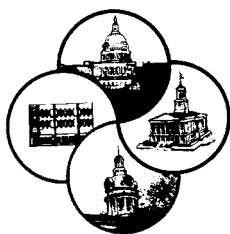


Reducing Tennessee's Evidence Backlog by Expanding Forensic Crime Lab Capacity





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Reducing Tennessee's Evidence Backlog by Expanding Forensic Crime Lab Capacity

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September 18, 2025

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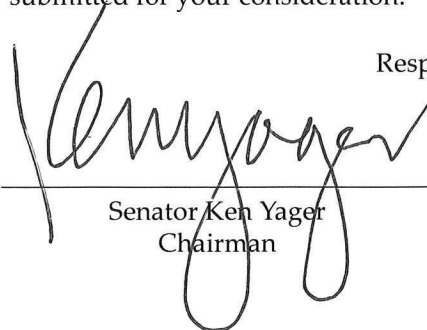
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Ladies and Gentlemen:

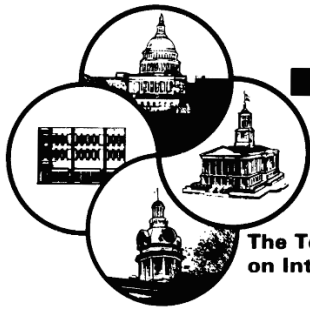
Transmitted herewith is the commission's report in response to a request from commission member Representative Ryan Williams at the May 2024 meeting that the commission evaluate the feasibility and need for establishing additional crime labs throughout the state, including the existing labs' capacity to process evidence efficiently and consideration of potential locations for any new crime labs to optimize resources. The report finds that without confronting the constraint of limited lab space, the state's efforts to further improve forensic evidence processing and public safety will be hindered. The Tennessee Bureau of Investigation (TBI) and Memphis have signed an agreement to expand forensic support for criminal investigations in the city by assigning two forensic scientists at TBI's Jackson lab—one in DNA and one in firearms—to work solely on Memphis cases. The report recommends that the state increase crime lab capacity in each grand division, in line with the TBI 2024 real estate strategic plan, by expanding the existing Jackson and Nashville labs, replacing the existing Knoxville lab with a larger lab with capacity for firearms testing, and adding a smaller, focused lab in Chattanooga for drug-related evidence and toxicology. The commission also recommends that while the state undertakes the long-term expansion of its facilities, TBI continue to look for areas to improve efficiency using external process improvement methods; the General Assembly amend DNA testing laws to allow rapid DNA implementation at law enforcement booking stations; and the state support resource-sharing partnerships for training local law enforcement agencies across the state through funding and technical assistance.

The commission approved the report on September 18, 2025, and it is hereby submitted for your consideration.

Respectfully yours,


Senator Ken Yager
Chairman


Cliff Lippard
Executive Director



TACIR

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MEMORANDUM

TO: Commission Members

FROM: Cliff Lippard
Executive Director

DATE: 18 September 2025

SUBJECT: Senate Bill 2877/House Bill 2961 (Capacity of Crime Labs in Tennessee)—
Final Report for Approval

The attached commission report is submitted for your approval. In response to concerns about the effects of evidence backlogs and turnaround times, Senate Bill 2877 by Senator Kyle and House Bill 2961 by Representative Hardaway in the 113th General Assembly requested that the commission study the feasibility of establishing a crime lab in Shelby County. The bill passed in the Senate but not in the House, and commission member Representative Williams requested in May 2024 that the commission undertake a broader study to evaluate the feasibility and need for establishing additional crime labs throughout the state, including the existing labs' capacity to process evidence efficiently and consideration of potential locations for any new crime labs to optimize resources. A draft report was presented at the June 2025 commission meeting for your review and comment.

In response to requests by members after reviewing the draft, commission staff added the following information to the report:

- Additional information about the state's digital forensics needs was added. TBI expects turnaround times to improve once all the recently added positions are filled and staff complete training, and TBI continues to assess staffing and space needs for this testing discipline.
- Examples of crime lab cost estimates, as well as a summary of the cost projections from TBI's real estate plan and the planned facilities' effects on projected need were added. Based on the real estate plan and information

provided from other sources, the planned Jackson and Knoxville lab projects combined could cost between \$44 million and \$66 million; the estimated cost of the Nashville and Chattanooga projects is unclear at this time.

- A clarification on funding for TBI's crime labs was added. TBI's labs are primarily funded by annual state appropriations, with the remainder of funds mostly coming from grants, similar to state crime labs nationwide.
- Staff provided more historical context on long-term crime trends by adding evidence request and turnaround time data from TBI dating back to fiscal year 2019-20.

One of the draft recommendations presented at the June 2025 commission meeting has since been implemented. The draft report recommended that TBI and the city of Memphis enter into an agreement for a firearms analyst in the Jackson lab dedicated to Memphis cases. Conversations among policymakers on this alternative were ongoing during the spring. Since that time, TBI and Memphis have signed an agreement to expand forensic support for criminal investigations by assigning two forensic scientists at the lab, one in DNA and one in firearms, to work solely on Memphis cases. These positions will now be funded by Memphis, and TBI plans to hire two additional scientists for the lab.

The final report's other recommendations remain unchanged. Ultimately, without confronting the constraint of limited lab space, the state's efforts to further improve forensic evidence processing and public safety will be hindered. **The commission recommends that the state increase crime lab capacity in each grand division—in line with TBI's 2024 real estate strategic plan—specifically by expanding the existing Jackson and Nashville labs, replacing the existing Knoxville lab with a larger lab with capacity for firearms testing, and adding a smaller, focused lab in Chattanooga for drug-related evidence and toxicology. Additionally, the commission recommends that expansions at the Nashville lab focus on the most overburdened disciplines—like forensic chemistry and toxicology.**

While the state undertakes long-term expansion of its facilities, there are other practices to be considered that could help reduce backlogs, expedite accurate forensic results, and improve public safety while TBI expands its labs, **the commission recommends that**

- **TBI continue to look for areas to improve efficiency using external process improvement methods;**
- **the General Assembly amend DNA testing laws to allow rapid DNA implementation at law enforcement booking stations; and**

- the state support resource-sharing partnerships for training local law enforcement agencies across the state through funding and technical assistance.

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Summary and Recommendations: Reducing Tennessee's Evidence Backlog by Expanding Forensic Crime Lab Capacity

Backlogs in testing criminal evidence have consequences not only for individual cases but also for public trust and safety. In one well-publicized tragedy, Eliza Fletcher set out for a jog near the University of Memphis early one September morning in 2022 but never returned home. Fletcher's abduction and murder shook the Memphis community, and later, the state, when the public learned that her killer had been investigated for sexually assaulting another woman, Alicia Franklin, nearly a year earlier. But he hadn't been arrested because the sexual assault kit containing his DNA—which would have tied him to the earlier crime—had not yet been tested because of the volume of evidence requests the state's crime labs receive. This type of testing delay was not an isolated occurrence. In 2022, because testing demand exceeded lab capacity, the Tennessee Bureau of Investigation's (TBI) median turnaround time—the time it takes the forensic lab to test evidence, write a report, and send the results back to the requestor—for almost every category of evidence was longer than the national median.

In response to concerns about the effects of evidence backlogs and turnaround times, Senate Bill 2877 by Senator Kyle and House Bill 2961 by Representative Hardaway in the 113th General Assembly requested that the Tennessee Advisory Commission on Intergovernmental Relations study the feasibility of establishing a crime lab in Shelby County (see appendix A). The bill passed in the Senate but not in the House, and commission member Representative Williams requested in May 2024 that the commission undertake a broader study to evaluate the feasibility and need for establishing additional crime labs throughout the state, including the existing labs' capacity to process evidence efficiently and consideration of potential locations for any new crime labs to optimize resources. The commission finds it would be beneficial to expand forensic crime lab capacity in each of Tennessee's grand divisions to address evidence backlogs and future demands, embed specialized personnel where needed, and enhance efficiency through process improvements, rapid DNA implementation, and regional partnerships.

Although the state has made improvements, rising statewide demand for forensic services outpace Tennessee's current crime lab capacity.

Crime lab capacity is in general a function of the number of staff available to conduct tests and the lab space available for those staff to work. Increasing either factor contributes to greater capacity. In recent years, the state has increased its testing capacity by hiring additional scientists. TBI

The 2022 murder of Eliza Fletcher in Memphis highlighted how evidence backlogs can delay justice and pose risks to public safety.

The Tennessee Bureau of Investigation's (TBI) turnaround times for some testing categories have improved; however, others have not and demand for testing continues to increase.

operates three crime labs—one in Jackson, Knoxville, and Nashville. Over the last four years, the General Assembly has appropriated funding for 50 new forensic scientists between these labs. As of July 2025, TBI has filled all these positions. The General Assembly also approved five additional positions in digital forensics during the same time. In its 2024 annual report, TBI found there had been improvement in some turnaround times from hiring and training new employees.

Although turnaround times for some testing categories have improved, other categories have not, and on top of that, demand for testing continues to increase:

- For example, while turnaround times for sexual assault requests peaked at 45 weeks in August 2022 before declining to 16.9 weeks in January 2025, turnaround times for violent forensic biology evidence increased from 25 weeks in January 2022 to 38 weeks in January 2025, and times for firearms analysis increased from 42 weeks to 67 weeks in the same period.
- Regarding increases in testing requests, demand for all forensic biology tests increased 7% statewide from 2022 to 2024, and the total number of requests for all testing categories at TBI's Jackson and Knoxville crime labs increased by 17% and 4%, respectively, between 2023 and 2024.

Tennessee's comparatively high rates of crime and population growth mean that demand for testing is likely to continue to increase. Tennessee's violent crime rate in 2023 was well above the national rate, but even if crime rates were to decrease in the future, projections for the state's population growth suggest the volume of cases and evidence that needs to be tested could continue to grow. The Boyd Center for Business and Economic Research projects there will be approximately one million more Tennessee residents by 2044. Ultimately, the Comptroller's 2024 performance audit of TBI found that "management faces additional backlog challenges," specifically within the Forensic Services Division's Firearms and Toolmark Identification Unit and Forensic Biology Unit, despite recent hiring, indicating that additional investments in capacity remain essential to meet the state's growing forensic needs.

Lack of physical lab space is now the primary factor constraining the capacity of TBI's labs.

The Comptroller's 2024 performance audit found that—having recently added more staff—the need for workspace expansion is the next significant challenge affecting TBI's Forensic Services Division. According to a 2025 TBI report to the General Assembly, after accounting for the recent staff additions, the Nashville lab may be able to accommodate one additional

forensic biology scientist, but the Jackson and Knoxville labs are currently at capacity.

