need for additional staff. Option 2 would include a rider in the 2020–21 General Appropriations Bill to require DIR, with the assistance of state agencies and institutions of higher education, to determine the need for statewide contracts for relevant contact center technology improvements and, if necessary, to enter into such contracts. The availability of additional service contracts for technology improvements, either through DIR's delivery based IT services or cooperative contracts models, would provide agencies with an accessible list of vendors registered through DIR. It also could decrease prices for services by utilizing economies of scale, compared to general market rates. To provide additional technical and planning assistance to agencies in addressing the requirements of Option 1, Option 2 also would require DIR to consider, within the scope of its request for proposal (RFP) activities, vendors that specialize in contact center consulting services. This inclusion would

provide an outside perspective to analyze and verify whether contact centers are using best practices for staff management and technology usage. Information provided by state agencies and private vendors indicates that consulting contracts can range from less than \$10,000 to \$100,000 or greater, depending on the scope of work.

STATEWIDE STAFF SOLUTIONS CONTRACT

The Employees Retirement System of Texas (ERS) has two contact centers. One is a state-operated facility that handles inquiries related to retirement, eligibility, insurance benefits, and retirement application topics. The other center has operated since 2011 through a contract with a private vendor. Its purpose is to provide additional capacity to assist with regular customer service questions and to address increased call volumes during seasonal enrollment periods. The vendor-operated center handles basic customer service questions and simple administrative activities, such as resetting a password or updating a customer's beneficiary designation. According to ERS staff, this structure is more cost-effective than seasonally or permanently increasing the number of FTE positions at the agency. Training new staff would require two weeks of initial training, followed by one week of supervised onsite training and performance testing. Other agencies, such as the Texas Department of Insurance (TDI), have explored using a contracted center to address shortfalls in customer assistance that occur during peak times or emergency events, such as the effects on state services that resulted from Hurricane Harvey. TDI ultimately chose to pursue various workforce and technological improvements instead of contracting with a third party.

DIR offers IT staffing services contracts that provide for temporary IT staffing augmentation through services performed by contractors who are paid hourly. Services are bid competitively through DIR's cooperative contract model for IT staffing services. According to DIR staff, however, the agency does not offer cooperative contracts for agencies to procure additional contact center staffing services to assist during peak or unexpected demand periods. The expansion of the cooperative contracts model into other workforce categories could improve contact center responsiveness to increases in demand. As part of Option 2, DIR would be required to establish preferred vendor contracts for contact center staff augmentation services. This preferred designation would expedite agency procurement of such services when unexpected demands on contact centers require staff augmentation to help ensure adequate customer response times.

ESTABLISH AN INNOVATIVE TECHNOLOGY GRANT PROGRAM

Agencies that provide information regarding contact center operations indicate that funding can be a primary constraint to implement technologies that improve service delivery. Option 3 would amend statute and the 2020–21 General Appropriations Bill to establish a technology innovation fund through which state agencies could receive grants to improve public communication and service delivery. The Legislature could appropriate General Revenue Funds for the 2020–21 biennium to fund this program. Alternatively, to provide a stable, long-term funding source, the Legislature could amend statute to redirect a portion of excess payments made to the state website Texas.gov that are transferred to the General Revenue Fund. Texas.gov provides portal and payment services for Texas state agencies and eligible local governmental organizations, enabling them to conduct business with their customers online. State agencies voluntarily participate in this program.

According to DIR's 2020–21 Legislative Appropriations Request, the agency anticipates receiving approximately \$62.0 million in Texas.gov collections during the 2020–21 biennium that would be transferred to the General Revenue Fund. Establishing a 5.0 percent set-aside, for example, would provide approximately \$3.1 million in grant funding for the 2020–21 biennium. It is assumed that DIR would require an additional 1.0 FTE position to administer this program, paid from a portion of revenue deposited to a newly established technology innovation fund. Utilizing a portion of the Texas.gov transfer also could incentivize agencies to route more revenue-generating services through the state website. This utilization would consolidate public access to government services within a single location and increase Texas.gov revenue generation, which could generate more money for the new grant program.

DIR would establish, by rule, specific program criteria and should consider multiple aspects when establishing this program. It should be structured to prioritize grant awards for projects that would have an immediate, quantifiable benefit to public service delivery. Service delivery could be measured by the extent to which a project decreases the time for a customer to communicate with the state, streamlines and decreases administrative layers to process requests, or results in cost savings to the public. The grant program also should contain a cost-share component to help ensure that it supports projects that agencies are committed to fully developing and implementing. In a contingency rider

implementing Option 3, the Department of Family and Protective Services (DFPS), DPS, the Texas Parks and Wildlife Department (TPWD), and Teacher Retirement System of Texas (TRS) would have priority to receive funding for the 2020–21 biennium. This opportunity to receive additional funding to address recommended remediation activities would help ensure that contact centers identified in this review as having the greatest performance concerns are addressed during the 2020–21 biennium.

AGENCY-SPECIFIC CONTACT CENTERS WITH EXCESSIVE OR UNKNOWN HOLD TIMES

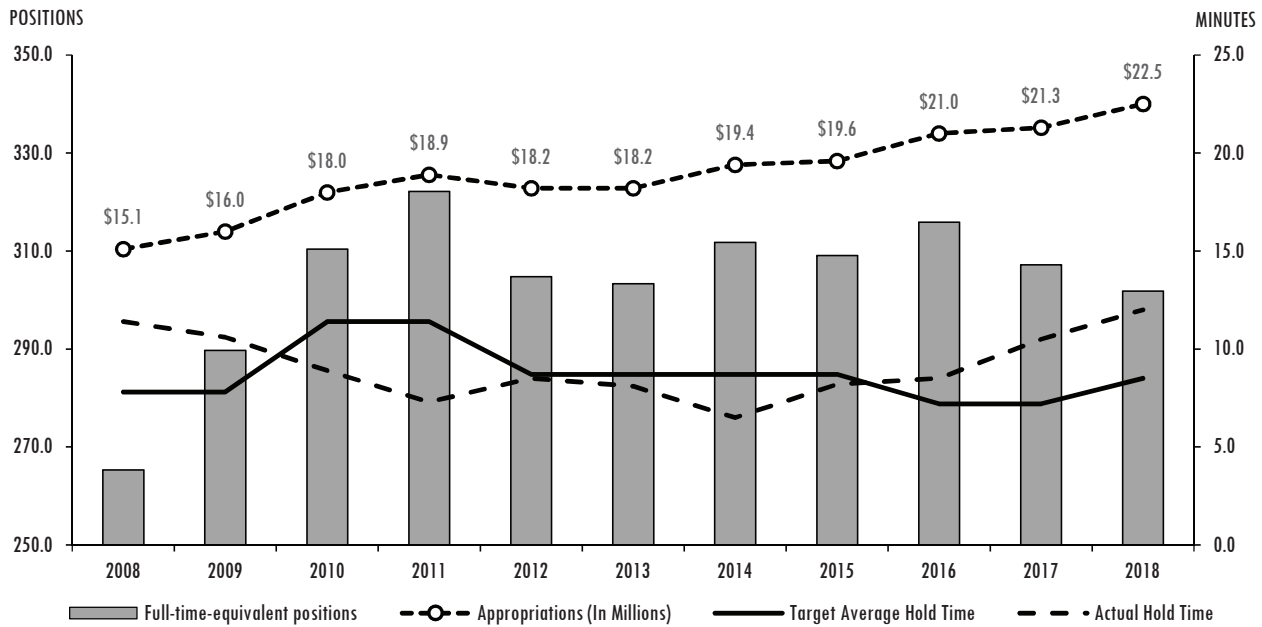
Agencies with the longest average hold times or incomplete performance data include DFPS, DPS, and TPWD. These agencies and TRS, which has experienced a significant increase in call volume and associated wait times during fiscal year 2018, are discussed in the following sections. The continued growth of the state's population can affect contact center performance negatively if an agency is not equipped to properly handle the increased call volume. According to agency survey responses and reports on the subject, common reasons for poor contact center performance typically are related to one or more of the following: insufficient staffing; inefficient contact center technology; or a lack of alternative methods to communicate with the public that decrease the number of calls received (e.g., providing online information or web-based applications to address customer needs).

DEPARTMENT OF FAMILY AND PROTECTIVE SERVICES, STATEWIDE INTAKE SERVICES

DFPS' Statewide Intake (SWI) program includes the operation of the statewide, centralized intake center located in Austin. The center receives, assesses, prioritizes, and routes reports of abuse, neglect, and exploitation of children, elderly adults, and persons with disabilities. SWI also provides 24-hour expedited background checks for Child Protective Services (CPS) caseworkers and information and referral services. SWI appropriations for the 2018–19 biennium total \$45.1 million in All Funds.

SWI had the longest administrative call wrap-up time (more than 31.0 minutes) and AHT (more than 45.0 minutes) of any contact center identified by LBB staff. The overall average wait time during fiscal year 2017 was 9.2 minutes, and DFPS staff anticipate this average to increase to 16.5 minutes by fiscal year 2021. Excluding calls from entities such as law enforcement, the average hold time for calls handled by intake specialists for the main abuse hotline in English was 12.0 minutes during fiscal year 2017. A separate hotline

FIGURE 4
DEPARTMENT OF FAMILY AND PROTECTIVE SERVICES APPROPRIATIONS FOR STATEWIDE INTAKE, COMPARED TO NUMBER OF AUTHORIZED INTAKE SPECIALISTS AND AVERAGE HOLD TIME FOR CALLS, FISCAL YEARS 2008 TO 2018



SOURCES: Department of Family and Protective Services, Data Book; General Appropriations Acts, 2008–09 to 2018–19 Biennia.

exists for law enforcement to call SWI. This line had an average hold time of 1.4 minutes during fiscal year 2017. However, law enforcement officers have reported waiting more than 20.0 minutes before their calls were answered. The total abandonment rate for all SWI queues during fiscal year 2017 was 27.5 percent. The abandonment rate for the same period for the main abuse hotline was 31.5 percent and, for the Spanish-language line it was 44.7 percent. **Figure 4** shows a correlation between the number of SWI staff and the length of call hold times, in which an increase in the former tracks a decrease in the latter. **Figure 4** also shows the consistent level of appropriations increases to DFPS for SWI.

