
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					

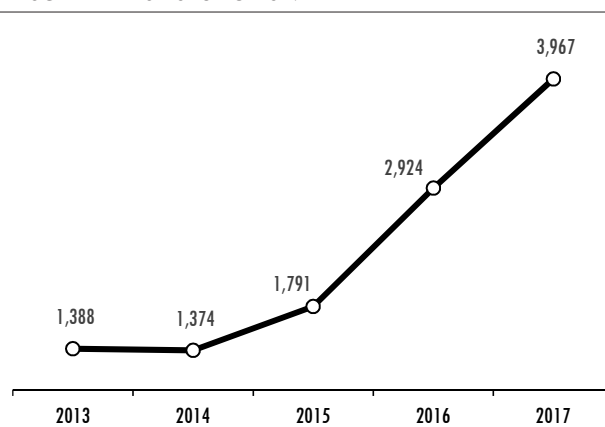
NOTE: QD=questioned documents, AFIS=Automated Fingerprint Identification System, GSR=gunshot residue.
SOURCE: Department of Public Safety.

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**



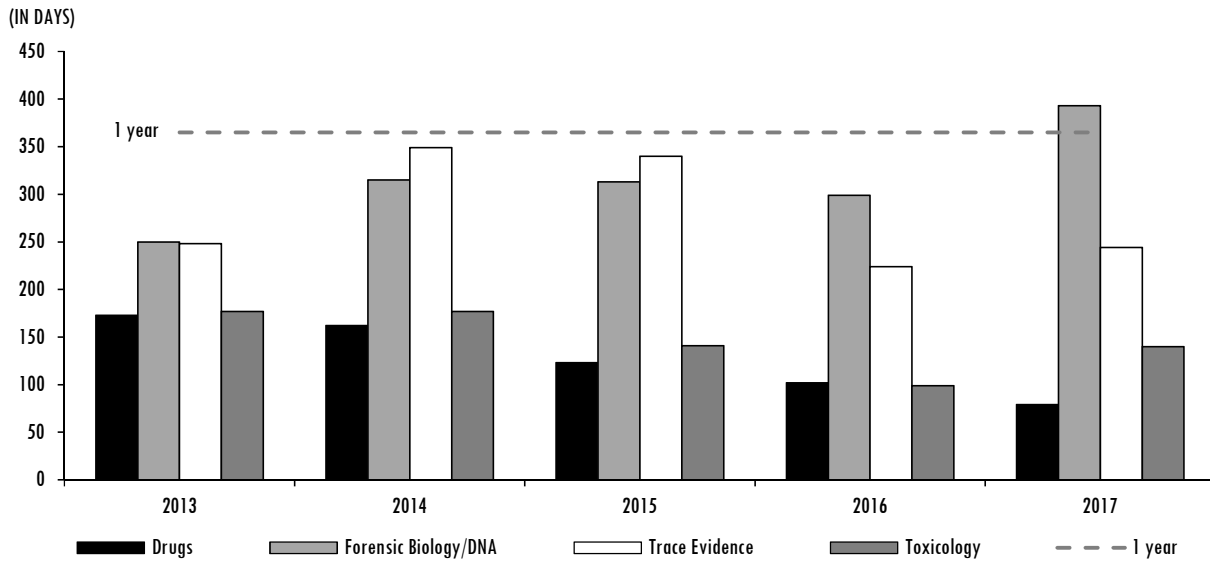
SOURCE: Department of Public Safety.

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.