In 2024, TBI completed a real estate strategic plan that outlines future expansion goals, including expansion of the Jackson lab, renovation and expansion of the Nashville lab, plans for a new, larger lab in Knoxville to replace the current one, and the establishment of a smaller lab in Chattanooga. According to TBI, the additional capacity will help reduce turnaround times to meet the state's goal of 8 to 12 weeks for all testing. The overall cost of completing all of these projects is unclear at this time in part because TBI plans to conduct further analysis of the need for additional space at the Nashville lab, and it plans to use a lease with a build-to-suit option in Chattanooga. Based on the real estate plan and information provided from other sources, however, the planned Jackson and Knoxville lab projects combined could cost between \$44 million and \$66 million. Although funding for the future projects in Nashville, Knoxville, and Chattanooga has not been appropriated the expansion of the Jackson lab began in 2025.

Commission staff analysis supports the need for additional lab space in each grand division:

- **West:** The Jackson lab, completed in 2021, has already outgrown its current space, and from 2023 to 2024, the lab experienced the highest percentage increase in forensic evidence requests of the three TBI labs. Because law enforcement agencies in Shelby County submit the largest volume of firearms requests to the Jackson lab, it raises the possibility that a new lab in Memphis might be warranted. But building a new lab would likely cost between \$40 million and \$50 million—not including the cost of initial equipment, hiring personnel, training, utilities, equipment, and other unexpected expenditures. From conception to opening, the Jackson lab took approximately six years to complete; and according to Metropolitan Nashville-Davidson County—the only local government to operate its own crime lab in Tennessee—building a new full-service lab can take between 5 and 10 years. Given these costs and timelines, to better serve Memphis and the rest of West Tennessee, another approach is for TBI to dedicate a firearms analyst to work solely on Memphis cases at the expanded Jackson lab. States like Illinois and Louisiana have used this approach successfully.
- **Middle:** TBI's Nashville lab receives the most forensic evidence requests of any of its three labs, as it offers all forensic services. It also has a greater caseload in forensic chemistry and in both drug and alcohol toxicology than most crime labs across the country. Several counties, like Rutherford and Wilson, submit a high number of toxicology and forensic chemistry requests, which

TBI's 2024 real estate strategic plan outlines adding capacity at its Jackson, Nashville, and Knoxville labs and establishing a small lab in Chattanooga—all will help reduce turnaround times to meet the state's goal of 8 to 12 weeks for all testing.

TBI and the city of Memphis have signed an agreement to expand forensic support for criminal investigations by assigning two scientists at the Jackson lab to work solely on Memphis cases.

are critical to managing drug-related evidence and DUI cases in Middle Tennessee's growing population centers. Turnaround times at this facility are among the highest statewide, particularly in forensic biology.

- East: The Knoxville lab has reached its physical limit, and TBI cannot add square footage on the existing property. The lab doesn't have an in-house firearms unit despite high demand for testing, which contributes to longer turnaround times and added strain on the firearms unit of TBI's other labs. Additionally, southeast Tennessee has a need for forensic chemistry and toxicology testing. Hamilton and Knox counties are among the top in toxicology requests statewide, with Knox County having the most toxicology requests in 2024. Establishing a new lab in Chattanooga would help relieve pressure on the Knoxville lab, improve regional access, and reduce the need to transfer evidence across the state.

Although recent state investments have led to improvements in capacity and forensic evidence turnaround times, persistent backlogs continue to delay investigations and court proceedings across Tennessee, and the state's projected population growth suggests that its current crime lab capacity will not be sufficient to meet future needs. Ultimately, without confronting the constraint of limited lab space, the state's efforts to further improve forensic evidence processing and public safety will be hindered. **For these reasons, the commission recommends that the state increase crime lab capacity in each grand division—in line with TBI's 2024 real estate strategic plan—specifically by expanding the existing Jackson and Nashville labs, replacing the existing Knoxville lab with a larger lab with capacity for firearms testing, and adding a smaller, focused lab in Chattanooga for drug-related evidence and toxicology. Additionally, the commission recommends that expansions at the Nashville lab focus on the most overburdened disciplines—like forensic chemistry and toxicology.**

At the June 12, 2025, commission meeting, staff presented a draft recommendation that TBI and the city of Memphis enter into an agreement for a firearms analyst in the Jackson lab dedicated to Memphis cases. Conversations among policymakers on this alternative were ongoing during the spring. Since that time, TBI and Memphis have signed an agreement to expand forensic support for criminal investigations by assigning two forensic scientists at the lab, one in DNA and one in firearms, to work solely on Memphis cases. These positions will now be funded by Memphis, and TBI plans to hire two additional scientists at the lab.

It is common for almost every crime to have some form of digital evidence. Digital forensics involves the extraction and analysis of digital evidence from electronic devices like computers, cell phones, and surveillance

systems, and the process is distinct and separate from scientific analysis of evidence that the crime labs conduct. The Cybercrime and Digital Evidence Unit (CDEU)—which operates as part of TBI's Technology and Innovation Division—conducts digital forensic analysis for most local law enforcement agencies in the state. During fiscal year 2023-24, TBI's average digital forensic turnaround time was 66 weeks for computer cases and 37.6 weeks for mobile device cases. Over the past four years, the General Assembly has approved five additional digital forensics positions, four of which have been filled. CDEU staff expect that turnaround times will decrease once the new staff complete training, and TBI continues to assess staffing and space needs for its digital forensics unit. Needs will likely depend to a certain extent on whether specific goals are set for turnaround times for digital forensics. TBI has not set internal goals for digital forensics at this time.

In addition to expanding lab space, the state can do several things to help reduce turnaround times at its existing labs.

Several practices to reduce workload and improve productivity can support crime labs while the state undertakes long-term expansions of its facilities. These include using process improvement methodologies to increase lab efficiency, supporting the use of rapid DNA testing, and developing partnerships to share resources.

Given the ongoing demand for high quality analysis and limited resources, crime lab staff often seek ways to operate more efficiently. Crime lab leadership in Tennessee say they continually review processes and make adjustments to improve them over time.

The United States Department of Justice's National Institute of Justice recommends that forensic DNA labs use process improvement tools—like Lean Six Sigma (LSS) and process mapping—to improve their performance by streamlining operations and reducing waste. Forensic laboratories in other states have used LSS and similar methodology and report improvements in backlogs and turnaround times. Crime lab leadership in Tennessee say these process improvement tools can be beneficial, but they caution that forensic labs face unique challenges, like highly varying evidence types, and the tools and principles need to be applied and adapted carefully.

Rapid DNA technology can improve crime lab operations by reducing the overall workload. This automated process creates DNA profiles from cheek swabs in one to two hours, enabling the quick identification of arrestees and searches in the national Combined DNA Index System (CODIS) database. In 2017, the federal Rapid DNA Act authorized the upload of qualifying DNA profiles directly into CODIS, paving the way for broader use; a

The use of rapid DNA technology can improve crime lab operations by reducing the overall workload.

Developing partnerships to share resources, particularly to process digital evidence, could also help reduce turnaround times.

few states have adopted this technology, improving testing speed and reducing lab burdens. In Tennessee, current law requires DNA samples to be collected from individuals convicted of violent felonies and processed by TBI. Changing the law to allow for the use of rapid DNA testing at booking stations would allow for immediate suspect identification and faster CODIS searches. This would require FBI authorization, new TBI policies, and investments in equipment and training.

Developing partnerships to share resources, particularly to process digital evidence, can help reduce turnaround times. While some larger law enforcement agencies have developed their own digital forensic capabilities, most local law enforcement agencies in Tennessee depend on TBI. To address long turnaround times, in 2024, the Jefferson County Sheriff's Office launched the East Tennessee Regional Forensic Facility and Training Program to help law enforcement agencies quickly conduct digital forensics analysis, help investigations, and remove some of the workload from TBI. According to stakeholders, the program's training and technical assistance, access to specialized equipment, and shared workspace have been successful and already helped solve several cases. The relatively low-cost, scalable model could be replicated in other parts of the state to reduce forensic backlogs and improve investigative outcomes.

Because increasing productivity would help reduce backlogs, expedite accurate forensic results, and improve public safety while TBI expands its labs, **the commission recommends that**

- **TBI continue to look for areas to improve efficiency using external process improvement methods;**
- **the General Assembly amend DNA testing laws to allow rapid DNA implementation at law enforcement booking stations; and**
- **the state support resource-sharing partnerships for training local law enforcement agencies across the state through funding and technical assistance.**

Analysis: Assessing Forensic Crime Labs in Tennessee

Every piece of forensic evidence helps tell a story, yet too many stories are left unresolved in part because of delays in forensic evidence testing. Evidence backlogs affect investigations; prosecutions; and justice for victims, communities, and those wrongfully accused. The ripple effects of these delays extend beyond individual cases, influencing public trust and safety. Early one September morning in 2022, Eliza Fletcher set out for a jog near the University of Memphis. She never returned home. Fletcher's abduction and murder shook the Memphis community, and later, the state, when the public learned that her killer had been investigated by the Memphis Police Department for sexually assaulting another woman, Alicia Franklin, nearly a year earlier. But he hadn't been arrested, as the sexual assault kit containing his DNA, which would have tied him to the earlier crime, had not yet been tested by the Tennessee Bureau of Investigation's (TBI) crime lab because of the volume of evidence requests the state's crime labs receive.¹

This type of testing delay was not an isolated occurrence. In 2022, because testing demand exceeded lab capacity, TBI's median turnaround time—the time it takes the forensic lab to test evidence, write a report, and send the results back to the requestor—for almost every category of evidence was longer than the national median.²

In response to concerns about the effects of evidence backlogs and turnaround times, during the 113th General Assembly, Senate Bill 2877 by Senator Kyle and House Bill 2961 by Representative Hardaway would have directed the Tennessee Advisory Commission on Intergovernmental Relations to study the feasibility of establishing a crime lab in Shelby County (see appendix A). The bill passed in the Senate but not in the House, and commission member Representative Ryan Williams requested at the May 2024 meeting that the commission undertake a broader study to evaluate the feasibility and need for establishing additional crime labs throughout the state, including the existing labs' capacity to process crime evidence efficiently and consideration of potential locations for any new crime labs to optimize resources. Memphis and Shelby County are conducting their own feasibility studies for a new crime lab—in 2024, Memphis completed its study, and the Shelby County study is currently underway and expected

Delays in forensic evidence testing and evidence backlogs affect investigations; prosecutions; and justice for victims, communities, and the accused.

¹ Perrusquia and Roberts 2022a.

² Commission staff analysis of data from Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, January 3, 2025; Speaker 2025; and email from Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, May 21, 2025.

to be completed by September 2025.³ See appendix B for the executive summary of the Memphis report.

Crime labs play a crucial role in the investigation and resolution of crimes.