The Texas Association for the Protection of Children issued a comprehensive analysis of CPS workforce and services during calendar year 2017. The report notes that DFPS has changed SWI since 1999 to improve services. For example, to address turnover the agency established a retention steering committee and implemented a telecommuting program. According to DFPS staff, 176.0 FTE positions, or 41.9 percent of the SWI staff, participated in telecommuting during the 2016–17 biennium. Additionally, SWI implemented a worker support programming initiative to address secondary traumatic stress disorder, a condition in

which workers experience trauma from the abuse they have witnessed. The initiative includes therapy dog visits with intake specialists. Additionally, DFPS began an initiative during fiscal year 2018 to evaluate SWI policies and processes to improve efficiencies. As a result of this initiative, DFPS requested fewer additional FTE positions than the agency initially anticipated in its 2020–21 Legislative Appropriations Request. SWI employee turnover decreased from 24.7 percent during fiscal year 2009 to 19.1 percent during fiscal year 2015. SWI appropriations increased by 23.0 percent during this period, from \$16.0 million for fiscal year 2009 to \$19.6 million for fiscal year 2015. As shown in **Figure 3**, SWI employee turnover has continued to decrease to an average annual rate of 15.8 percent for the 2016–17 biennium. According to DFPS staff, however, the turnover rate for an entry-level Intake Specialist I was 66.7 percent during the 2016–17 biennium. The Legislature increased appropriations to DFPS for SWI by 8.6 percent for the 2016–17 biennium from 2014–15 biennial funding.

However, based on recent average hold time and call abandonment rates, further improvements to program delivery are needed. As part of Option 1, DFPS should utilize DIR resources to continue to evaluate process

improvements to SWI. The following areas should be evaluated for change:

- SWI was the only system among agencies providing information regarding contact center operations that is operating an interactive voice response (IVR) system that did not enable callers to select an option before all options were presented. This requirement can delay the time it takes for callers to make selections to proceed through the queue;
- callers are not provided an estimated wait time. According to a 2011 study performed by the Schulich School of Medicine, this feature could enable customers to choose an option with a relatively shorter wait time, such as completing an online form;
- callers that are proceeding through the call routing system and waiting on hold wait more than 3.0 minutes from the start of the call until they are notified about an online reporting option. Moving this notification to the beginning of the phone call could decrease call volumes by redirecting more customers to the online form;
- approximately half, or 55.0 percent, of SWI contacts meet the criteria to justify intake processing. According to DFPS staff, a significant portion of the other 45.0 percent of calls are related to callers seeking referral or other information, which could be handled via other platforms such as mobile text or online chat. Other organizations, such as the U.S. Department of Defense, Oakland County in California, and the SAFE Alliance in Austin, also use these communication methods for crisis intervention services and emotional support for topics related to child abuse, sexual assault and domestic violence; and
- SWI does not utilize a callback option, which could decrease the time callers are on hold and provide a more convenient option for callers to communicate with SWI. This feature would be optional and utilized only by callers that agree to receive a call back for lower-priority or nonimmediate requests for assistance. For callers who are concerned that others might know they are contacting the agency, the system could be set up to de-identify the caller. During fiscal year 2017, 50.6 percent of callers to SWI were medical personnel, school staff, law enforcement, or

community agencies. Providing a callback option also would enable these staff to maintain productivity, instead of waiting on hold.

In addition to improvements that could result from these strategies, the number of active, experienced intake specialists answering calls can have a direct effect on further decreasing wait times. The number of DFPS-authorized FTE positions for the entire SWI program decreased from fiscal years 2017 to 2018 by 26.0 positions, or 7.4 percent. DFPS adjusted the number of positions allocated to the SWI program, due to the agency's ongoing difficulty in hiring and retaining as many positions as previously appropriated. According to DFPS staff, the primary impediment to hiring and retaining sufficient staff is salaries that are not competitive with similar positions elsewhere in the market. In December 2016, the LBB approved a package of funding for DFPS that included targeted pay raises for certain child and family protective service employees. During fiscal year 2016, the voluntary separation rate of employees for the targeted positions was 8.0 percentage points higher than for nontargeted positions. During fiscal year 2017, the voluntary separation rate for the targeted positions was 0.4 percentage points higher than for the nontargeted positions. This indicates that this action was effective at decreasing voluntary separation for the targeted positions.

Option 4 would increase appropriations in the 2020–21 General Appropriations Bill to DFPS to provide a salary increase for SWI program staff and to improve their performance through decreased employee turnover and improved retention. Decreased turnover would enable current staff and management responsible for training new staff to reallocate some training time to answering phones, which could assist in decreasing overall hold times. According to DFPS, increasing salaries of intake specialists, supervisors, and program administrators by \$500 per month each would cost \$4.3 million for the 2020–21 biennium. The average starting salary for an entry-level intake specialist is approximately \$2,684 per month. In this case, an additional \$500 per month equates to a salary increase of 18.6 percent. According to DFPS, this pay increase would approach a more equitable salary position for SWI staff compared to staff performing similar jobs in Texas and in other states. The increase is expected to improve retention, which would enhance tenure of staff and improve overall SWI program performance.

**DEPARTMENT OF PUBLIC SAFETY,
DRIVER LICENSE DIVISION**

The largest regulatory programs at DPS are driver license services, driving and motor vehicle safety, and safety education programs, which are administered by the agency's Driver License Division (DLD). Since fiscal year 2012, as part of an ongoing effort to support DPS in realizing more efficient processes and shorter waiting periods for driver license applicants, the Legislature has appropriated \$443.1 million to the Driver License Improvement Program (DLIP). A related but separate component to the physical service centers is the DLD contact center. Due to system technology constraints, the contact center can accept a maximum of 150 calls at once, which has resulted in approximately 20.0 percent of phone calls being answered. The DLD contact center had both the greatest employee turnover rate (35.4 percent) and average call hold time (15.5 minutes) of any agency surveyed.

In addition to the agency's driver license functions, the regulatory services program area includes the regulatory service compliance and regulatory service issuance programs. These services, including the private security program, handgun licensing, the vehicle inspection program, and the Texas metals program, are administered by the Regulatory Services Division (RSD). Although RSD reported significant call wait times during the 2016–17 biennium, DPS implemented changes at the program level that have decreased wait times from approximately 11.5 minutes to 3.5 minutes during fiscal year 2018. These changes include extending operating hours from 7:00 AM to 7:00 PM and expanding telecommuting opportunities for customer service staff. Additional modifications included implementing a virtual queuing and callback function and changes to the RSD website that have, according to the agency, improved the user experience. According to DPS staff, extending operating hours resulted in \$7,104 in additional annual salary costs. Four Customer Service Representative III staff were promoted to team lead positions (Customer Service Representative V) to provide oversight in the contact center. No additional FTE positions were hired to expand contact center hours. This expansion was accommodated through more flexible scheduling from increased telecommuting practices. In program structure, RSD has a greater percentage of staff that telecommute (70.0 percent for RSD, compared to 48.4 percent for DLD), is open for an additional 1.0 hour per day, and provides customers a callback feature.

The DLD contact center IVR is complex compared to other agency systems and requires entering a greater number of selections before reaching the queue to speak to customer service staff. If the caller makes a selection that is not recognized by the IVR, the call is disconnected. According to DPS, the driver license system lacks integration with the IVR. Industry sources suggest a maximum of three levels to five levels of call routing should be used to maintain convenience for the caller. These issues could be contributing to the DLD division's call abandonment rate of 21.7 percent, which is among the greatest rates of the contact centers surveyed. Due in part to the cumbersome functionality of interacting with the DLD call system, approximately 19.9 percent of the 12.9 million calls received during the 2016–17 biennium were from repeat callers. As part of Option 1, DPS should further analyze DLD for process improvements that could decrease wait times. Possible improvements include expanding the DLD telecommuter program, increasing the hours of operation to match RSD's hours, integrating virtual queuing callback technology as feasible, evaluating the IVR system for improvements to simplify calls for customers, and integrating a live chat and chatbot platform.

According to state agency staff and contact center reports, one way to improve performance issues is to hire more staff to answer calls. According to DPS' 2017 Strategic Plan, the DLD contact center's performance measure target is to connect 5.0 percent of calls with customer service staff within 5.0 minutes. According to DPS, to have 80.0 percent of calls answered within 5.0 minutes, the agency would need an additional 580.0 FTE positions based on current technology and administrative practices, which DPS estimates would cost \$107.7 million in additional appropriations.

ALTERNATIVE STAFF AUGMENTATION STRATEGIES

The Texas Department of Criminal Justice (TDCJ) administers the Texas Correctional Industries program, which is intended to provide participants with marketable job skills and to help decrease recidivism through job skills training and documented work history. Program participants are inmates, defendants, or supervised parolees that are confined or housed in a facility operated by or contracted with TDCJ. TDCJ is statutorily authorized to establish and operate a prison industries program at each correctional facility that it considers suitable. Statute prohibits participants from having access to personally identifiable information of individuals not in confinement. The federal prison system and other states, such as Arizona and New York, have

implemented programs using inmates to support contact center operations by performing services that do not require customers' personally identifiable information.

In Arizona, inmates assist the Department of Transportation by answering calls made to the state's Motor Carrier Services Division. The Arizona Correctional Industries program prohibits offenders convicted of a telephone-related crime or credit card or computer fraud from participating. According to staff, inmates have a high level of participation in the program, and the program does not experience workforce shortages.

The New York State Department of Motor Vehicles (NYS DMV) operates two contact centers within correctional facilities. These centers answer approximately 1.0 million calls per year, saving taxpayers \$3.5 million annually by avoiding hiring additional state government staff. According to New York Department of Corrections and Community Supervision (DOCCS) materials, the program provides offenders with knowledge of vehicle and traffic law, permits, renewals, commercial driver licenses, and fee structure. Offenders learn proficiency intended to provide them with marketable skills upon release from prison, including customer service, communication, and problem solving. Contact center operations are housed within a medium-security facility, and calls are monitored at random. Offenders must complete an initial 490.0-hour training program supervised by NYS DMV staff. The training sessions consist of classroom time and telephone time. NYS DMV may hire offenders after they are recommended by DOCCS, and NYS DMV staff regularly evaluate their performance.

Option 5 would include a rider in the 2020–21 General Appropriations Bill requiring TDCJ and DPS to implement a pilot program through which TDCJ offenders would provide contact center assistance for DPS. Offenders would provide general information and answer questions that do not involve customers' personally identifiable information through either telephone or computer interaction. According to DPS staff, some of the commonly asked questions for the DLD include how to obtain, renew, or replace a license. Correctional industries offenders could answer general inquiries of this kind. The DPS DLD contact center and a TDCJ facility are located in Austin. Therefore, the pilot program could take place in central Texas, which would facilitate the placement of DPS supervisory staff to supervise and monitor the program in the TDCJ facility. The infrastructure used to operate the contact center would come from available TDCJ facility space, combined with telephone

or computer hardware provided by DPS. At the conclusion of the pilot program, TDCJ and DPS would submit a joint report of their findings and accomplishments to the Legislature. The report should include recommendations about continuing the program and how it might be replicated at other agencies.