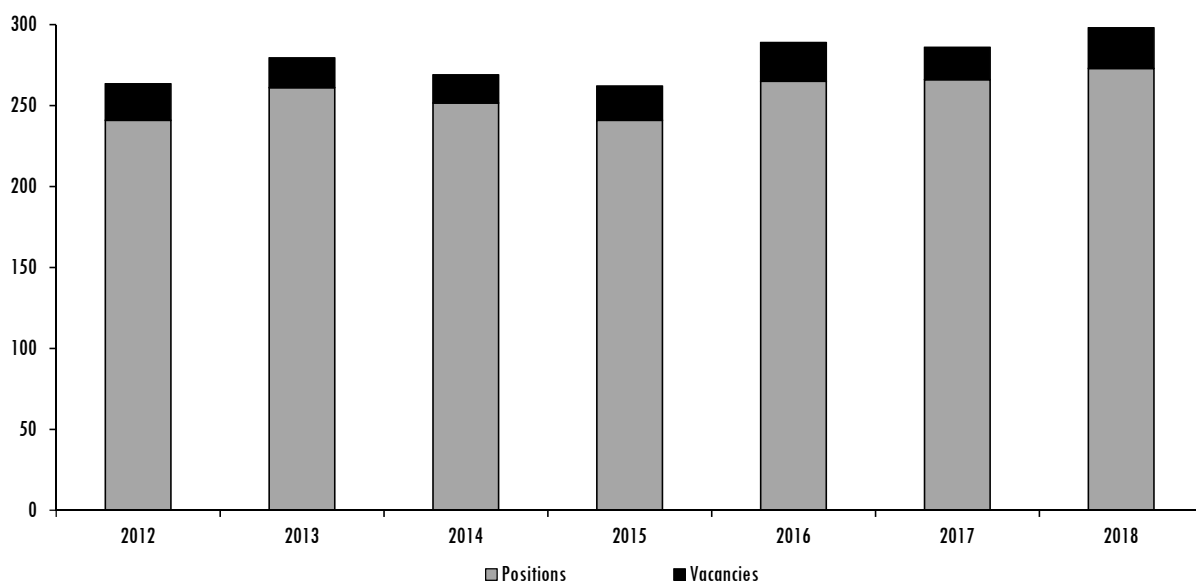
Comparatively low salaries and high work volume or excessive overtime contribute to turnover. Multiple managers in DPS labs reported that they often encourage analysts to work overtime to keep up with the influx of requests received. According to DPS, analysts are more productive during overtime hours 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.

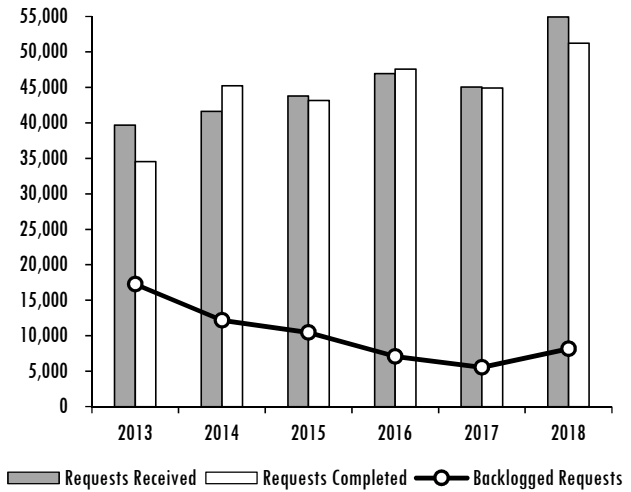
Forensic science is becoming more useful to law enforcement and prosecutors alike. Law enforcement agencies recognize the value of forensic analysis for solving current and older cases. Prosecutors may consider jurors’ expectations that DNA or other forensic analysis is presented in evidence at trial.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

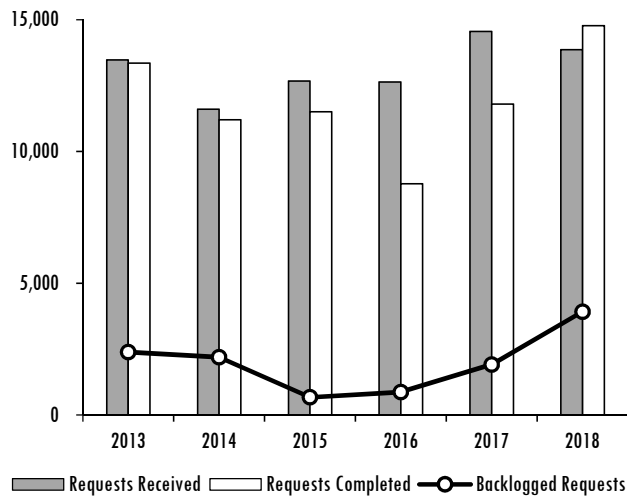
Figure 5 shows the number of controlled substance evidence samples received, completed, and backlogged for fiscal years 2013 to 2018. For controlled substances, the backlog trend is going down, due to DPS crime labs outsourcing to private

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.