Reliance on science in the investigation and adjudication of crimes, and subsequently on forensic crime labs⁴ throughout the country, continues to increase as more sophisticated and efficient analyses and equipment become available.⁵ Crime labs—which are distinct from medical examiners (see figure 1)—can house any combination of forensic disciplines and examine a variety of evidence types, conducting a wide range of analyses from identifying controlled substances and biological material to linking suspects to crime scenes through fingerprints or firearms analysis. Examples of other common testing requests include toolmark analysis and forensic chemistry, and crime labs are often responsible for entering DNA profiles into state and national databases. Some crime labs also offer digital evidence analysis, or digital forensics, which involves the extraction and analysis of evidence from electronic devices like computers, cell phones, and surveillance systems.⁶ Crime labs are diverse and can include publicly funded labs, forensic units within police departments, and private labs.⁷ Forensic analysis in the US has historically been seen more as a law enforcement function than a scientific one—today, most of the over 400 publicly funded crime labs across the country are run by law enforcement agencies.⁸

Figure 1. Distinction between Crime Labs and Medical Examiners

Crime labs and medical examiners have different roles and work independently of each other. While crime labs focus on analyzing evidence from crime scenes, medical examiners determine the cause and manner of death through autopsies. Every county in Tennessee is required to have a medical examiner.

Source: Tennessee Code Annotated, Section 38-7-104; and testimony at commission meeting by Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, and Stephen Crump, executive director, Tennessee District Attorneys General Conference, December 19, 2024.

³ Interviews with James McCutcheon, associate professor, Department of Criminology and Criminal Justice, University of Memphis, August 27, 2024, and February 21, 2025; and emails from James McCutcheon, associate professor, Department of Criminology and Criminal Justice, University of Memphis, December 6, 2024, and August 8, 2025, and Bill Gibbons, president, Memphis Shelby Crime Commission, December 18, 2024, and August 8, 2025.

⁴ When paired with “crime labs,” the term “forensics” refers to the application of scientific techniques to criminal investigations through the analysis of evidence. While not all crime labs perform forensic testing, this report uses the term “crime lab” to refer to forensic crime labs.

⁵ Peterson et al. 2013; Muhlhausen 2019; and National Institute of Justice “Forensic Laboratory Operations.”

⁶ Brooks 2023; and Muhlhausen 2019.

⁷ Garrett 2020.

⁸ Garrett 2020; and Garrett 2022.

The Tennessee Bureau of Investigation has three crime labs and a digital forensic unit, and there is one locally run crime lab in Tennessee.

The Tennessee Bureau of Investigation (TBI) receives and processes evidence for state and local entities through two divisions—the Forensic Services Division, which operates the three state-run crime labs in Tennessee, and the Cybercrime and Digital Evidence Unit (CDEU) within the Technology and Innovation Division, which provides digital forensic services.⁹ TBI provides services to all law enforcement agencies throughout the state, along with the district attorney general, the chief medical examiner, county medical examiners, and various state departments.¹⁰ The Metro Nashville Police Department (MNPd) is the only local law enforcement agency that operates its own crime lab, providing forensic services to Nashville-Davidson County.¹¹

The Tennessee Bureau of Investigation's Forensic Services Division operates the state crime labs.

TBI's three state-run labs are located in Nashville, Jackson, and Knoxville.¹² Through these labs, TBI provides forensic analysis of the biological, chemical, and physical evidence from crime scenes, but the individual labs don't all provide the same forensic testing services (see table 1).¹³ TBI's crime lab system is accredited by the American National Standards Institute's National Accreditation Board (ANAB).¹⁴ Third-party professional forensic science accreditation organizations, like ANAB, evaluate a crime lab's technical competency, policy, and procedures to ensure the lab can produce valid forensic findings and accurate interpretations.¹⁵ These organizations also monitor accredited labs on an ongoing basis to ensure continued compliance with industry best practices.¹⁶ While there isn't a federal requirement for crime labs to be accredited, accreditation affects the acceptance and credibility of evidence in legal proceedings,¹⁷ and many federal grants require accreditation as a condition of eligibility.¹⁸

TBI provides forensic services to law enforcement agencies statewide at its three accredited state crime labs located in Nashville, Jackson, and Knoxville.

⁹ Tennessee Bureau of Investigation 2024b.

¹⁰ Tennessee Code Annotated, Section 38-6-103(b); Tennessee Comptroller of the Treasury 2024; and Tennessee Bureau of Investigation 2024b.

¹¹ Johnson 2024; and interview with Amanda Sweet, director, Heather Watson, crime lab business manager, and Vanessa Martinucci, crime lab director, Forensic Services Division, Metropolitan Nashville Police Department, July 15, 2024.

¹² Tennessee Bureau of Investigation 2024a; and Tennessee Bureau of Investigation 2024b.

¹³ Tennessee Bureau of Investigation 2024b; Tennessee Code Annotated, Sections 38-7-109 and 38-6-103; and testimony at commission meeting by Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, and Jeff Peach, commission member, December 19, 2024.

¹⁴ Tennessee Bureau of Investigation "Accreditation."

¹⁵ Brooks 2023.

¹⁶ Ibid.

¹⁷ Garret 2020; and Brooks 2023.

¹⁸ Garret 2020; and Muhlhausen 2019.

Table 1. TBI Forensic Science Services Provided by Crime Lab Location

Services Provided	Description	Jackson	Nashville	Knoxville
Breath Alcohol	Administration and maintenance of Tennessee's breath alcohol testing program; certification and calibration of breath alcohol testing instruments; training for law enforcement operators on the instruments.	Yes	Yes	Yes
Forensic Biology	Identification and characterization of blood and other body fluids related to crimes; and DNA testing and profiling for individual identification from crime scene or victim evidence.	Yes	Yes	Yes
Forensic Chemistry	Analysis of substances seized as evidence in cases involving the illegal sale, manufacture, distribution, or use of controlled and illicit drugs.	Yes	Yes	Yes
Toxicology	Analysis of blood and other body fluids for the presence of alcohol, drug, or poisons, in DUI cases and other criminal investigations.	Yes	Yes	Yes
Evidence Receiving	Receipt, inventory, distribution, and secure storage of all evidence submitted for forensic analysis.	Yes	Yes	Yes
Combined DNA Index System (CODIS)	Searches evidentiary DNA profiles against national databases of convicted offenders and arrestees to assist in developing investigative leads.*	Yes	Yes	No
Firearms and Toolmark Identification	Comparison of bullets, cartridge cases, and toolmarks to determine weapon matches; restoration of serial numbers; NIBIN searches to link related firearm crimes.	Yes	Yes	Planned
Latent Prints	Analysis and comparison of fingerprints and palm prints; database searches to identify prints from crime scenes.	Planned	Yes	Planned
Microanalysis	Examination and comparison of trace evidence, including fire debris, gunshot residue, paint, glass, fibers, tape, and shoe and tire impressions to link items and individuals to a crime scene.	No	Yes	No

*TBI's Nashville lab oversees all statewide CODIS activities. TBI's Jackson lab performs in-house testing of samples received for the CODIS database.

Source: Tennessee Bureau of Investigation 2024a; Tennessee Bureau of Investigation "Forensic Services Division"; and interview with Donna Nelson, crime laboratory regional administrator, Jackson, Tennessee Bureau of Investigation, November 1, 2024.

TBI first received its accreditation in forensic testing services in 1994.¹⁹ TBI must also be accredited and follow the FBI's quality standards for DNA evidence testing to access and use the FBI's Combined DNA Index System (CODIS) database.²⁰

Prior to 2003, TBI operated five crime labs—in Nashville, Knoxville, Chattanooga, Jackson, and Memphis.²¹ State budget cuts led to the closures of the Chattanooga and original Jackson labs in 2003, leaving the Memphis lab as the only forensic service provider in West Tennessee; however, it was not equipped to meet regional needs.²² In 2021, a new facility opened in Jackson, and the Memphis facility was closed.

TBI's Cybercrime and Digital Evidence Unit processes the state's digital evidence.

It is common for almost every crime to have some form of digital evidence.²³ Digital evidence analysis is distinct and separate from scientific analysis of evidence that crime labs conduct. The Cybercrime and Digital Evidence Unit—which operates as part of TBI's Technology and Innovation Division in Nashville, Jackson, Chattanooga, and Knoxville—collects, preserves, analyzes, and interprets digital evidence in support of criminal investigations statewide.²⁴ The unit's Digital Forensics Squad plays a central role in conducting digital forensic analysis including the recovery, extraction, enhancement, and authentication of data from a wide range of sources, including mobile devices, computers, vehicle systems, and surveillance equipment.²⁵ The unit also serves as an educational and training resource for TBI, local agencies, and the community.²⁶ Most local law enforcement agencies in the state depend on TBI for assistance with digital forensics, though some larger agencies have developed their own digital forensic testing capabilities.²⁷

TBI also operates a Cybercrime and Digital Evidence Unit, which collects, preserves, analyzes, and interprets data from phones, computers, and other devices in support of investigations statewide.

¹⁹ Tennessee Bureau of Investigation "Accreditation."

²⁰ Federal Bureau of Investigation 2025b.

²¹ Presentation to Memphis Shelby County Crime Commission Board by Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, April 24, 2024; and testimony at commission meeting by Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, December 19, 2024.

²² Presentation to Memphis Shelby County Crime Commission Board by Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, April 24, 2024; interview with Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, July 31, 2024; and testimony at commission meeting by Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, December 19, 2024.

²³ Muhlhausen 2019.

²⁴ Tennessee Comptroller of the Treasury 2024.

²⁵ Tennessee Comptroller of the Treasury 2024; and McCutcheon et al. 2024.

²⁶ Tennessee Comptroller of the Treasury 2024.

²⁷ Interview with Chet Mason, special agent in charge, Dawn Mackey, assistant special agent in charge of digital forensics in East and Upper East Tennessee, Melanie Garner, assistant special agent in charge of digital forensics in Middle and West Tennessee, Rachel Russell, deputy counsel of operations, Cybercrime and Digital Evidence Unit, Richard Littlehale, assistant director, Technology and Innovation Division, and Patrick Powell, policy director, Tennessee Bureau of Investigation, February 20, 2025; and Tennessee Comptroller of the Treasury 2024.

In 2014, the Metro Nashville Police Department opened its own full-service accredited crime lab, allowing Davidson County to prioritize local cases and reducing strain on TBI's Nashville lab.

The Metro Nashville Police Department operates the only local crime lab in the state.

The MNPD crime lab opened in 2014, exclusively serving Davidson County.²⁸ Though the initial plans for the lab only included DNA and firearms testing, it was determined that a full-service lab would better suit the growing needs of the community and allow the lab to have control over prioritizing cases and handling backlog.²⁹ The lab offers services in four main areas: forensic biology and DNA, forensic chemistry (drug identification and toxicology), latent prints, and firearms and tool mark analysis.³⁰ The lab is staffed by 61 people, including scientists, technicians, and administrative personnel, and is funded by Metro Nashville-Davidson County government and some federal grants.³¹

Prior to the lab being built, Davidson County made up about a quarter of the caseload at TBI's Nashville lab.³² Having its own lab allows MNPD to prioritize its own cases without competing with other law enforcement agencies for TBI's resources.³³ When there is an increase in specific types of cases, like sexual assault kits and toxicology, MNPD will outsource testing to manage the workload and expedite results.³⁴ From 2022 through July 2025, MNPD outsourced 3,968 toxicology cases at a cost of \$1,083,792, and from 2018 through 2025, 1,416 DNA cases—mostly sexual assault kits—were outsourced at a cost of \$1,941,211. The costs were covered through a combination of local funds and \$724,615 in federal grants for testing sexual assault kits.³⁵

Forensic crime labs across the nation face challenges with evidence backlogs, turnaround times, and staffing.