TEXAS PARKS AND WILDLIFE DEPARTMENT STATE PARKS CONTACT CENTER

Among responding state-operated contact centers, TPWD State Parks contact center, which includes three call center locations, provided the least amount of performance detail. TPWD's contact center experienced a 32.5 percent call abandonment rate during fiscal year 2016, which was the greatest rate of any contact center providing information. TPWD did not capture information to calculate this rate for fiscal year 2017. Additionally, LBB staff called the State Parks Reservation Hotline several times at random, and the estimated wait times ranged from 23.0 minutes to 3.0 hours, including one occasion when the contact center was closed due to a staff meeting. A positive attribute of the contact center, however, is that it enables callers to opt for a call back from TPWD staff.

An advantage of utilizing a website application to make park reservations is that it presents an alternate and more convenient option to the public, in lieu of making a phone call. However, TPWD's website has certain limitations that require individuals to use the hotline. For example, canceling a reservation made 180 days or more ahead of time, including reservations made online, requires calling the contact center. Minor adjustments to the website's functionality could decrease the number of phone calls the agency needs to manage. For instance, increasing the public's ability to make reservations for campsites could increase park revenue collections. System improvements, such as providing an online wait list and notification feature, would help parks fill vacancies due to sudden cancellations. As part of Option 1, TPWD would be required to use DIR resources to evaluate its contact center services during the 2020–21 biennium, and to consider implementing other improvements presented in this report.

TEACHER RETIREMENT SYSTEM, BENEFIT COUNSELING SERVICES

TRS' mission is to improve Texas educators' retirement security by investing and managing trust assets and delivering member benefits. TRS was not selected initially to provide information regarding contact center operations. The agency

alerted LBB staff about significant call wait times that had arisen at its benefits counseling contact center, which addresses inquiries related to pension benefits and TRS-Care, the healthcare program for public school retirees.

Due to benefits changes and increased membership that have resulted in increased call volumes, TRS has experienced an increase in costs during fiscal year 2018 of approximately \$3.8 million from Fund No. 960, Teacher Retirement System Trust Account, including \$1.8 million in outsourced contact center support services and \$0.4 million in long-distance charges. According to TRS, benefit counseling's AHT has increased from 10.0 minutes to 30.0 minutes from fiscal years 2017 to 2018. Average hold times have increased from approximately 3.0 minutes to more than 23.0 minutes during the same period. These factors decrease the agency's ability to assist all customer calls and to meet the target service level of answering 80.0 percent of calls within 3.0 minutes. As of April 2018, the agency answers 15.3 percent of calls within the first 3.0 minutes.

An independent consulting firm hired to analyze services and provide recommendations to TRS concluded that multiple staff, process, and technology improvements were needed to adapt to call center volumes. These improvements included investing in updated technologies, such as automatic call distribution and IVR systems, and improving quality monitoring and data analytics. According to TRS staff, the agency is scheduled to implement IT improvements at the end of fiscal year 2019 that could decrease call hold times. However, these changes might not address all of the consultant's recommended technologies. These IT improvements would be implemented as part of the TRS Enterprise Application Modernization (TEAM) program, a seven-year, \$130.0 million project to replace all of TRS' major IT systems. These systems include member records, annuity payroll, employer reporting, and website functionality. It is anticipated that call volumes will decrease as more members adopt a self-service approach to certain actions, such as changing beneficiary designations online.

Additionally, the consultant's report concluded that the TRS contact center is not staffed adequately to meet service-level objectives. The TRS Board of Trustees approved adding 43.0 FTE positions during the 2018–19 biennium, but TRS staff does not anticipate requesting additional staff for the 2020–21 biennium. As part of Option 1, TRS should examine additional process and technology improvements to address contact center wait times. The agency should consider expanding telecommuting and contact center hours of

availability to further absorb increased call volumes, a strategy that proved successful for DPS' Regulatory Services Division. Option 6 would increase the number of authorized FTE positions in the 2020–21 General Appropriations Bill to TRS to decrease benefits counseling call wait times. Any additional associated costs would be paid from the Teacher Retirement System Trust Account as part of administrative expenses determined and incurred by the agency.

FISCAL IMPACT OF THE OPTIONS

Option 1 would amend statute to define the phrase contact center, require agencies to report relevant performance information to DIR, and, if warranted, to collaborate with DIR to develop a remediation plan to address the identified issues. Agencies that would be subject to this provision include, but are not limited to, DFPS, DPS, TPWD, and TRS. Depending on the issues identified and DIR's technical level of expertise, an agency may contract out for consulting services. Vendors contacted as part of the review provided consulting cost estimates that ranged from \$0 to \$100,000, depending on the scope of service. As such, it is assumed that contracting activities could be accomplished within existing resources with no significant fiscal impact to participating agencies. Expenditures also may be compensated through the technology innovation fund, as suggested through Option 3. State agencies also may achieve an indeterminate amount of cost savings from decreasing contact center wait times through avoided phone toll charges or VoIP data usage, although these savings are not anticipated to be significant. Option 2 would include a rider in the 2020–21 General Appropriations Bill to require DIR to solicit additional vendors to provide contact center-specific technology and consulting services, and to establish preferred vendor contracts for staff augmentation services at contact centers. No significant fiscal impact is anticipated.

Option 3 would establish a technology innovation fund at DIR to award grant funding to agencies to pursue technology projects that would improve customer service performance. From excess Texas.gov payments, estimated at \$62.0 million for the 2020–21 biennium, 5.0 percent could be redirected into the newly established fund, as shown in **Figure 5**. This amount, or a direct appropriation of General Revenue Funds, would result in a cost to General Revenue Funds of \$3.1 million for the 2020–21 biennium. It is assumed that DIR would require an additional 1.0 FTE position to administer the program, the salary for which would be paid out of money deposited to the newly established technology innovation fund.

**FIGURE 5
FIVE-YEAR FISCAL IMPACT OF OPTION 3, FISCAL YEARS 2020 TO 2024**

YEAR	PROBABLE SAVINGS/(COST) IN GENERAL REVENUE FUNDS	PROBABLE REVENUE GAIN/ (LOSS) TO NEW TECHNOLOGY INNOVATION FUND	PROBABLE SAVINGS/(COST) TO NEW TECHNOLOGY INNOVATION FUND	PROBABLE ADDITION/ (REDUCTION) OF FULL-TIME- EQUIVALENT POSITIONS
2020	(\$1,550,000)	\$1,550,000	(\$1,550,000)	1.0
2021	(\$1,550,000)	\$1,550,000	(\$1,550,000)	1.0
2022	(\$1,550,000)	\$1,550,000	(\$1,550,000)	1.0
2023	(\$1,550,000)	\$1,550,000	(\$1,550,000)	1.0
2024	(\$1,550,000)	\$1,550,000	(\$1,550,000)	1.0

SOURCES: Legislative Budget Board; Texas Department of Information Resources.

Option 4 would increase General Revenue appropriations to provide a salary increase to SWI program staff. As shown in **Figure 6**, this increase would cost an estimated \$4.3 million in General Revenue Funds for the 2020–21 biennium.

Option 5 would include a rider in the 2020–21 General Appropriations Bill directing TDCJ to conduct a pilot program for offenders to provide contact center assistance to DPS. It is assumed that a small-scale, initial pilot can be conducted within the existing resources of both agencies, and no significant fiscal impact is anticipated.

Option 6 would increase the number of authorized FTE positions in the 2020–21 General Appropriations Bill to TRS to decrease benefits counseling call wait times. TRS has adjusted the assignments for FTE positions through the Teacher Retirement System Trust Account during the 2018–19 biennium. As such, no significant fiscal impact is anticipated for the 2020–21 biennium.

The introduced 2020–21 General Appropriations Bill includes adjustments to implement Option 6.

**FIGURE 6
FIVE-YEAR FISCAL IMPACT OF OPTION 4
FISCAL YEARS 2020 TO 2024**

YEAR	PROBABLE SAVINGS/(COST) IN GENERAL REVENUE FUNDS
2020	(\$2,164,996)
2021	(\$2,164,996)
2022	(\$2,164,996)
2023	(\$2,164,996)
2024	(\$2,164,996)

SOURCES: Legislative Budget Board; Department of Family and Protective Services.

IMPROVE TELECOMMUNICATIONS MANAGEMENT PRACTICES TO REDUCE STATE AGENCY COSTS

Business and government operations use a large number of wired and wireless devices to communicate information internally and with their constituents. The state spent approximately \$474.4 million in All Funds on telecommunications-related services during the 2016–17 biennium. These services include Internet, landline, and mobile services. Other government and private organizations have evaluated their monitoring and management practices related to these services to improve administrative efficiency and to save costs. Legislative Budget Board staff collected information from 12 state agencies and institutions of higher education that have significant related expenditures. This data was collected to ascertain the agencies' practices regarding the monitoring of phone inventories and usage, and to identify opportunities for improvement. By providing agencies with additional direction to use more effective telecommunications management practices, the state could realize cost savings by decreasing unnecessary expenditures and increasing administrative efficiency.

FACTS AND FINDINGS

- ◆ The Texas Department of Information Resources is responsible for providing certain telecommunications services to agencies, primarily landline and Internet services. Individual agencies are responsible for mobile phone procurement, although the Department of Information Resources has entered into contracts that approximately 90 state agencies participate in to some degree.
- ◆ JPMorgan Chase & Co. surveyed its staff in 2015 to evaluate opportunities to reduce telephone costs voluntarily, such as removing voicemail features, which resulted in approximately \$8.0 million in annual cost savings.

CONCERNS

- ◆ Seven of 12 state agency respondents reported delegating the role of monitoring phone usage predominately to individual departments within the agencies. Without a central inventory, agencies have a limited ability to improve efficiencies, such as verifying proper device usage or leveraging all applicable agency resources to make procurements.

- ◆ Two of 12 responses indicated a process to identify whether staff need both landline and mobile devices, or if certain add-on features are necessary.
- ◆ Statute governing the Department of Motor Vehicles requires telephone and fax machine infrastructure to be in place for submission of certain permit and registration information, which requires the agency to maintain unnecessary and outdated equipment.