As forensic science advances, the demand for forensic services grows, but this growth frequently outpaces a crime lab's available resources and

²⁸ Interview with Amanda Sweet, director, Heather Watson, crime lab business manager, and Vanessa Martinucci, crime lab director, Forensic Services Division, Metropolitan Nashville Police Department, July 15, 2024.

²⁹ Ibid.

³⁰ Metropolitan Government of Nashville and Davidson County "Metro Nashville Police Crime Laboratory."

³¹ Interview with Amanda Sweet, director, Heather Watson, crime lab business manager, and Vanessa Martinucci, crime lab director, Forensic Services Division, Metropolitan Nashville Police Department, July 15, 2024; and Metropolitan Government of Nashville and Davidson County "Metro Nashville Police Crime Laboratory."

³² Interview with Amanda Sweet, director, Heather Watson, crime lab business manager, and Vanessa Martinucci, crime lab director, Forensic Services Division, Metropolitan Nashville Police Department, July 15, 2024; and Metropolitan Government of Nashville and Davidson County "Metro Nashville Police Crime Laboratory."

³³ Perrusquia and Roberts 2022a.

³⁴ Interview with Amanda Sweet, director, Heather Watson, crime lab business manager, and Vanessa Martinucci, crime lab director, Forensic Services Division, Metropolitan Nashville Police Department, July 15, 2024; and Johnson 2024.

³⁵ Emails from Amanda Sweet, director, Forensic Services Division, Metropolitan Nashville Police Department, August 5 and August 20, 2025.

ability to meet demand, leading to long turnaround times and growing backlogs.³⁶ Backlogs and turnaround times are metrics that crime labs commonly use to measure performance. But how those terms are defined varies across jurisdictions.³⁷

There is no set industry standard definition of a backlogged case, and varying definitions can make comparing backlog data challenging and limit the ability to capture the true scope of the problem nationally.³⁸ Regardless, the data tends to show persistent backlogs nationwide:

- Project FORESIGHT³⁹ defines a backlogged case as one that remains untested more than 30 days after submission to a crime lab.⁴⁰ From 2011 to 2017, Project FORESIGHT data showed the average backlog grew nearly 250% across almost all forensic disciplines, growing faster than case submissions.⁴¹
- The US National Institute for Justice (NIJ) defines a backlogged case as one that has yet to have a final report issued.⁴² Using the NIJ definition, publicly funded crime labs in the US had an estimated 710,900 backlogged requests across all types of forensic evidence at the end of 2020.⁴³ From 2014 to 2020, backlogs nationwide increased significantly in key areas: firearms and toolmark analysis rose by 97%, DNA databasing by 87%, controlled substances analysis by 22%, forensic biology casework by 17%, and toxicology analysis by 16%.⁴⁴ At the same time, backlogs declined in other areas like digital evidence, latent prints, and trace evidence.⁴⁵

Turnaround time is generally defined as the time between the submission of a request for forensic analysis and the issuance of a final report with results and is also often used to assess a crime lab's efficiency.⁴⁶ According to Project FORESIGHT's 2023-2024 Report, median turnaround times at the national level were 20.1 weeks for DNA casework, 11.1 weeks for firearms and ballistics, 4.1 weeks for blood alcohol, and 10.4 weeks for controlled substances.⁴⁷

Nationwide, crime labs face persistent backlogs and long turnaround times as demand for forensic services grows faster than resources.

Turnaround time is generally defined as the time between the submission of a request for forensic analysis and the issuance of a final report with results.

³⁶ Garrett 2020.

³⁷ James and Sacco 2022.

³⁸ Houck 2020; USAFacts 2023; and James and Sacco 2022.

³⁹ Project FORESIGHT is a business-guided self-evaluation and benchmarking program for forensic science laboratories. See Speaker 2025.

⁴⁰ Houck 2020; and La Vigne 2022.

⁴¹ Muhlhausen 2019.

⁴² Houck 2020; La Vigne 2022; and Brooks 2023.

⁴³ Brooks 2023.

⁴⁴ Ibid.

⁴⁵ Ibid.

⁴⁶ Turnaround time metrics can also vary between jurisdictions with some labs tracking turnaround times from the date the first item in a request was submitted, others from the last, and some from the initial request for analysis through report delivery. See Speaker 2024b and Muhlhausen 2019.

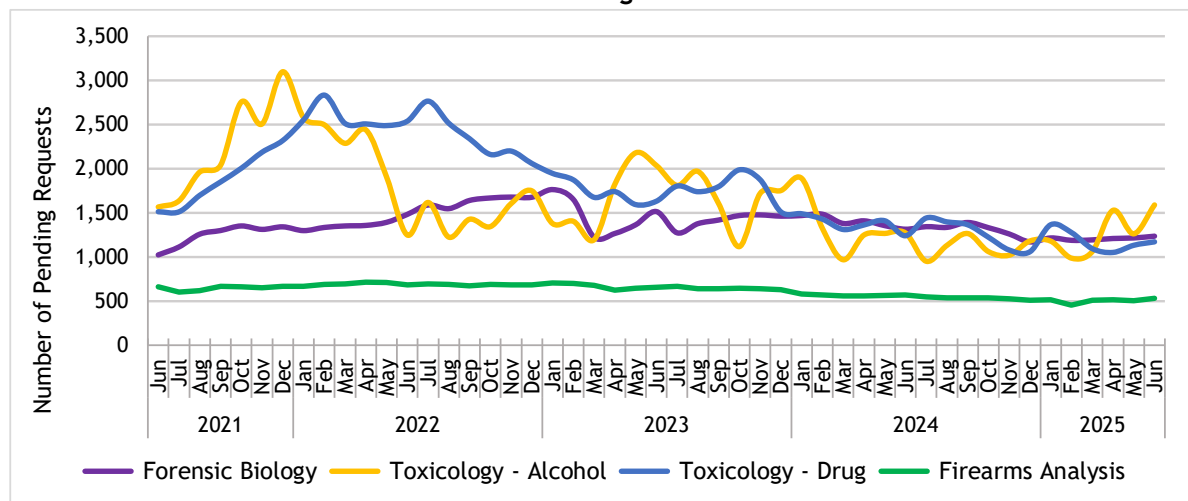
⁴⁷ Commission staff analysis of Speaker 2025, Table 41.

Backlogs and turnaround times are heavily influenced by the amount of evidence submitted for testing.⁴⁸ Over the past decade, the volume of submissions has increased nationally, with average annual growth in case submissions per capita of 10.3% for DNA casework, 4.5% for firearms and ballistics, 12.9% for blood alcohol, and 3.7% for controlled substances.⁴⁹ Compounding this rising demand is a national funding gap. A 2019 report to Congress estimated that forensic laboratories nationwide require an additional \$640 million annually to reach an optimal balance of incoming submissions and personnel.⁵⁰

Tennessee has persistent backlogs and increased turnaround times.

Tennessee's crime labs reflect the national trends and experience similar challenges with growing demand for forensic services, persistent backlogs in select disciplines, and turnaround times in some areas that remain above national benchmarks. TBI defines backlogged evidence as any evidence received by the labs that has not yet been tested.⁵¹ As of June 2025, TBI's Forensic Service Division had 7,032 untested evidence requests, down from 10,814 in June 2024.⁵² Despite the overall backlog reduction, backlogs in select disciplines remain (see figure 2). From June 2021 to June

**Figure 2. TBI's Backlog of Requests in Select Disciplines
June 2021 through June 2025**



Source: Commission staff analysis of data from Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, June 16, 2025; and email from Susan Sims, administrative assistant, Forensic Services Division, Tennessee Bureau of Investigation, July 10, 2025.

⁴⁸ Muhlhausen 2019.

⁴⁹ Speaker 2024b.

⁵⁰ Muhlhausen 2019.

⁵¹ Email from Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, May 21, 2025.

⁵² Email from Susan Sims, administrative assistant, Forensic Services Division, Tennessee Bureau of Investigation, July 10, 2025.

2025, the average year-over-year backlog increased for violent forensic biology requests (18.9%), non-violent forensic biology (30.3%), and alcohol toxicology (7.6%) (see appendix C).⁵³

TBI measures turnaround time as the time from when the evidence is received to the time the report is generated.⁵⁴ In fiscal year 2023-24, TBI's average turnaround time was 19.2 weeks across all testing;⁵⁵ the state has a goal to reduce this to an 8-to-12-week turnaround time for all evidence.⁵⁶ Turnaround times have varied by forensic discipline over the last three fiscal years (see table 2). For digital evidence during fiscal year 2023-24, turnaround was longer, with 37.6 weeks for mobile device cases and 66 weeks for computer cases.⁵⁷

**Table 2. TBI's Average Turnaround Times (in weeks)
Compared to Project FORESIGHT Data
Fiscal Years 2021-22 through 2023-24**

Forensic Discipline	2021-22	2022-23	2023-24	Project FORESIGHT, 2023-24		
				25th Percentile	Median	75th Percentile
Drugs - Controlled Substances	22.60	27.65	24.94	7.43	10.43	13.14
Firearms	44.87	54.86	59.78	4.14	13.86	18.57
Forensic Biology - DNA	27.93	33.76	28.01	16.00	20.14	23.43
Latent Prints	10.58	11.37	15.56	7.71	10.43	12.43
Toxicology - Blood Alcohol	8.55	5.79	4.89	2.43	4.14	5.57
Toxicology - Drugs	22.28	22.38	15.85	6.00	9.86	12.00

Note: The turnaround times shown above are estimated based on weighted average monthly data. When comparing to Project FORESIGHT, it is important to note that Project FORESIGHT includes both national and international data, and crime labs do not always categorize data uniformly. The table demonstrates how TBI compares to other crime labs in a few categories.

Source: Commission staff analysis of data received from Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, June 15, 2025; and Speaker 2025.

⁵³ Commission staff analysis of data from Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, June 16, 2025; and email from Susan Sims, administrative assistant, Forensic Services Division, Tennessee Bureau of Investigation, July 10, 2025.

⁵⁴ Email from Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, May 21, 2025.

⁵⁵ Commission staff analysis of data from Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, June 16, 2025; and email from Susan Sims, administrative assistant, Forensic Services Division, Tennessee Bureau of Investigation, July 10, 2025.

⁵⁶ Tennessee Office of the Governor 2022; and email from Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, April 10, 2025.