OPTIONS

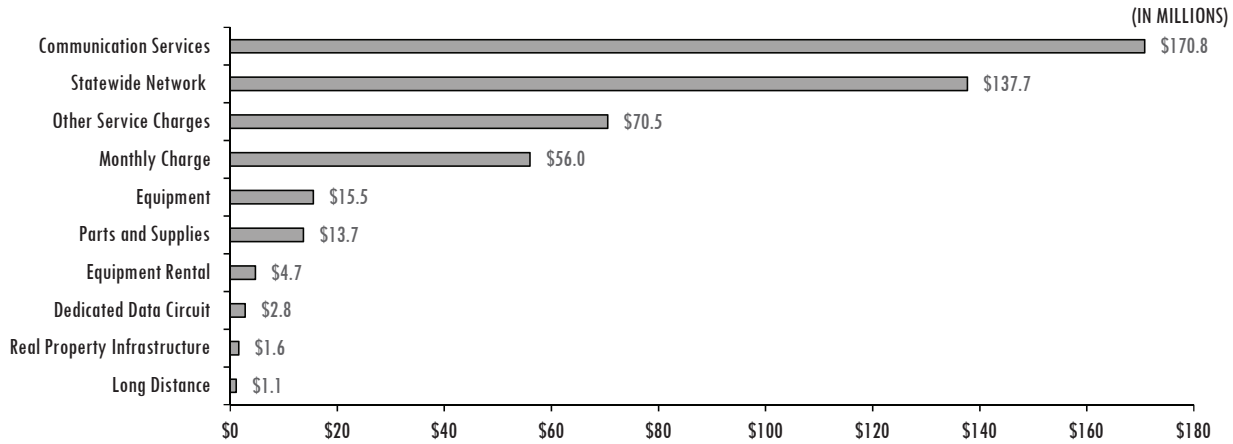
- ◆ **Option 1:** Amend statute to require state agencies to compile and maintain inventories of landline and mobile devices, including associated service limits and rates, and to develop documented procedures to assess device usage. This information would be reported to the Department of Information Resources, upon request, to assist in guiding contract negotiations.
- ◆ **Option 2:** Include a rider in the 2020–21 General Appropriations Bill requiring state agencies to survey staff for telecommunications preferences, to assist in determining potential cost savings from telecommunications services that no longer may be necessary, and to report results to the Department of Information Resources.
- ◆ **Option 3:** Amend statute to remove requirements that the Department of Motor vehicles maintains telephone and fax machine infrastructure to receive certain permit and registration information.

DISCUSSION

All state agencies use wired or wireless devices as a means to communicate internally and with their various constituents. Legislative Budget Board (LBB) staff analysis identified 10 Comptroller of Public Accounts (CPA) Uniform Statewide Accounting System accounting codes primarily associated with telecommunications services, including landline and mobile telephones and data and Internet services. Expenditures for these services are shown in **Figure 1** and totaled \$474.4 million in All Funds for the 2016–17 biennium.

These accounting codes, however, encompass additional items that are not related directly to landline or mobile

FIGURE 1
TELECOMMUNICATIONS-RELATED EXPENDITURES FOR STATE AGENCIES AND INSTITUTIONS OF HIGHER EDUCATION, ALL FUNDS
2016–17 BIENNIUM



SOURCES: Legislative Budget Board; Comptroller of Public Accounts, State of Texas Cash Activity.

telephone services. The term telecommunications can encompass other services including fax machine line charges, wireless Internet, and others. As a result, it is difficult to isolate the direct cost to the state for landline and mobile telephone equipment. **Figure 2** shows details regarding the largest categories of expenditures.

ROLE OF DEPARTMENT OF INFORMATION RESOURCES

The Department of Information Resources’ (DIR) mission is to provide technology leadership, solutions, and value to state government, education, and local government entities in Texas. DIR’s mission includes enabling and facilitating the fulfillment of these entities’ core missions. The Texas Government Code, Chapter 2170, establishes the statutory framework for how DIR fulfills this mission and interacts

with its customers regarding telecommunications services. Statute requires agencies to use DIR intercity services, including long-distance, local network, and wide-area network functions. For intracity services, agencies officed outside the Capitol Complex in Austin are authorized to use alternative providers in lieu of DIR, provided these agencies use a bidding process. Provisions relating to mobile devices, however, are outlined within the Texas Government Code, Chapter 2157, because these devices are considered a commodity like other types of hardware and software. Agencies are not required to purchase wireless services through DIR. However, DIR negotiates contracts with telecommunications providers for wireless services. According to information supplied to DIR, approximately 90 of 135

FIGURE 2
STATE AGENCIES’ LARGEST TELECOMMUNICATIONS EXPENDITURES, 2016–17 BIENNIUM

CATEGORY	DESCRIPTION	EXPENDITURES (IN MILLIONS)
Communication Services	Electronically transmitted communication services, which include but are not limited to computer lines, teleconferencing, and wireless Internet	\$170.8
Statewide Telecommunications Network	Payments by the Department of Information Resources for communication technology services rendered to the Statewide Telecommunications Network	\$137.7
Telecommunications – Other Service Charges	Other telecommunications charges, which include but are not limited to cellular phone and tablet computer data plans, roaming charges, and telephone line installation	\$70.5
Telecommunications – Monthly Charge	Monthly telephone charges	\$56.0

SOURCES: Legislative Budget Board, Comptroller of Public Accounts, State of Texas Cash Activity and Manual of Accounts.

state agencies, or two-thirds, purchase some or all of their mobile services through DIR contracts.

Customers that are eligible to enter into DIR's acquired service agreements include state agencies, institutions of higher education, and local governments and school districts. According to DIR staff, this larger customer pool enables DIR to negotiate lower pricing structures in the market. Aside from pricing negotiations, DIR's other contractual incentives include billing reconciliation on behalf of customers, streamlined procurement processes, and negotiated standard terms and conditions. **Figure 3** shows the number of entities participating in service agreements with DIR, by customer type, during fiscal years 2015 and 2016. As of April 2018, DIR employed 5.0 full-time-equivalent (FTE) positions as billing analysts, who review bills submitted by vendors for accuracy. DIR then bills the agencies for the services, less any amount disputed for incorrect charges.

TELECOMMUNICATIONS PROGRAMS

DIR has several service programs for agencies to use, depending on agencies' locations and business needs. **Figure 4** shows DIR's primary telecommunications programs, the Capitol Complex Telephone System (CCTS) and the

**FIGURE 3
DEPARTMENT OF INFORMATION RESOURCES'
PARTICIPATING COMMUNICATIONS TECHNOLOGY
SERVICE CUSTOMERS, FISCAL YEARS 2015 AND 2016**

CUSTOMER	2015	2016
State Agencies	134	135
Local Governments	430	436
Education	324	349 (1)
Other	4	5
Total	892	925

NOTE: Education calculations include customers in both public and higher education. For fiscal year 2016, the Department of Information Resources had 238 customers in public education and 111 customers in higher education.
SOURCE: Department of Information Resources, 2016 Report on Telecommunications.

statewide consolidated telecommunications system called the Texas Agency Network (TEX-AN). As of April 2018, DIR employed 6.0 FTE positions to assist agencies in ordering services through DIR's contracts for these programs.

The Texas Government Code, Chapter 2170, provides that a state agency should use TEX-AN to the fullest extent possible. A state agency may not acquire other telecommunications services unless DIR's executive director

**FIGURE 4
PRIMARY TELECOMMUNICATIONS PROGRAMS PROVIDED BY DEPARTMENT OF INFORMATION RESOURCES
FISCAL YEAR 2017**

CAPITOL COMPLEX TELEPHONE SYSTEM (CCTS)

- provides help desk support; move, add and change support; and telephone equipment supplies within the Capitol Complex area;
- manages approximately 20,000 phones, supporting 90 agencies in 48 buildings;
- the Eighty-fifth Legislature, General Appropriations Act (GAA), 2018–19 Biennium, Department of Information Resources, Strategy B.4.1, Capitol Complex Telephone, provides \$9.4 million from the Telecommunications Revolving Account to maintain and increase CCTS capabilities;
- performance measures developed with the Legislative Budget Board (LBB) and reported by the Department of Information Resources (DIR) show that 95.0 percent of customers were satisfied with CCTS during fiscal year 2015; and
- the CCTS system in use is scheduled to be decommissioned during the 2018–19 biennium. As of the end of fiscal year 2016, DIR had transitioned some or all of the phones in 19 agencies to a Voice over Internet Protocol (VoIP) platform. An additional 62 agencies have been briefed on imminent changes, and 23 agencies are planning for transition.

TEXAS AGENCY NETWORK (TEX-AN)

- provides telephone service other than CCTS, data circuits, Internet, and video services to Texas cities, state and local government agencies, local school districts, and institutions of higher education statewide;
- DIR contracts with Gartner, a research and advising company, to assist in benchmarking rates to achieve competitive vendor pricing;
- the 2018–19 GAA, DIR, Strategy B.5.1, Network Services, provides \$176.0 million from the Telecommunications Revolving Account to maintain the legacy TEX-AN and provide enhanced TEX-AN network services; and
- performance measures developed with the LBB and reported by DIR show that 84.6 percent of customers were satisfied with TEX-AN during fiscal year 2015.

SOURCE: Legislative Budget Board, Department of Information Resources.

**FIGURE 5
TEXAS ENTITIES PROVIDING INFORMATION FOR TELECOMMUNICATIONS ANALYSIS, FISCAL YEAR 2018**

Texas Facilities Commission	Texas Department of Criminal Justice
Office of the Attorney General	Department of Public Safety
Department of Family and Protective Services	Parks and Wildlife Department
Health and Human Services Commission	Department of Motor Vehicles
Texas A&M University System Health Science Center	Department of Transportation
University of Texas at Austin	Texas Workforce Commission

SOURCE: Legislative Budget Board.

determines that the agency’s requirement cannot be met at a comparable cost by TEX-AN or CCTS. State agencies are granted an exemption for the procurement of telecommunications services that are not part of TEX-AN or CCTS. The following services are included in this exemption:

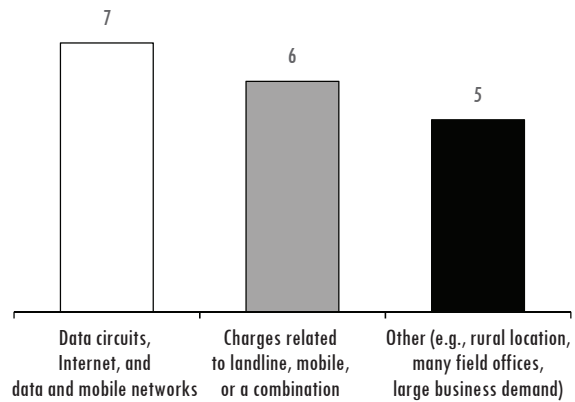
- cellular devices and service – applies only to devices bought with corresponding service (e.g., cellular phones, air cards, etc.);
- local telephone service;
- over-the-phone interpretation service;
- answering or paging devices and services;
- radio telephones, including cellular type for vehicle, marine, personal, etc.; and
- interpreter services that are electronically assisted, such as foreign language, hearing impaired, etc.

Agencies are able to obtain telecommunication services through DIR’s acquired service contracts throughout much of the state. However, gaps may exist in locations where DIR has no contracted services available to state agencies. In these cases, agencies may be granted a waiver to contract outside of DIR’s contracts, but agencies seeking exemption must request bids for services. As of March 2018, 143 DIR telecommunications waivers were active. Of this amount, 128, or 89.5 percent of waivers, were for Small Office/Home Office services for one to 25 workstations. The majority of these waivers were granted to the Texas Parks and Wildlife Department for remote park locations.