⁵⁷ Commission staff analysis of data from Chet Mason, special agent in charge, Cybercrime and Digital Evidence Unit, Tennessee Bureau of Investigation, February 28, 2025.

Even with its own dedicated facility, the MNPd lab continues to have long turnaround times, particularly in DNA testing, and faces additional delays when equipment requires maintenance or staff turnover occurs.⁵⁸ In calendar year 2024, MNPd's crime lab reported an average turnaround time of 8.6 weeks for controlled substance testing, 2.1 weeks for drug toxicology, 22.7 weeks for firearms analysis, and 106.1 weeks for forensic biology testing, including outsourced requests.⁵⁹ See table 3.

**Table 3. MNPd's Crime Lab Average Turnaround Times (in weeks)
Compared to Project FORESIGHT Data
2022 through 2024**

Forensic Discipline	Calendar Year 2022	Calendar Year 2023	Calendar Year 2024	Project FORESIGHT Fiscal Year 2023-24		
				25th Percentile	Median	75th Percentile
Drugs - Controlled Substances	3.86	12.86	8.57	7.43	10.43	13.14
Firearms	17.57	18.71	22.71	4.14	13.86	18.57
Forensic Biology - DNA	95.29	152.71	106.14	16.00	20.14	23.43
Latent Prints	18.57	15.29	8.14	7.71	10.43	12.43
Toxicology - Blood Alcohol	4.29	3.14	2.14	2.43	4.14	5.57
Toxicology - Drugs	4.29	4.29	4.29	6.00	9.86	12.00

Note: Project FORESIGHT includes both national and international data, and crime labs do not always categorize data uniformly. The table demonstrates how MNPd compares to other crime labs in a few categories.

Source: Staff analysis of data received from Vanessa Martinucci, crime lab director, Forensic Services Division, Metro Nashville Police Department, February 4, 2025; and Speaker 2025.

Delays in evidence processing are not the only factor that affects the speed at which cases are resolved, but they can contribute to broader challenges within Tennessee's criminal justice system. When forensic evidence turnaround times are long, law enforcement may lack the critical, objective information needed to guide investigations, confirm or dismiss suspects, or pursue timely leads.⁶⁰ These delays may allow perpetrators to remain at large longer, increasing the risk of additional offenses—as in the case of Eliza Fletcher.⁶¹ For victims, extended turnaround times can be harmful, contributing to frustration, re-traumatization, and disengagement from the justice process.⁶² At the same time, delays also hinder efforts

⁵⁸ Testimony at commission meeting by Amanda Sweet, director, Forensic Services Division, Metropolitan Nashville Police Department, December 19, 2024.

⁵⁹ Commission staff analysis of data from Vanessa Martinucci, crime lab director, Forensic Services Division, Metropolitan Nashville Police Department, February 4, 2025.

⁶⁰ Wickenheiser 2021b; and Muhlhausen 2019.

⁶¹ Wickenheiser 2021b; and Perrusquia and Roberts 2022b.

⁶² Testimony at commission meeting by Jennifer Escue, chief executive officer, Tennessee Coalition to End Domestic & Sexual Violence, December 19, 2024; and interviews with Sandy Bromley, director, Division of Community Services, Nathali Roberts, rape crisis advocacy manager, Crime Victims & Rape Crisis Center, and Amanda Taylor, director of nursing, Crime Victims & Rape Crisis Center, Shelby County Government, September 30, 2024, and Jennifer Escue, chief executive officer, Tennessee Coalition to End Domestic & Sexual Violence, November 25, 2024.

to exonerate the wrongfully accused, prolonging pretrial detention or incarceration.⁶³ In one Tennessee case, for example, TBI did not receive the evidence until nearly a year after the defendant's arrest and then did not issue its report until eight months later. Additional delays were linked to the heavy caseloads in the district attorney's office.⁶⁴ In the state Comptroller's investigative report on the Shelby County criminal justice system, stakeholders said that extended wait times for forensic testing can play a role in prolonging the resolution of cases. In fact, wait time for forensic evidence testing was the reason cited for delays in approximately 17% of observed criminal court cases.⁶⁵

Tennessee's crime labs, like many across the country, face ongoing staffing challenges.

The demanding nature of forensic science work, which involves handling sensitive cases, combined with the pressure to produce accurate and timely results, can lead to burnout and high turnover rates.⁶⁶ Consequently, crime labs often struggle to recruit and retain qualified professionals, resulting in key positions remaining vacant for extended periods.⁶⁷ In 2020, the Department of Justice's *Census of Publicly Funded Forensic Crime Laboratories* reported that crime labs nationwide had over 1,500 job vacancies.⁶⁸ Further, salaries offered by publicly run crime labs often lag behind private sector employers, exacerbating the overall shortage of trained forensic scientists at public sector labs.⁶⁹

These nationwide staffing challenges are mirrored in Tennessee. The turnover rate for forensic technicians at TBI labs was 13.6% in 2023 and 11.5% in 2024, while turnover among level one forensic scientists rose from 8% to 12.8% during the same period.⁷⁰ Since 2020, TBI's Cybercrime and Digital Evidence Unit has had between one and four vacancies—representing up to 36.4% of their workforce at times.⁷¹ The unit's leadership and the Comptroller's 2024 performance audit of TBI agree that staffing shortages contribute to the digital forensic backlog.⁷² Similar to TBI, the

Staffing shortages and turnover in both the TBI and Metro Nashville Police Department labs strain the system and slow evidence processing.

TBI's Cybercrime and Digital Evidence Unit has also experienced staffing shortages which have contributed to digital forensic backlogs.

⁶³ James 2022; and interview with Jason Gichner, deputy director and senior legal counsel, Tennessee Innocence Project, September 25, 2024.

⁶⁴ *State of Tennessee v. Alfred Lee Boykin, III*, Tenn. Crim. App. (2021).

⁶⁵ Tennessee Comptroller of the Treasury 2025.

⁶⁶ McCutcheon et al. 2024; and Stout 2023.

⁶⁷ Testimony at commission meeting by Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, December 19, 2024; McCutcheon et al. 2024; McAndrew, Speaker, and Houck 2023; and La Vigne 2022.

⁶⁸ Brooks 2023.

⁶⁹ McCutcheon et al. 2024; and Perrusquia and Roberts 2022b.

⁷⁰ Commission staff analysis of data from Ernie Ricketts, director of human resources, Tennessee Bureau of Investigation, January 29, 2025.

⁷¹ Commission staff analysis of data from Chet Mason, special agent in charge, Cybercrime & Digital Evidence Unit, Tennessee Bureau of Investigation, March 20, 2025.

⁷² Tennessee Comptroller of the Treasury 2024; and email from Chet Mason, special agent in charge, Cybercrime & Digital Evidence Unit, Tennessee Bureau of Investigation, July 8, 2025.

Newly hired forensic scientists often spend one to two years undergoing training before taking on casework and contributing to reducing the workload. Existing scientists may spend up to half their time training the new hires, reducing time available to work existing caseloads.

MNPD crime lab has also experienced challenges in turnover despite offering competitive salaries, with 15 separations since 2021.⁷³

Education and training gaps have long been recognized as contributing to staffing challenges in crime labs.⁷⁴ University programs don't always align with the labs' operational needs,⁷⁵ and as a result, recent graduates typically require significant on-the-job training before contributing to casework, mirroring other fields like medicine and law.⁷⁶ In Tennessee, Middle Tennessee State University's forensic science bachelor's program is one of 53 accredited programs nationwide and the only program within the state.⁷⁷

At TBI, newly hired scientists often spend one to two years undergoing training—including 16 weeks of special-agent training—before they are able to take on casework and contribute to reducing the workload.⁷⁸ During these training periods, existing scientists may spend up to half their time training the new hires, reducing the time they can dedicate to managing ongoing caseloads.⁷⁹ Even after training is completed, scientists must also pass competency testing to ensure their test results are court-admissible.⁸⁰ Similar to forensic scientists, newly hired digital forensic examiners require training. After completing special-agent training, digital forensic examiners must undergo an additional 18 to 24 months of training to become fully certified to independently work on different device types.⁸¹

Beyond testing evidence, TBI's scientists also assist local law enforcement at violent crime scenes, like homicides and officer-involved shootings, especially in areas lacking their own forensic resources, and they provide testimony in court about the results of their evidence analysis.⁸² One report found that, nationally, the personnel time spent on testimony over the course of one year equated to the employment of five full-time employees.⁸³ During fiscal year 2023-24, the TBI's Violent Crime Response

⁷³ Interview with Amanda Sweet, director, Heather Watson, crime lab business manager, and Vanessa Martinucci, crime lab director, Forensic Services Division, Metropolitan Nashville Police Department, July 15, 2024, and August 23, 2024; and email from Vanessa Martinucci, crime lab director, Metropolitan Nashville Police Department, February 4, 2025.

⁷⁴ Muhlhausen 2019.

⁷⁵ Becker and Dale 2021; and Muhlhausen 2019.

⁷⁶ Muhlhausen 2019.

⁷⁷ American Academy of Forensic Sciences "AAFS FEPAC-Accredited Programs."

⁷⁸ Tennessee Comptroller of the Treasury 2024; and interviews with Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, July 31, 2024, and August 7, 2025.

⁷⁹ Tennessee Comptroller of the Treasury 2024.

⁸⁰ Muhlhausen 2019.

⁸¹ Tennessee Comptroller of the Treasury 2024.

⁸² Muhlhausen 2019; Tennessee Comptroller of the Treasury 2024; Tennessee Bureau of Investigation 2024b; and Tennessee Bureau of Investigation "Becoming a Special Agent/Forensic Scientist."

⁸³ Muhlhausen 2019.

Teams⁸⁴ were called to locate, document, and collect evidence 26 times across the state, representing 1,533.3 on-site staff-hours.⁸⁵ TBI's scientists also spent 1,890.9 hours responding to requests for court testimony during the same period.⁸⁶

Rising statewide demand for forensic services will likely outpace Tennessee's current crime lab capacity.

The state's crime lab system continues to face mounting pressure from rising forensic demand.⁸⁷ The state's rate of violent crime and projected population growth point to a growing need for expanded public safety and forensic infrastructure. Nationwide, crime labs are experiencing similar challenges as the demand for forensic services and the rate of violent crimes appears to outpace current capacity.⁸⁸

TBI has experienced rising demand for forensic services, particularly in areas like DNA and firearms analysis, leading to increased workloads.⁸⁹ TBI defines a "request" as a single unit of testing, whereas a "case" may include multiple requests across forensic disciplines.⁹⁰ Forensic biology requests at TBI increased 6.6% statewide over the past three years, while total forensic requests at TBI's Jackson and Knoxville crime labs increased by 17.4% and 3.9%, respectively, between 2023 and 2024.⁹¹ Although the inflow of evidence requests has remained stable over the past decade these trends do not account for the increasing complexity of forensic testing which can lead to longer processing times.⁹² Forensic demand is not evenly distributed across the state, but each grand division contains pockets of high demand for testing. Some counties account for a disproportionately large share of requests, which coincide with rapid population growth and persistent violent crime. For example, in 2024, Rutherford County had the highest total number of forensic evidence requests statewide, followed by

TBI has experienced rising demand for forensic services, particularly in areas like DNA and firearms analysis, although demand is concentrated in fast-growing and high-crime counties.