TELECOMMUNICATIONS PRACTICES OF STATE AGENCIES AND INSTITUTIONS OF HIGHER EDUCATION

LBB staff collected information from 12 agencies and institutions of higher education to identify how agencies monitor and manage their telecommunications infrastructure.

**FIGURE 6
STATE ENTITIES’ REPORTED PRIMARY TELECOMMUNICATIONS COST DRIVERS
FISCAL YEAR 2018**



SOURCES: Legislative Budget Board; agency survey submissions.

Figure 5 shows the entities who provided information for this analysis; they were chosen based on having the greatest telecommunications-related expenditures, according to the Texas Comptroller of Public Accounts’ Cash Activity data for the 2016–17 biennium.

Agencies reported a variety of factors as significant cost drivers for telecommunications operations. Seven of 12 entities indicated data circuits, Internet, and data and mobile networks were primary cost drivers; six of 12 entities indicated that landline and mobile charges also were cost drivers. Figure 6 shows cost drivers reported by agencies.

Ten of 12 respondents reported using DIR services for the majority of their telecommunications functions, excluding those exempt from using required DIR services. Six agencies reported that they did not fully utilize DIR services because some services are not available in all areas of the state. In rural areas of the state, although DIR may not have a contract available, alternative sources are available for agencies to

receive telecommunications services. For example, the Texas Statewide Telephone Cooperative, Inc., (TSTCI) is a statewide association of 45 rural telephone cooperatives and independent local telephone companies. TSTCI contracts with clients including state agencies, municipalities, independent school districts, and institutions of higher education.

FEDERAL MONITORING OF MOBILE TELECOMMUNICATIONS USAGE

Federal Executive Order 13589, 2011, stated that federal agencies should assess device inventories and usage and establish controls to ensure that they are not paying for unused or underutilized equipment. The federal Office of Management and Budget (OMB) issued guidance regarding mobile services to federal departments. Departments are required to implement a comprehensive central inventory and policies that assess individual accounts for overuse, underuse, and no usage. OMB later identified potential savings of approximately \$388.0 million from federal fiscal years 2013 to 2015 by consolidating or eliminating certain mobile device contracts.

Following the release of OMB's guidance, the U.S. Government Accountability Office (GAO) reported on weaknesses in 15 selected agencies' controls of mobile device spending in 2015. GAO found that most agencies did not have an inventory of mobile devices and associated services that could be used to assess usage. According to GAO, without an inventory that includes each device and associated service limits and rates and documented procedures to assess device usage relative to service rate plans, agencies have a limited ability to monitor device usage and determine if it should be canceled or moved to a different service plan. Furthermore, without a reliable inventory of mobile service contracts, agencies are less likely to identify opportunities for consolidation and are less likely to achieve the associated cost savings.

STATE PRACTICES IN INVENTORY AND DEVICE USAGE MONITORING

The generating of a device inventory and call usage history was a key component of the OMB and GAO reviews. LBB staff collected similar information from participating state agencies and institutions. DIR does not receive or maintain a breakout of usage by individual device number. Seven agencies were not able to provide this information readily because the monitoring of telecommunications-related data is delegated to individual departments within those agencies.

This data is not provided to a central location within the agency. Two agencies reported that requested information was not kept in-house and that they would need to contact their private vendors to obtain it.

Several agencies submitted samples of phone statements, although these usually were supplied as scanned PDF documents of paper invoices. According to agency submissions, seven agencies receive their billing statements in both paper and electronic formats. Some agencies indicated that they receive electronic invoices from DIR and typically receive paper statements from vendors. One agency reported that it receives 13,000 pages of mobile inventory billing statements from its vendor per month. Three respondents reported receiving all of their billing statements electronically. One respondent that receives both electronic and paper statements acknowledged that some vendors offer paperless statement delivery options and may offer discounts; however, program-level staff must research and request those options.

Regarding processes to monitor the actual usage of their landline or mobile inventories, agencies indicated that they typically delegate this function to individual departments within those agencies. Three respondents did not indicate having any process to review landline usage, and two respondents did not indicate having a process to review mobile device usage. Three agencies indicated that they use a process to eliminate lines that have no usage during a finite period; the frequency of this evaluation ranges from one month to six months. The remainder of survey respondents reported having a general process for monitoring device usage in which individual division personnel had the ability to view these reports and could make management adjustments accordingly.

DIR indicated that agencies submit monthly vendor sales reports, not detailed cost or equipment information. According to DIR, agencies' additional service detail information could strengthen DIR's negotiating position. Additionally, DIR indicated that having centrally organized telecommunications information would enable DIR to communicate with the same staff from a particular agency, improving DIR's ability to assist these agencies.

Option 1 would amend the Texas Government Code, Chapter 2170, to require state agencies to compile and maintain inventories of landline and mobile devices, in a manner determined by DIR. These inventories would include device usage, any associated contracts, and service limits and rates. This amendment also would require agencies

to document procedures to assess device usage relative to service rate plans. DIR would be authorized to request these inventories and any other related service information to assist in guiding contract negotiations. As part of Option 1, statute also would be amended to require agencies, as feasible, to receive information related to their telecommunications services in electronic format from their contracted vendors. This requirement would enable agencies to compile the information described in Option 1 more efficiently for analysis by all parties. Information compiled through Option 1 would be collected to the extent feasible by the agency; some agencies operate within a telecommunications infrastructure that would prevent the complete aggregation of these variables. The ability of an agency to receive its information electronically is predicated on the vendor's ability to supply that information in the desired format.

In some cases, agencies could receive information more feasibly from individual departments electronically and compile the data. Another structure could mimic what the Texas Facilities Commission (TFC) uses, wherein the agency's central fiscal division receives the monthly agencywide bill electronically. TFC's fiscal division divides the bills by organization code, and emails the individual bills to the appropriate divisions. These bills include call data for every device, which enables each division to review its device use every month.

SOLICITATION OF STAFF INPUT REGARDING TELECOMMUNICATION PREFERENCES

The process of soliciting direct input from staff regarding their telecommunications preferences can yield additional opportunities for cost savings and improved administrative efficiency. For example, as part of a larger cost-cutting initiative in 2015, JPMorgan Chase & Co. eliminated about two-thirds of its voicemail operations based on staff surveys, which led to approximately \$8.0 million in annual savings. The Coca-Cola Company performed a similar survey of its staff, and 6.0 percent of staff chose to retain their voicemail functionality, leading to an annual savings of \$0.1 million. During the surveys and analysis performed in 2015, JPMorgan had an average of 234,598 FTE positions and Coca-Cola had 123,200 FTE positions. In comparison, during fiscal year 2017, Texas state agencies and institutions of higher education employed an average of 327,016.0 FTE positions. According to Verizon Communications Inc. business division staff interviewed in 2015, digital telecommunications services have reduced the common

availability of voicemail features so that approximately one-third of office phones have voicemail.

Ten of the 12 respondents indicated that they have never performed such a survey of their staff. One agency stated that it administers an informal survey of mobile phone users and phone management, which is performed annually when the mobile phone plan is reviewed. Another agency described performing a similar, onetime survey process as part of its voice over Internet protocol (VoIP) migration. Additionally, agencies were asked what processes exist to determine whether staff need both landlines and mobile phones. One agency responded that it is assessing the need for staff that also have agency-issued mobile phones, although the agency's practice is to provide all workstations with landlines. The remaining 11 agencies typically described a process to determine whether to issue mobile devices, but they did not comment directly on any processes that have been used to evaluate the ongoing need to retain landlines. Two respondents did not include any related processes.

Option 2 would include a rider in the 2020–21 General Appropriations Bill requiring state agencies to conduct a onetime survey of staff that have a dedicated landline telephone, mobile phone, or VoIP system to gauge their telecommunications preferences. This survey would require agencies to obtain staff opinion regarding the following factors: (1) the necessity of retaining multiple forms of telecommunications hardware; and (2) whether certain supplemental features, such as voicemail or any features for which the agency pays a premium, are necessary for employees to properly conduct business. Whether an agency pays a premium for supplemental features varies by vendor. Some vendors bundle additional services including voicemail in their pricing, and others may charge supplemental fees for those services. Results from this survey would be reported to DIR.

Agencies may wish to augment any staff survey tools they currently administer, to identify potential administrative efficiencies or costs savings from removing unnecessary telecommunications devices or features. For example, the Health and Human Services Commission issues to its staff a biennial survey conducted by the University of Texas Institute for Organizational Excellence. Although the survey is not specific to telecommunications, it asks staff about their satisfaction with various information systems. Considering the JPMorgan and Coca-Cola case studies, based on the size of the state's workforce, and assuming the same levels of state staff have voicemail services that incur a similar premium,

the state could achieve an annual savings from \$0.4 million to \$11.2 million in All Funds by decreasing the prevalence of this feature. In examining a sample of DIR-approved contracts, some pricing plans for landline or VoIP services would include separate premium charges for services such as voicemail, caller identification, or call forwarding. Other contracts or negotiations made on individual cases may bundle these types of charges together. It is unknown to what degree agencies pay premiums for services such as these. Additional savings could be achieved through the identification of other unneeded services, such as having both a dedicated landline and mobile device for individual staff.

DEPARTMENT OF MOTOR VEHICLES COMMUNICATION RESTRICTIONS

State law may guide agencies in the method of communication they are to use when interacting with the public. Respondents did not indicate any areas in state law that limit their ability to communicate with the general public, except the Texas Department of Motor Vehicles (DMV). According to DMV, two sections of statute establish impediments because, due to advancements in technology, the following communication methods are required to be available but are inconsistent with the agency's business model:

1. Submission of Insurance for Vehicle Registration – The Texas Transportation Code, Section 502.046, relates to providing evidence of financial responsibility during the submission of insurance for vehicle registration. This provision requires an infrastructure to support the submission of this information to the local county assessor-collector through both telephone and fax machine; and
2. Oversize/Overweight Permit Issuance by Department – The Texas Transportation Code, Section 623.081, requires DMV to have a process and infrastructure to provide for issuing a permit by telephone for the operation of an overweight or oversize motor vehicle on a state highway.

For both of these provisions, statutory language requires the retention of older technologies and infrastructure. Option 3 would amend the Texas Transportation Code, Chapters 502 and 623, to remove these communication requirements, enabling this information to be received through electronic or other means that the county or agency determines to be

the most effective method of communicating with its constituents.