⁸⁴ TBI's Violent Crime Response Teams are made up of Special Agent/Forensic Scientists with expertise in Firearms and Toolmark Analysis, Latent Prints, Microanalysis/Trace evidence, Serology/DNA, and Documentation. See Tennessee Bureau of Investigation "Forensic Services Division."

⁸⁵ Tennessee Bureau of Investigation 2024b.

⁸⁶ Commission staff analysis of data from Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, January 3, 2025.

⁸⁷ Commission staff analysis of data from Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, March 20, 2025; Tennessee Comptroller of the Treasury 2024; and Tennessee Bureau of Investigation 2024a.

⁸⁸ La Vigne 2022; Innocence Project 2017; Muhlhausen 2019; and McCutcheon et al. 2024.

⁸⁹ McCutcheon et al. 2024; Muhlhausen 2019; and testimony at commission meeting by Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, December 19, 2024.

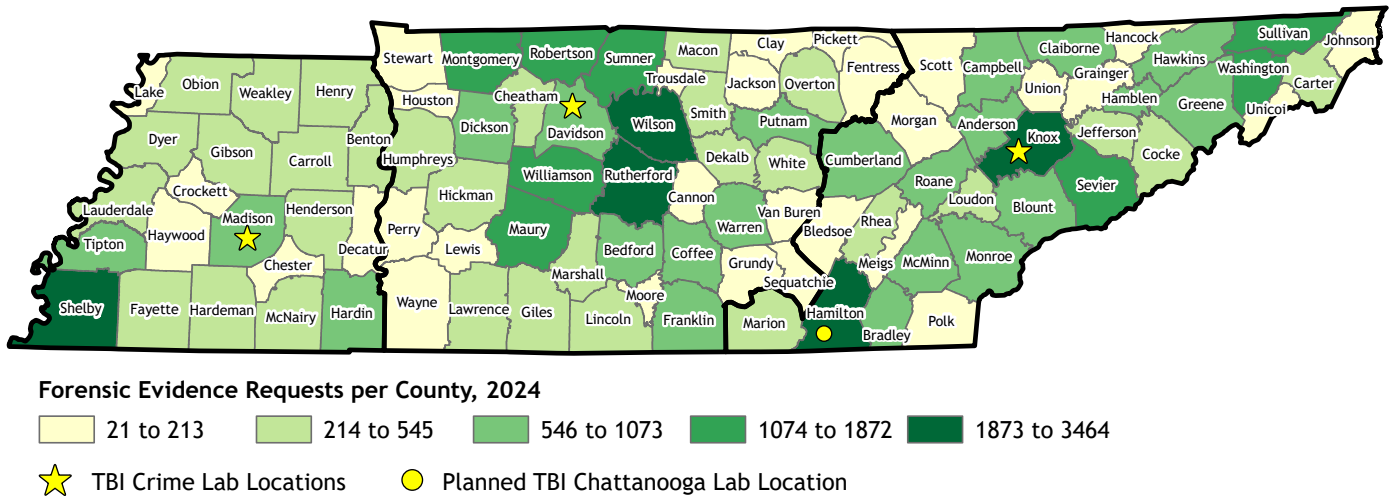
⁹⁰ Email from Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, March 26, 2025.

⁹¹ Commission staff analysis of data from Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, March 20, 2025.

⁹² Tennessee Bureau of Investigation 2024a.

Hamilton, Wilson, Knox, and Shelby counties (see map 1).⁹³ Demand for testing is also growing in many counties, though, again, this does tend to vary across the state (see map 2). See appendix D for more information.

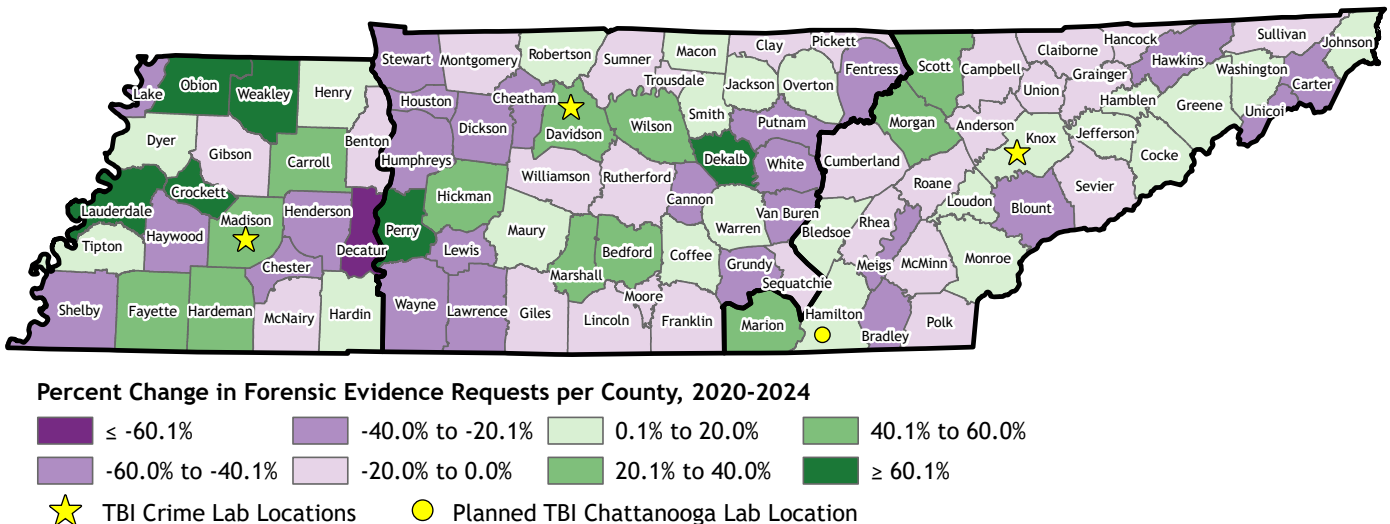
Map 1. Forensic Evidence Requests Received by TBI per County, 2024



Note: Davidson County sends most of its evidence to the MNPd crime lab for testing instead of sending it to TBI's labs.

Source: Commission staff analysis of data from Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, April 3, 2025.

Map 2. Percent Change in Forensic Evidence Requests Received by TBI per County 2020 through 2024



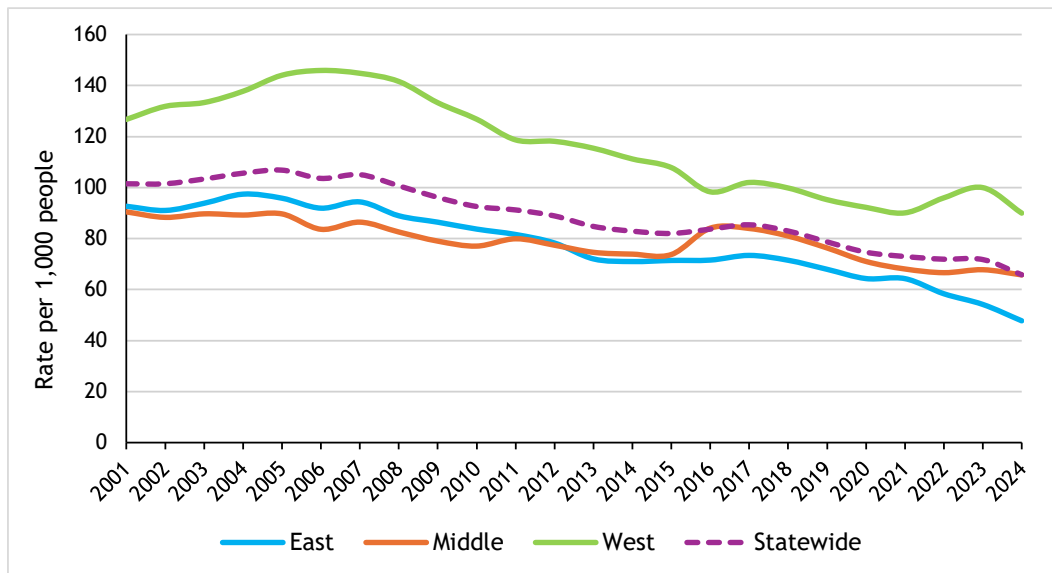
Note: Davidson County sends most of its evidence to the MNPd crime lab for testing instead of sending it to TBI's labs.

Source: Commission staff analysis of data from Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, April 3, 2025.

⁹³ Commission staff analysis of data from Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, April 3, 2025.

While the state's overall crime rate has experienced a long-term decline (see figure 3), recent data shows that certain types of crimes are on the rise. In 2023, Tennessee saw an increase in the rates of murder (7.5%), robbery (3.7%), and property crime (1.3%).⁹⁴ The state's violent crime rate remains high relative to the rest of the country (see map 3) at 628.2 per 100,000 people—well above the national rate of 374.4.⁹⁵ Shelby County reported the highest number of total crimes in 2024 (126,208), and the Memphis Police Department reported the highest crime rate of any local law enforcement agency, at 180.79 crimes per 1,000 people.⁹⁶ Several smaller agencies in East Tennessee, including the Rocky Top Police Department, Baileyton Police Department, and Pigeon Forge Police Department, also reported high crime rates, averaging 158.9 per 1,000 people.⁹⁷ As shown in map 4, crime rates varied widely by county in 2024, with concentrations of higher crime rates in parts of West and Middle Tennessee. Appendix E shows crime and population data for each county in the state.

Figure 3. Historical Crime Rate per 1,000 People by Grand Division in Tennessee 2001 through 2024



Source: Commission staff analysis of Tennessee Bureau of Investigation "Tennessee Information Based Reporting System," Crime Rates by Jurisdiction, February 4, 2025, and July 29, 2025.

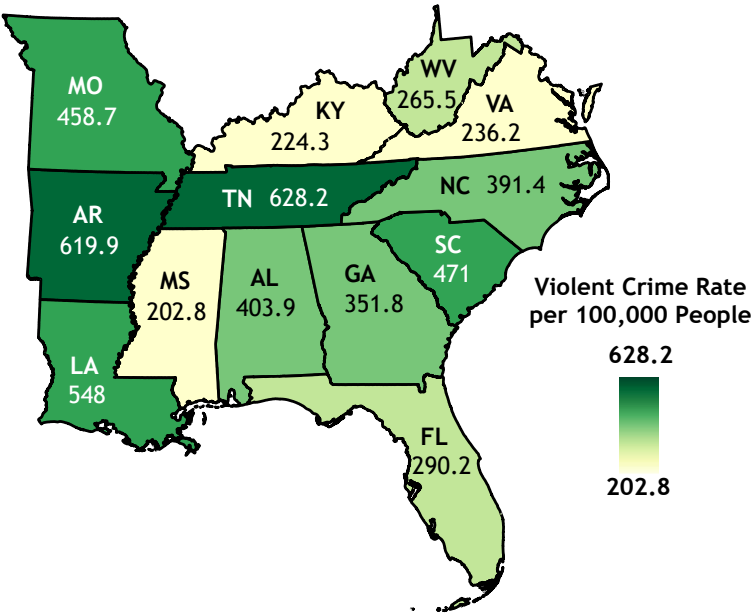
⁹⁴ Federal Bureau of Investigation 2024a.