FISCAL IMPACT OF THE OPTIONS

Option 1 would amend statute to require state agencies, as feasible, to compile landline and mobile device information, in a manner determined by DIR, within a central location within each agency, draft policies to monitor and evaluate usage, and make this information available to DIR upon request. No significant fiscal impact is anticipated as a result of Option 1, and it is assumed this task can be accomplished within existing resources. Performing a staff survey, as described in Option 2, also could be accomplished within existing resources, and no significant fiscal impact is anticipated. This effort may result in the elimination of certain telecommunications devices, services, or additional features such as voicemail, which could lead to cost avoidance for those agencies. However, this amount would depend on the structure of the agency's current telecommunications contract(s), and the amount of cost avoidance is not anticipated to be significant. No significant fiscal impact is anticipated as a result of Option 3, which would enable certain DMV-related communications to be performed through alternative methods to telephone or fax.

The Senate introduced 2020–21 General Appropriations Bill includes a rider to implement Option 2.

OVERVIEW OF OPIOID CRISIS IN TEXAS

Opioids are a class of drug that includes prescription medicines, such as hydrocodone, oxycodone, morphine, and methadone, and illicit substances, such as heroin. Opioid use has increased dramatically across the U.S., resulting in more than 42,000 overdose deaths during calendar year 2016. During that year, 1,375 Texans died from opioid overdose, according to research from the Centers for Disease Control and Prevention

This overview of the opioid crisis in Texas includes information regarding select state-level programs and responsive actions and information regarding federal actions to combat the crisis that have implications for the state. Information focuses on prevention, treatment, and monitoring activities in Texas, although it does not include all behavioral health programs and services that may relate to opioid use. In addition, criminal justice-related activities are not within the scope of this overview.

FACTS AND FINDINGS

- ◆ Rates of opioid prescribing, nonmedical use of opioids, and opioid overdose deaths in Texas are either similar to or less than those for the nation.
- ◆ New federal funding, including the formula-funded State Targeted Response to the Opioid Crisis Grants, is available to states to address the opioid crisis. Texas received \$73.6 million for this purpose for federal fiscal year 2018.
- ◆ For fiscal year 2018, the Health and Human Services Commission budgeted \$218.6 million in All Funds for substance use disorder services, including \$44.1 million in General Revenue Funds and \$174.5 million in Federal Funds.
- ◆ During fiscal year 2017, the Texas Medicaid program provided opioid use disorder treatment to 6,594 clients and paid \$11.4 million in All Funds in claims for these services.
- ◆ Texas has 85 opioid treatment program sites, which provide access to medication-assisted treatment for people diagnosed with moderate to severe opioid use disorder. Approximately 2.0 million Texans live in areas that do not have any publicly funded

opioid treatment program sites. The Health and Human Services Commission is working to increase medication-assisted treatment services using newly available federal funding.

DISCUSSION

Opioid drugs have valuable medicinal properties when used within a physician's care, but they also can be habit-forming or fatal when misused or abused. Many individuals who use opioids are prescribed the drugs for legitimate medical uses, including pain management, but opioid use may also involve the misuse or abuse of either prescription or illicit opioids. Misuse is defined as the incorrect use of a prescription opioid while abuse refers to a recurring pattern of either prescription or illicit opioid use which substantially impairs a person's functioning in one or more important life areas such as social or vocational.

Opioid use has increased dramatically nationwide, a development that has been linked to an increase in opioid prescriptions. According to research from the Centers for Disease Control and Prevention (CDC), prescription opioid sales quadrupled nationally from calendar years 1999 to 2010. Concerns about insufficient treatment of pain and lack of accurate information about the risk of addiction led to increased prescribing of opioids. The number of opioids prescribed peaked during calendar year 2010 and has decreased each year through calendar year 2015. Despite this decrease, the amount of opioids prescribed during calendar year 2015 was approximately three times higher than during calendar year 1999.

Opioids have a high potential for abuse, and using prescription opioids can lead to their misuse or abuse, or to addiction. Addiction is indicated by an inability to consistently abstain from opioid use, impairment in behavioral control, and cravings, among other characteristics. Research indicates that a subset of individuals prescribed opioid medications misuse or abuse them or develop an addiction. However, as many individuals take opioids, a significant number of people develop problems.

According to research from the CDC and the federal Substance Abuse and Mental Health Services Administration (SAMHSA) prescription opioid misuse, abuse, and addiction

can lead to heroin use. The transition from prescription opioids to heroin use may be driven by their similarity in the chemical properties and physiological impacts and because heroin may be cheaper and easier to find. Users of heroin face additional risks including exposure to additives and other drugs, such as fentanyl.

During calendar year 2016, 12.3 million people age 12 or older misused prescription opioids or used heroin in the U. S. During the same year, an estimated 2.3 million people age 12 or older met the clinical criteria for having an opioid use disorder (OUD).

In addition to the risk for addiction, opioid misuse and abuse can lead to overdose or death. During calendar year 2016, more than 42,000 people across the U.S. died of an opioid overdose. Approximately 15,500 of those deaths were attributed to heroin overdose.

OPIOID CRISIS IN TEXAS

Rates of opioid prescribing are lower in Texas than the U.S. average. Texas’ calendar year 2016 rate of opioid prescriptions per 100 persons was 57.6, and the national rate was 66.5 per 100 persons. **Figure 1** shows opioid prescribing rates from calendar years 2012 to 2016 in Texas and the U.S.

However, lower opioid prescribing rates have not shielded Texas completely from the crisis. According to the 2015 and 2016 National Surveys on Drug Use and Health, an estimated 4.48 percent of Texans age 12 and older (approximately 1.0 million people) misused prescription pain relievers during the previous year, which is similar to the national rate of 4.46 percent. The percentage of Texans age 12 and older reporting past-year heroin use was 0.20 percent (approximately 45,000), compared to 0.33 percent nationally. The percentage of Texans age 12 and older with OUD was 6.7 per 1,000 (approximately 149,000 people) while the national rate was 8.4 per 1,000.

Eligible individuals with OUD may receive treatment through state-funded providers or through the Texas Medicaid program. In addition, until calendar year 2017, individuals with OUD who resided in the Dallas area could receive treatment through the NorthSTAR program, a behavioral health delivery system that served Medicaid-eligible and medically indigent persons. Beginning in 2017, former NorthSTAR clients receive OUD treatment through either Texas Medicaid or Health and Human Services Commission (HHSC) state-funded treatment for OUD, depending on their eligibility status.

**FIGURE 1
TEXAS AND U.S. OPIOID PRESCRIBING RATES PER 100 PERSONS, CALENDAR YEARS 2012 TO 2016**



SOURCE: Centers for Disease Control and Prevention.

During calendar year 2017, 8,749 Texans received state-funded treatment for OUD. That same year, 3,192 individuals accessed medication-assisted treatment (MAT) services, the evidence-based treatment for moderate to severe OUD. MAT typically consists of long-term, daily, outpatient treatment, including the use of certain medications that are intended to address withdrawal symptoms and reduce cravings for the abused opioid. **Figure 2** shows medications used to treat opioid-related disorders. The waitlist to receive OUD treatment services through state-funded providers had 5,872 entries in 2017, and 2,135 individuals on the waitlist eventually were served.

Figure 3 shows the number of individuals who received treatment for OUD through state-funded providers from calendar years 2012 to 2017.

During calendar year 2016, the last full year that NorthSTAR was in operation, 3,146 individuals with OUD received treatment through the program and 833 individuals received MAT services. **Figure 4** shows the number of individuals that received treatment for OUD through NorthSTAR from calendar years 2012 to 2016.

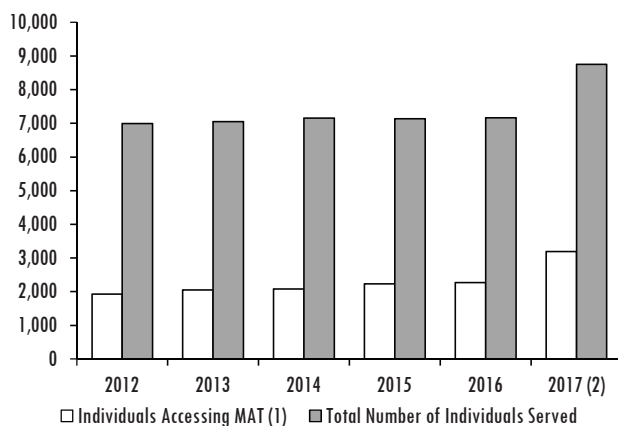
During fiscal year 2017, the Texas Medicaid program provided treatment to 6,594 individuals with OUD, and 6,179 individuals accessed MAT services. **Figure 5** shows the number of individuals that received treatment for OUD through the Texas Medicaid program from fiscal years 2012 to 2017.

**FIGURE 2
MEDICATIONS USED TO TREAT OPIOID-RELATED DISORDERS, CALENDAR YEAR 2018**

MEDICATION	USAGE
Medication-assisted treatment drugs that decrease opioid withdrawal symptoms and cravings	
Methadone	Pill, liquid, and wafer form; administered once daily
Buprenorphine	Sublingual tablet and oral film forms; can be administered once daily or less frequently
Naltrexone	Pill, administered once daily; or an injectable form, administered monthly
Opioid-blocking drug that temporarily reverses an opioid overdose	
Naloxone	Nasal spray or an injectable form

NOTE: Each medication-assisted treatment medicine works differently pharmacologically, and users may experience different results. Some buprenorphine products contain naloxone to decrease the likelihood of diversion and misuse.
SOURCE: Substance Abuse and Mental Health Services Administration.

**FIGURE 3
INDIVIDUALS IN TEXAS RECEIVING OPIOID USE DISORDER TREATMENT THROUGH STATE-FUNDED PROVIDERS CALENDAR YEARS 2012 TO 2017**

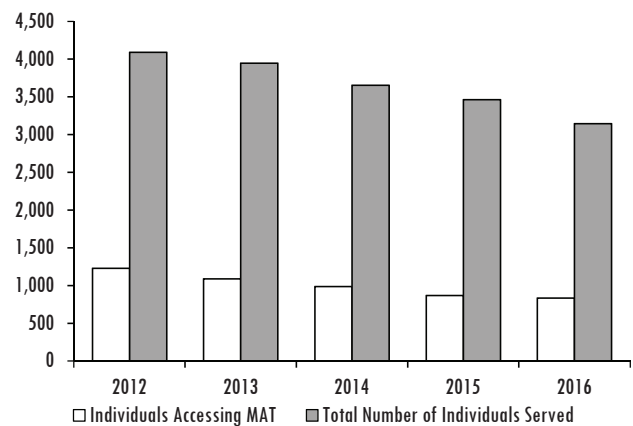


NOTES:
(1) MAT=medication-assisted treatment services.
(2) The increase in total number of individuals served through state-funded providers for calendar year 2017 is due partially to the discontinuation of NorthSTAR.
SOURCE: Health and Human Services Commission.

According to HHSC, available OUD treatment services in Texas are not sufficient. This lack is particularly true for MAT services. During 2016, 86.0 percent of new admissions for OUD treatment through state-funded providers received episodic, abstinence-based treatment programs. Unlike MAT services, these programs help clients initiate recovery but do not provide support for recovery maintenance.