⁹⁵ Ibid.

⁹⁶ Commission staff analysis of Tennessee Bureau of Investigation "Tennessee Information Based Reporting System," Crime Rates by Jurisdiction, February 4, 2025; and commission staff analysis of Tennessee Bureau of Investigation "Tennessee Information Based Reporting System," All Crime Clearance Rates, March 20, 2025.

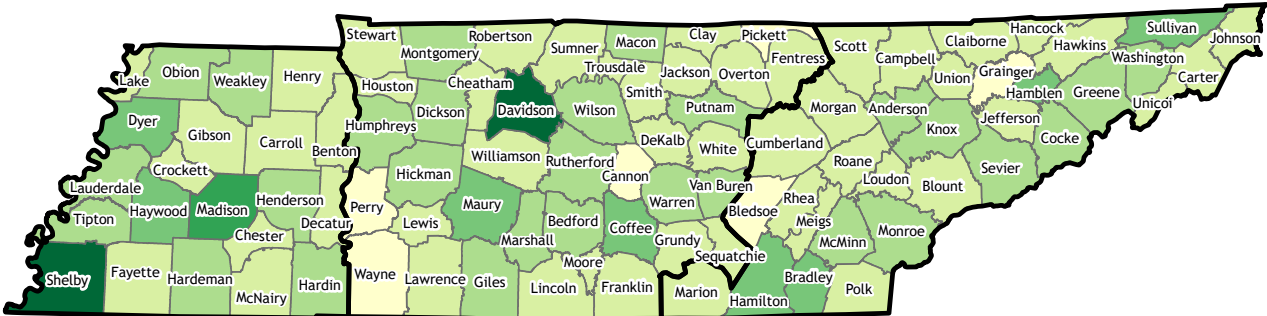
⁹⁷ Commission staff analysis of Tennessee Bureau of Investigation "Tennessee Information Based Reporting System," Crime Rates by Jurisdiction, February 4, 2025.

Map 3. Violent Crime Rates in the Southeastern US, 2023



Source: Federal Bureau of Investigation 2024a.

Map 4. Crime Rate per 1,000 People in Tennessee by County, 2024



Crime Rate per 1,000 People, 2024

≤ 20 20.1 to 40.0 40.1 to 60.0 60.1 to 80.0 80.1 to 100.0 ≥ 100

Source: Commission staff analysis of Tennessee Bureau of Investigation “Tennessee Information Based Reporting System,” Crime Rates by Jurisdiction, July 29, 2025.

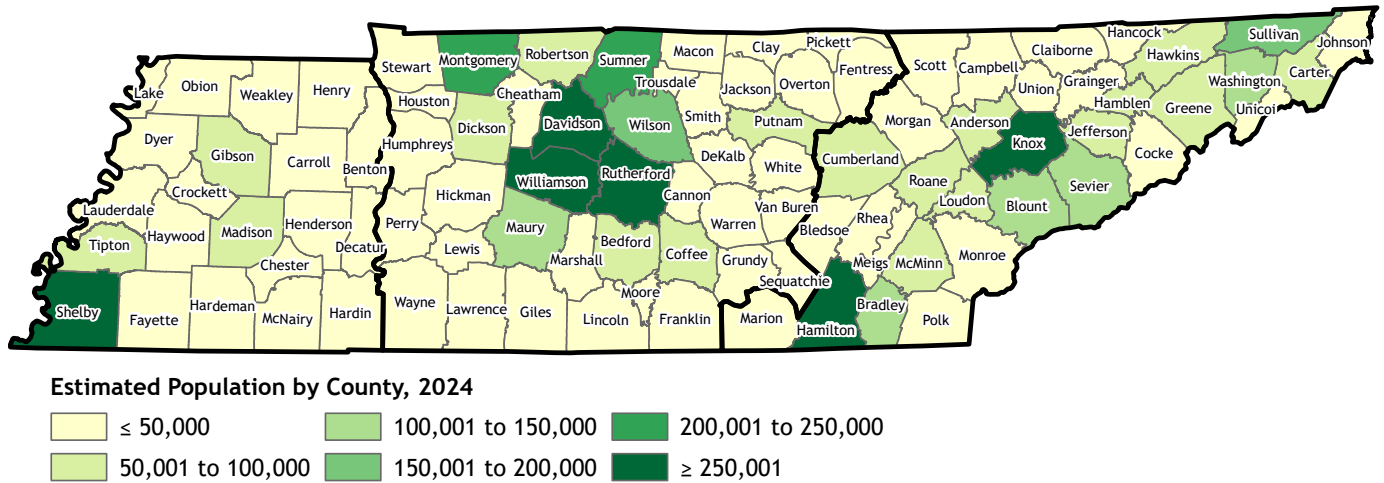
Even if crime rates were to decrease in the future, projections for the state’s population growth suggest the volume of evidence that needs to be tested could continue to grow. From 2022 to 2023, Tennessee’s population grew by 77,513 residents, more than double the national rate, placing the state sixth in population growth for all states.⁹⁸ In 2024, the estimated population was 7.1 million—gaining an additional 79,446 residents (see map 5).⁹⁹ The Boyd Center for Business and Economic Research projects

⁹⁸ Kessler et al. 2024.

⁹⁹ Tennessee State Data Center “U.S. States: Decennial Census, 2024 Population Estimates and Change.”

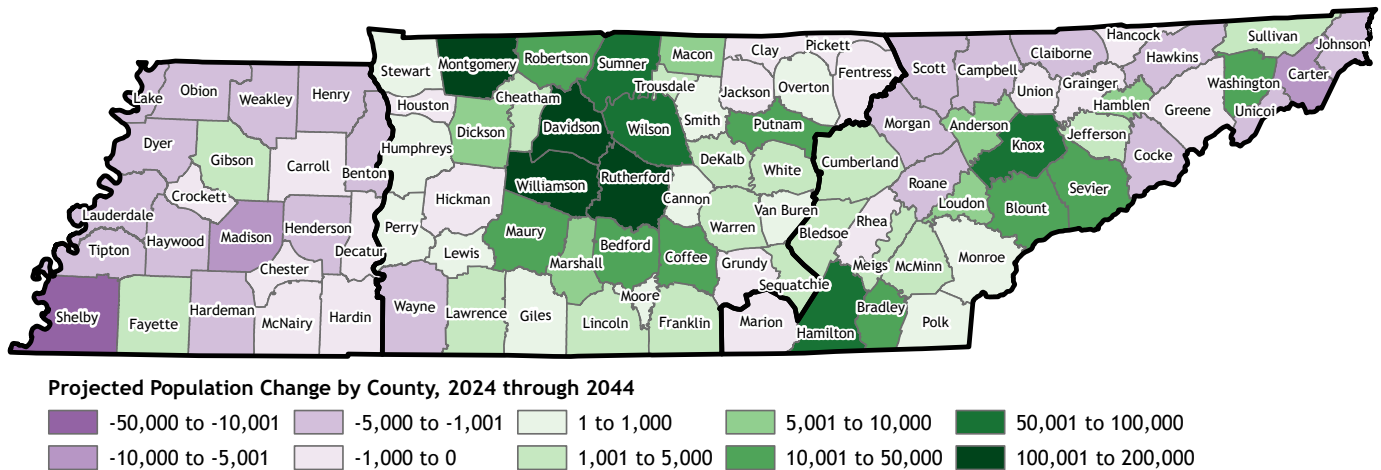
the state's population will reach 8.1 million by 2044 and grow to over nine million by 2070.¹⁰⁰ Middle Tennessee—especially Davidson, Rutherford, Wilson, and Williamson counties—is projected to experience significant population growth during this time, which will likely increase forensic testing demand. See map 6.

Map 5. Estimated Population in Tennessee by County, 2024



Source: University of Tennessee Boyd Center for Business and Economic Research 2024.

Map 6. Projected Population Change in Tennessee by County 2024 through 2044



Note: Shelby County's population is projected to decrease by 41,942. Montgomery County's population is projected to increase by 108,545, Williamson County by 114,408, Davidson County by 128,010, and Rutherford County by 163,468.

Source: University of Tennessee Boyd Center for Business and Economic Research 2024.

¹⁰⁰ Kessler et al. 2024; and University of Tennessee Boyd Center for Business and Economic Research 2024.

The state has improved evidence backlogs and turnaround times by adding positions and hiring and training new employees—the average statewide turnaround time improved from 26.9 to 18.4 weeks.

Tennessee has worked to improve crime lab capacity, but some testing disciplines continue to see increased turnaround times.

Crime lab capacity is fundamentally a function of the number of trained staff available to conduct forensic analyses and the physical lab space available for those staff to work efficiently.¹⁰¹ Increasing either of these factors can increase capacity.¹⁰² In recent years, the state has made several efforts to increase its forensic capacity. Over the last four years, TBI requested 56 new positions to expand their evidence testing services—50 within the Forensic Services Division and six within the CDEU¹⁰³—and the General Assembly approved 50 forensic science positions and five digital forensic examiner positions.¹⁰⁴ As of August 2025, all of the new positions in the Forensic Service Division are filled, with five of those 50 still in training, and four of the five new positions in the CDEU are filled, two of which are still undergoing training.¹⁰⁵ Recognizing that low salaries have challenged recruitment and retention, TBI has implemented pay scale improvements to remain competitive with other employers.¹⁰⁶

TBI's fiscal year 2023-24 annual report highlighted improvement in evidence backlogs and turnaround times from hiring and training new employees—pending requests for laboratory testing dropped by 47.5% from July 1, 2023, to July 1, 2024, in several forensic disciplines, and the average statewide turnaround time improved from 26.9 weeks to 18.4 weeks; as staff complete training, turnaround times are expected to continue improving.¹⁰⁷

But with these staffing increases, TBI has now utilized all of the existing labs' infrastructure. While the Nashville and Knoxville labs reconfigured office space to accommodate new employees, these renovations did not

¹⁰¹ Houck 2020; and Muhlhausen 2019.

¹⁰² Muhlhausen 2019.

¹⁰³ Tennessee Comptroller of the Treasury 2024; Tennessee Bureau of Investigation 2025; and email from Chet Mason, special agent in charge, Cybercrime and Digital Evidence Unit, Technology and Innovation Division, Tennessee Bureau of Investigation, May 28, 2025.