Lack of access to MAT in Texas can be attributed partially to a lack of providers. Texas has 85 opioid treatment program (OTP) sites, which are facilities that specialize in the treatment of OUD and meet certain federal and state

**FIGURE 4
INDIVIDUALS IN TEXAS RECEIVING OPIOID USE DISORDER TREATMENT THROUGH NORTHSTAR CALENDAR YEARS 2012 TO 2016**



NOTE: MAT=medication-assisted treatment services.
SOURCE: Health and Human Services Commission.

certification, accreditation, licensing, and other requirements. Eight OTPs contract with the Texas Medicaid program or with the state for indigent care services. Three of the state’s 11 public health regions, representing a population of 2.0 million, do not have any publicly funded OTP sites.

In addition, physicians that are authorized to prescribe buprenorphine may provide MAT services and are not restricted to treating OUD patients at OTP sites. According to information from SAMHSA as of July 2018, approximately 1,100 physicians practicing in 84 Texas counties are authorized to prescribe buprenorphine. The following sections of this report provide additional information regarding OUD treatment available through state-funded providers and the Texas Medicaid program.

According to official death statistics, the opioid overdose death rate in Texas is lower compared to the national rate. During calendar year 2016, 4.9 Texans per 100,000 persons died of an opioid overdose, compared to 13.1 persons per 100,000 nationwide. In Texas, 1,375 persons died that year of an opioid overdose. **Figure 6** shows opioid overdose death rates for the U.S. and for Texas from calendar years 2012 to 2016.

SELECT PROGRAMS IN TEXAS

HHSC provides substance use disorder (SUD) related services in Texas, of which OUD services are a component. The Eighty-fifth Legislature, Regular Session, General Appropriations Act (GAA), 2018–19 Biennium, appropriated funding to HHSC for SUD related services in Strategy D.2.4, Substance Abuse Prevention, Intervention, and Treatment. For fiscal year 2018, HHSC budgeted \$218.6 million in All Funds for SUD services, composed of \$44.1 million (20.2 percent) in General Revenue Funds and \$174.5 million (79.8 percent) in Federal Funds. The Federal Funds come mainly from the Substance Abuse Prevention and Treatment Block Grant and State Targeted Response to the Opioid Crisis Grants (Opioid STR), which are discussed in the *Federal Response* section of this report. HHSC distributes funding to 11 service regions throughout the state by a formula based on population, poverty, and need. Community-based providers and state-licensed treatment program providers within the service regions deliver prevention, intervention, treatment, and recovery services, as discussed in the following sections.

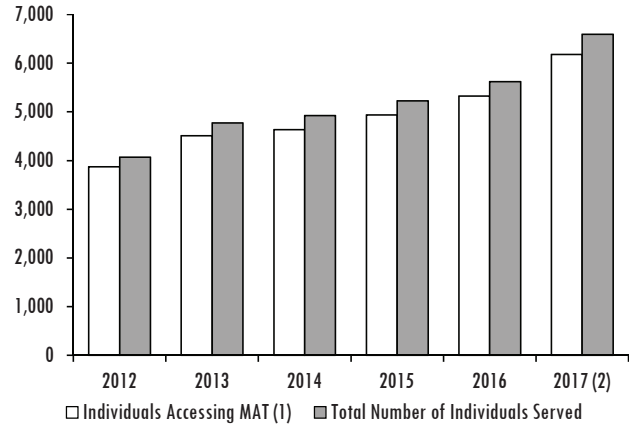
PREVENTION SERVICES

HHSC funds an array of prevention efforts, mainly focused on Texas youth. These programs include universal programs, such as substance abuse education using school-based curricula, and selective programs for specific populations, such as children of substance-abusing parents. For fiscal year 2018, HHSC budgeted \$51.6 million in All Funds for SUD prevention services and expects to serve 151,847 individuals on average per month.

INTERVENTION SERVICES

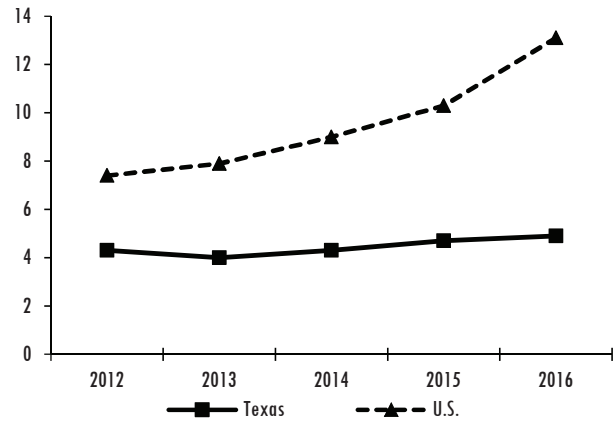
General SUD intervention services are provided through HHSC’s Outreach, Screening, Assessment, and Referral (OSAR) program. OSAR provides substance use screenings and assessments, interventions including counseling and education, and referrals to treatment. In addition to OSAR, specialized intervention services are available for specific

**FIGURE 5
INDIVIDUALS RECEIVING OPIOID USE DISORDER
TREATMENT THROUGH TEXAS MEDICAID
FISCAL YEARS 2012 TO 2017**



Notes:
 (1) MAT=medication-assisted treatment services.
 (2) The increase in total number of individuals served in Texas Medicaid for fiscal year 2017 is due partially to the discontinuation of NorthSTAR.
 SOURCE: Health and Human Services Commission.

**FIGURE 6
TEXAS AND U.S. OPIOID OVERDOSE DEATHS
CALENDAR YEARS 2012 TO 2016**



NOTE: Rate is number of deaths per 100,000 population.
 SOURCE: Centers for Disease Control and Prevention.

populations, such as pregnant and parenting women and individuals with SUD who are at risk for contracting human immunodeficiency virus. For fiscal year 2018, HHSC budgeted \$25.3 million in All Funds for SUD intervention services and expects to serve 7,524 individuals on average per month.

TREATMENT SERVICES

Treatment for OUD in Texas is available to adults and youth ages 13 to 17 years. To receive treatment services, an individual must meet the Diagnostic and Statistical Manual of Mental Disorders criteria for an SUD and have an income of less than 200 percent of the federal poverty level, which is \$24,280 for a single person in 2018. Certain populations, such as pregnant women and those who inject drugs, are priority populations for admissions and treatment. For fiscal year 2018, HHSC budgeted \$130.5 million in All Funds for SUD treatment services and expects to serve 11,539 individuals on average per month.

Adults receiving treatment may receive MAT. MAT medications available to individuals receiving treatment through state-funded providers include methadone and buprenorphine but not naltrexone, the only other Food and Drug Administration (FDA)-approved MAT medication. As discussed previously, access to MAT services across the state is lacking. HHSC is working to increase MAT services, using new federal Opioid STR funding to address the lack of availability. The federal funding, however, is only anticipated to result in a 9.0 percent increase in new admissions for MAT services.

RECOVERY SERVICES

Recovery support services, such as housing, employment, and recovery coaching, also are available to individuals with SUD. Recovery services surpass traditional treatment services to support individuals with SUD during their long-term recovery and integration back into the community. Any adult Texas resident who is in or seeking recovery may participate, along with family or other supportive individuals, in recovery support services. HHSC is using new federal Opioid STR funding to increase these services. For fiscal year 2018, HHSC budgeted \$10.1 million in All Funds for SUD recovery services.

TEXAS MEDICAID PROGRAM**SUBSTANCE USE DISORDER SERVICES**

The Eighty-first Legislature, Regular Session, GAA, 2010–11 Biennium, authorized HHSC to add SUD benefits for adults in Medicaid. Most outpatient benefits began September 1, 2010, and residential benefits and detoxification services began January 1, 2011. Benefits include an SUD assessment, outpatient individual and group counseling, outpatient detoxification, MAT, and residential detoxification and treatment. The Texas Medicaid program covers all three MAT drugs approved by the FDA to treat OUD. Medicaid

recipients receive these benefits through Medicaid managed care or Medicaid fee-for-service programs.

For fiscal year 2017, the Texas Medicaid program provided OUD treatment for 6,594 clients and paid \$11.4 million in All Funds in claims for these services.

OTHER ACTIONS BY THE STATE

In addition to the opioid-related services provided through state programs and the Texas Medicaid program, the state has taken a number of actions in response to the opioid crisis. These actions include regulating the prescribing of opioids, controlling opioid prescribing and dispensing to enrollees of Texas Medicaid and state health benefit programs, and implementing a state prescription drug monitoring program, among other actions.

OPIOID PRESCRIBING REGULATIONS

Texas Medical Board (TMB) regulations provide a number of controls for the prescribing and dispensing of opioids to patients with pain. A provider treating a patient with opioids for chronic pain must conduct steps to ensure patient safety and mitigate potential risk. For instance, before initiating such treatment for chronic pain with opioids, the provider must evaluate the patient, including obtaining a medical history and administering a physical examination. This evaluation assists the provider with assessing whether the patient has a history of or potential for substance abuse or diversion, which is the use of drugs by anyone other than person for whom the drug was prescribed. Texas regulations also require a provider to develop a written treatment plan that includes the goals of opioid treatment and other treatment options that are planned or considered. In addition, the provider must discuss with the patient the risks of taking opioids for the treatment of chronic pain.

TMB regulations also require the state's pain management clinics to be certified by the board. The physician who operates the clinic must hold an unrestricted medical license that authorizes the physician to practice medicine in Texas. Regulations also require the physician operating the clinic to ensure the quality of patient care by being onsite for a certain period and by reviewing a certain number of patient files, among other responsibilities.

Although Texas regulations require all providers who are authorized to prescribe controlled substances to receive continuing education, only certain providers must receive continuing education on the topic of pain management or opioid prescribing practices. These providers include

personnel employed by a pain management clinic who have contact with patients and dentists authorized to prescribe controlled substances.

**OPIOID PRESCRIBING AND DISPENSING CONTROLS
WITHIN THE TEXAS MEDICAID PROGRAM
AND STATE HEALTH BENEFIT PROGRAMS**

The Texas Medicaid program employs a number of strategies to identify and reduce prescription opioid abuse. Medicaid covers approximately 4.1 million Texans, or one in seven Texans. Therefore, these strategies affect a significant portion of the state population. During fiscal year 2015, Texas Medicaid filled opioid prescriptions for more than 426,000 covered individuals.

The Texas Medicaid and the Children's Health Insurance Program Services Division's Vendor Drug Program (VDP) recommends and develops clinical prior authorization edits (VDP edits) with the goal of decreasing patient harm. VDP edits require pharmacists to confirm that certain patient criteria are met or to obtain authorization by the prescriber before filling certain prescriptions. Several VDP edits have been developed for opioid prescriptions. In January 2018, the VDP implemented an edit limiting a patient's daily dose of opioid medication, which is expressed as an equivalent dose in milligrams of morphine (MED). The limit will decrease gradually until it reaches 90 MED per day. The CDC recommends this daily MED in its Guidelines for Prescribing Opioids for Chronic Pain.

According to a 2017 report from the HHSC Office of Inspector General (OIG), however, existing VDP edits for opioid prescriptions have not adopted every recommendation included in the CDC guidelines. Furthermore, although VDP edits related to opioid prescriptions apply to all Medicaid fee-for-service clients, not all Medicaid managed care organizations (MCO) implement them. During fiscal year 2017, 8.5 percent of Medicaid clients were enrolled in the fee-for-service program and were subject to existing VDP opioid-related edits. According to HHSC, the agency is working with MCOs to implement additional VDP edits corresponding to the CDC guidelines for both fee-for-service and managed-care clients.

VDP also conducts retrospective reviews of prescription drug claims to identify prescribing patterns and outliers to accepted prescribing practices by providers who serve Medicaid fee-for-service clients. These reviews may identify problematic prescribing of opioids. In response, HHSC may provide outreach to providers, implement VDP edits, or

refer providers to the OIG or the applicable professional regulatory board. MCOs conduct their own utilization reviews.

In addition, the Texas Medicaid program employs the IG Lock-In Program for clients who misuse or abuse controlled substances, including opioids. Clients in lock-in status are restricted in their use of Medicaid benefits to a single designated pharmacy, or a single provider in some instances, to decrease access to excessive quantities of prescription opioids. During fiscal year 2017, an average of 1,052 clients were designated with lock-in status.

Among other responsibilities, the Medicaid Program Integrity Unit (MPI) identifies possible fraud or abuse by prescribers and pharmacy providers who serve Medicaid clients. MPI investigations may result from referrals or complaints, and from proactive operations that identify possible fraud or abuse through data analysis of encounters and claims billing. MPI investigations may result in OIG administrative enforcement action, referrals to appropriate licensure boards, or referrals to the Office of the Attorney General's Medicaid Fraud Control Unit when criminal Medicaid fraud is indicated.

The Employees Retirement System of Texas, the Teacher Retirement System of Texas, the University of Texas System, and the Texas A&M University System administer health benefit programs for certain employees and retired employees of the state and their dependents. During fiscal year 2017, these health benefit programs covered 1.6 million Texans. In conjunction with health plan administrators and pharmacy benefit managers, these programs also employ strategies to identify and reduce prescription opioid abuse. Strategies vary across health benefit programs but include limiting an enrollee's daily MED, supply of an opioid prescription to a certain number of days, and access to long-acting opioids.

TEXAS PRESCRIPTION MONITORING PROGRAM

A prescription drug monitoring program (PDMP) can be a tool to help healthcare providers assess their patients' histories of prescription opioid use. The Texas Prescription Monitoring Program enables registered, authorized users to view a patient's controlled substance history online for up to three years. Authorized users include pharmacists, physicians, and pharmacy technicians and nurses within the direction of a pharmacist or physician.

Senate Bill 195, Eighty-fourth Legislature, 2015, implemented a number of recommended updates to the

Texas program. These updates included transferring the program from the Department of Public Safety to the Texas State Board of Pharmacy (TSBP), enabling practitioners to auto-enroll in the program, and authorizing TSBP to share information with other states. On September 1, 2016, TSBP began participating in InterConnect, a prescription drug data-sharing system that enables participating states to access each other's prescription drug data and to track the prescriptions of patients regardless of where they fill them. As of May 2018, practitioners in Texas can view a patient's controlled substance history in 42 other states through InterConnect.

TSBP also has taken steps to improve the state's PDMP, including ensuring that the system contains high-quality information that is available quickly to users. HHSC is using federal Opioid STR funds to promote the PDMP and meaningful utilization.

House Bill 2561, Eighty-fifth Legislature, Regular Session, 2017, made additional changes to the state's PDMP. For instance, the legislation requires pharmacists to submit data to the PDMP within one day of dispensing controlled substances to increase the timeliness and completeness of the data in the system. In addition, the legislation requires most prescribers to consult the state's PDMP before prescribing certain drugs, including opioids, for noncancer and nonhospice patients beginning in fiscal year 2020.

During fiscal year 2017, PDMP users performed 4.2 million system searches. As of March 20, 2018, 71,703 practitioners were registered with the state's PDMP, the majority of which were physicians, pharmacists, advanced practice registered nurses, and dentists.

OTHER ACTIONS

Naloxone, the opioid antagonist medicine that reverses an opioid overdose temporarily, became widely available in Texas following the passage of Senate Bill 1462, Eighty-fourth Legislature. The legislation allows for the prescribing and dispensing of an opioid antagonist to a person at risk of experiencing an overdose, or to a family member or friend, and the administration of the antidote by those people. In August 2016, the Texas Pharmacy Association obtained a physician-signed standing order authorizing Texas pharmacists that complete a one-hour course to dispense an opioid antagonist to any consumer. Pursuant to Senate Bill 315 and Senate Bill 584, Eighty-fifth Legislature, Regular Session, 2017, TMB plans to issue guidelines for prescribing an opioid antagonist to a person prescribed an opioid and to

one at risk of an opioid-related drug overdose. Proposed guidelines were published in the *Texas Register* on February 9, 2018.

In May 2018, the Office of the Attorney General filed suit against Purdue Pharma, the maker of the opioid medication OxyContin, for misrepresenting the risks of opioid addiction. The state is seeking significant penalties from the manufacturer. Several Texas counties also have sued pharmaceutical companies for economic damages, alleging that manufacturers downplayed addiction risks and that their distributors failed to track suspicious orders. In addition, Texas has joined a multi-state investigation into several pharmaceutical companies to determine any role manufacturers played in initiating the opioid crisis and whether the companies violated any laws.

FEDERAL RESPONSE

New federal funding is available to states to combat the opioid crisis. For instance, the Comprehensive Addiction and Recovery Act of 2016 and the Substance Use-Disorder Prevention that Promotes Opioid Recovery and Treatment for Patients and Communities Act of 2018 (the SUPPORT for Patients and Communities Act) authorized a number of grants related to prescription drug and heroin abuse that are available to states on a competitive basis. The 21st Century Cures Act, signed into law on December 13, 2016, authorized funding for Opioid STR.

Figure 7 shows recent, select federal funding that Texas has received for prevention, monitoring, and treatment activities in response to the opioid crisis.

In addition to the authorization of funds, the federal government has taken steps intended to counter the opioid crisis that have implications for Texas. One set of actions seeks to curtail the high rates of opioid prescribing across the U.S. On March 18, 2016, the CDC published guidelines containing a unified set of recommendations for providers based on the most recent scientific evidence for prescribing opioid pain relievers to adult patients. These guidelines include guidance to assess risk and address the harms of opioid use.

The FDA updated its Extended-Release and Long-Acting Opioid Analgesic Risk Evaluation and Mitigation Strategy in September 2018. Part of the update requires all opioid companies to develop and provide certain continuing education to healthcare providers who participate in the treatment and monitoring of pain. The continuing education

**FIGURE 7
SELECT FEDERAL FUNDING FOR OPIOID CRISIS RECEIVED BY THE STATE OF TEXAS
FEDERAL FISCAL YEARS 2014 TO 2018**

GRANT PROGRAM	FEDERAL FUNDING RECEIVED (IN MILLIONS)
Substance Abuse Prevention and Treatment Block Grant – formula funding available to every state for prevention, treatment, and rehabilitation activities to address alcohol and drug abuse	\$713.7
State Targeted Response to the Opioid Crisis Grants – formula funding available to every state for prevention, treatment, and recovery activities for opioid use disorder	\$101.0
Strategic Prevention Framework – Partnership for Success, State and Tribal Initiative – funding competitively awarded to states to combat underage drinking and prescription drug misuse and abuse among teenagers and young adults through prevention activities	\$4.9
Strategic Prevention Framework Rx – funding competitively awarded to states to combat prescription drug misuse and abuse, primarily through awareness activities	\$1.1
First Responder Training – funding competitively awarded to states to train and provide resources to first responders and others regarding carrying and administering opioid overdose reversal drugs	\$1.6
Youth Treatment – Planning and Implementation – funding competitively awarded to states to expand and improve treatment for adolescents with substance use disorder and/or co-occurring substance use and mental health disorders	\$2.0
Harold Rogers Prescription Drug Monitoring Program: Implementation and Enhancement Grants – funding competitively awarded to states to plan, implement, or enhance their prescription drug-monitoring programs	\$0.5

NOTE: Not an exhaustive list of federal funding received and expended related to the opioid crisis. This list does not include federal funding received by local communities and community organizations. Some grants are used generally for substance abuse services.
SOURCE: Substance Abuse and Mental Health Services Administration; U.S. Department of Justice, Bureau of Justice Assistance.

focuses on the fundamentals of acute and chronic pain management and the safe prescribing of opioids.

On August 2, 2017, the U.S. Attorney General announced the formation of the Opioid Fraud and Abuse Detection Unit, a U.S. Department of Justice pilot program. The unit will focus specifically on identifying and prosecuting physicians and pharmacies that are contributing to the opioid crisis through illegal prescribing and dispensing practices.

The federal government also has moved to increase access to treatment for individuals with OUD. For example, effective August 8, 2016, U.S. Department of Health and Human Services rules authorize increased availability of the MAT drug buprenorphine and combination buprenorphine–naloxone. Eligible providers may treat up to 275 patients with these medications. Previously, providers were limited to treating 100 patients.

In addition, on February 15, 2018, SAMHSA published Treatment Improvement Protocol (TIP) 63, Medications for Opioid Use Disorder, which reviews the three MAT drugs approved by the FDA to treat OUD. The TIP is intended to expand healthcare professionals’ understanding of MAT drugs and effective strategies for supporting patients receiving MAT.

Finally, the SUPPORT for Patients and Communities Act increases access to SUD treatment for Children’s Health Insurance Program (CHIP), Medicaid, and Medicare clients. The legislation mandates state coverage of SUD benefits for CHIP clients beginning in federal fiscal year 2020 and makes it easier for Medicare patients to access MAT and SUD telehealth services. The SUPPORT for Patients and Communities Act also allows states to cover certain residential SUD treatment for Medicaid patients for a limited time.

The opioid crisis will continue to affect Texas and the U.S. The state and the federal government have taken steps to prevent new cases of opioid misuse, abuse, and addiction and to treat existing patients with OUD. It is important for the state to monitor its progress in addressing the epidemic, particularly in improving access to treatment. It also is important for the state to continue to take advantage of any federal funding opportunities to combat the crisis.