¹⁰⁴ Tennessee Comptroller of the Treasury 2024; Tennessee Bureau of Investigation 2025; and email from Chet Mason, special agent in charge, Cybercrime and Digital Evidence Unit, Technology and Innovation Division, Tennessee Bureau of Investigation, May 28, 2025.

¹⁰⁵ Tennessee Comptroller of the Treasury 2024; Tennessee Bureau of Investigation 2025; emails from Chet Mason, special agent in charge, Cybercrime and Digital Evidence Unit, Technology and Innovation Division, Tennessee Bureau of Investigation, May 28 and August 21, 2025; and interview with Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, August 7, 2025.

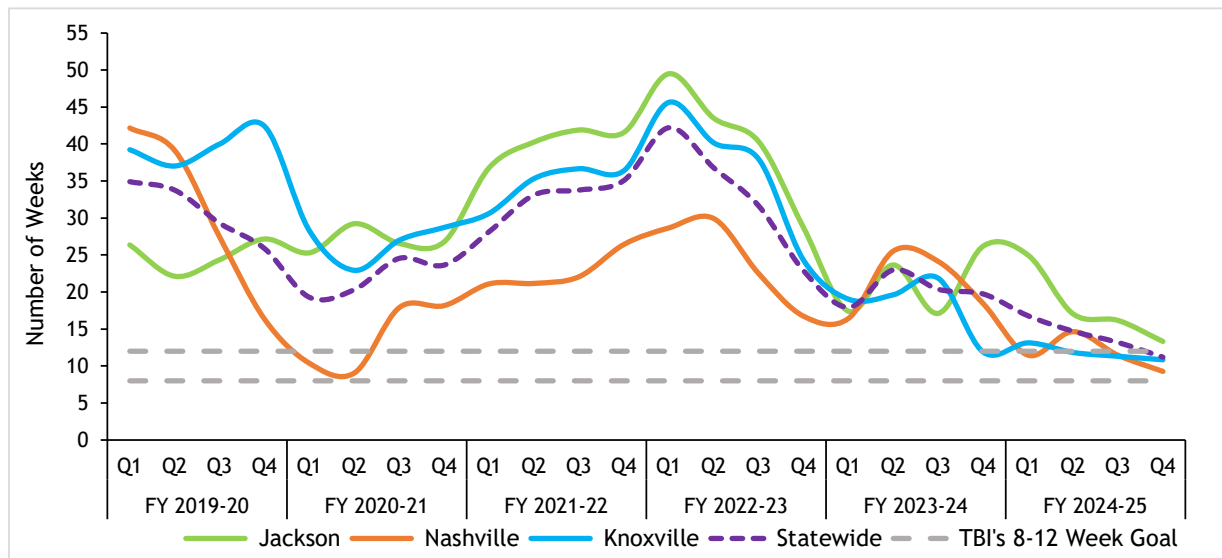
¹⁰⁶ Interview with Ernie Ricketts, human resources director, Tennessee Bureau of Investigation, and Toney Del Priore, director, Organizational Performance and Data Management, Department of Human Resources, January 24, 2025.

¹⁰⁷ Tennessee Bureau of Investigation 2024b; and emails from Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, January 29, 2025, and April 10, 2025.

expand square footage or fully equip new workstations.¹⁰⁸ TBI's Jackson lab also went through a similar space reconfiguration to support the additional staff.¹⁰⁹ TBI has emphasized that expanding their facilities is critical to fully realizing the benefits of expanded staffing.¹¹⁰

TBI has also focused on reducing turnaround times for select testing disciplines. It has prioritized sexual assault kit (SAK) testing in response to Public Chapter 362, Acts of 2021, reducing in-house turnaround times from a peak of 45.4 weeks in August 2022 to an average of 16.9 weeks in January 2025. In May 2025, the average turnaround time fell to 10.9 weeks reaching the state's 8-to-12-week goal at that time (see figure 4).¹¹¹

**Figure 4. TBI Average In-House Turnaround Time for Sex Offense Requests, by Crime Lab Location
Fiscal Years 2019-20 through 2024-25**



Note: The statewide average does not include the average turnaround time for June 2025.

Source: Commission staff analysis of data from Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, June 16, 2025; and email from Susan Sims, administrative assistant, Forensic Services Division, Tennessee Bureau of Investigation, July 10, 2025.

¹⁰⁸ Tennessee Bureau of Investigation 2025; Tennessee Comptroller of the Treasury 2024; and interviews with Jenifer Hall, crime laboratory regional supervisor, Nashville, Tennessee Bureau of Investigation, October 28, 2024, and Adam Gray, crime laboratory regional supervisor, Knoxville, Tennessee Bureau of Investigation, November 15, 2024.

¹⁰⁹ Tennessee Bureau of Investigation 2024a; Tennessee Comptroller of the Treasury 2024; and interview with Donna Nelson, Jackson crime laboratory regional administrator, Tennessee Bureau of Investigation, November 1, 2024.

¹¹⁰ Tennessee Bureau of Investigation 2024a; Tennessee Bureau of Investigation 2025; and interview with Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, January 24, 2025.

¹¹¹ Commission staff analysis of data from Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, June 15, 2025. Public Chapter 362, Acts of 2021, is codified at Tennessee Code Annotated, Sections 38-6-128 and 39-16-519, and it included several provisions to increase transparency, which TBI has also implemented, including its SAMSTrack system, a statewide system that allows for sexual assault survivors to anonymously track the location and status of their kit from the point of collection through forensic testing. See Tennessee Bureau of Investigation 2021.

While outsourcing is commonly used in crime labs to ease backlogs, TBI staff say it is not considered a long-term, sustainable solution—it has limitations and is not always faster than in-house testing.

TBI's effort to reduce turnaround times for SAKs has included outsourcing of some testing. TBI received approximately \$2.15 million from the state's Office of Criminal Justice Programs in fiscal year 2023-24 to outsource testing to accredited private labs.¹¹² This funding paid for the processing of 3,178 SAKs, resulting in 64 uploads to the Combined DNA Index System (CODIS) and contributed to the resolution of 18 sexual assault investigations.¹¹³

While outsourcing is commonly used in crime labs and can help reduce backlogs, TBI does not consider it to be a long-term, sustainable solution.¹¹⁴ Outsourcing has limitations, and it is not always faster. Private labs don't accept all types of evidence—they primarily test toxicology and SAKs, not other evidence like clothing or firearms. When TBI receives the results from the private lab, crime lab staff must review them, and for DNA tests, must upload results into CODIS because private labs cannot access it—the FBI only allows access to government labs.¹¹⁵ The turnaround time for outsourced SAKs can be 1.5 times longer than TBI's in-house processing of SAKs with additional evidence partly because of the review TBI must do when it receives the results of the outsourced tests.¹¹⁶ Further, if court testimony is required, the analyst from the private lab who performed the testing is required to travel to the court and testify.¹¹⁷

Turnaround times for other disciplines have worsened. For example, turnaround times for violent forensic biology evidence¹¹⁸ increased by 54.1%—from 24.6 weeks in January 2022 to 37.9 weeks in January 2025—and firearms analysis, which increased by 61.1%—from 41.9 weeks in January 2022 to 67.5 weeks in January 2025.¹¹⁹ See figures 5 and 6. The Comptroller's 2024 performance audit of TBI found that "management faces additional backlog challenges within the Forensic Services Division's Firearms and Toolmark Identification Unit and Forensic Biology Unit"¹²⁰ despite recent hiring, indicating that additional investments in capacity remain essential to meet the state's growing forensic needs.

¹¹² Commission staff analysis of data from Jeremiah Morton, assistant director, Office of Criminal Justice Programs, Department of Finance and Administration, September 5, 2024; and Tennessee Office of Criminal Justice Programs "Annual Report FY 2023."

¹¹³ Tennessee Office of Criminal Justice Programs "Annual Report FY 2023."

¹¹⁴ Tennessee Bureau of Investigation 2024a; and Brooks 2023.

¹¹⁵ Interview with Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, July 31, 2024, and email received April 10, 2025.

¹¹⁶ Tennessee Bureau of Investigation 2024a.

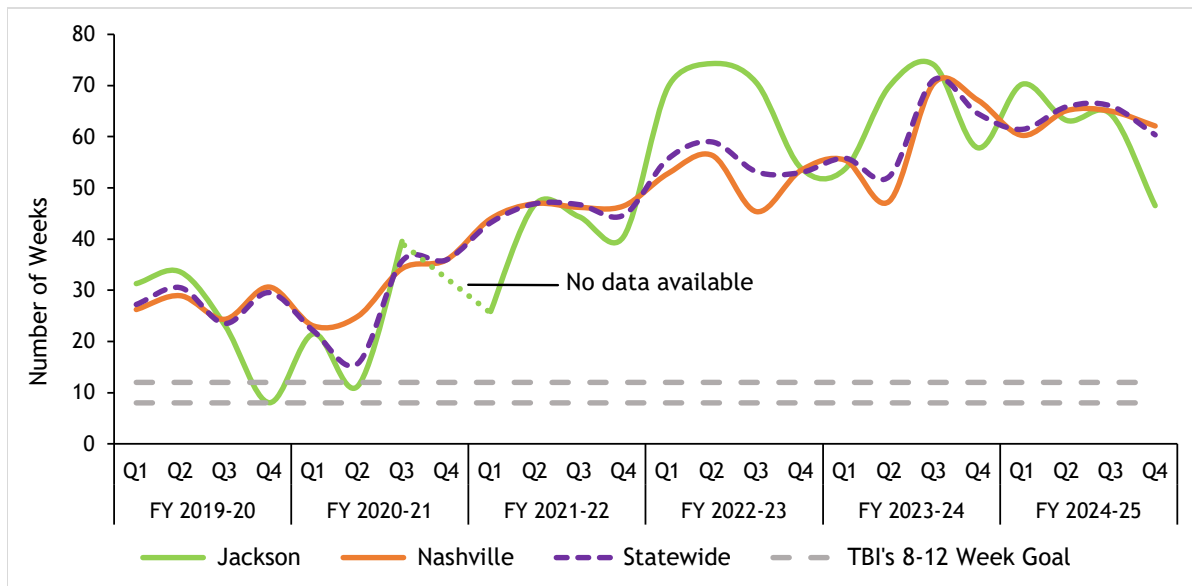
¹¹⁷ Interview with Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, July 31, 2024, and email received April 10, 2025.

¹¹⁸ Violent forensic biology requests include homicides and assaults, and non-violent forensic biology requests include burglaries and other property crimes. While sexual assaults are considered violent crimes, TBI tracks them in their own category of forensic testing requests called sex offense.

¹¹⁹ Commission staff analysis of data from Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, June 15, 2025.

¹²⁰ Tennessee Comptroller of the Treasury 2024.

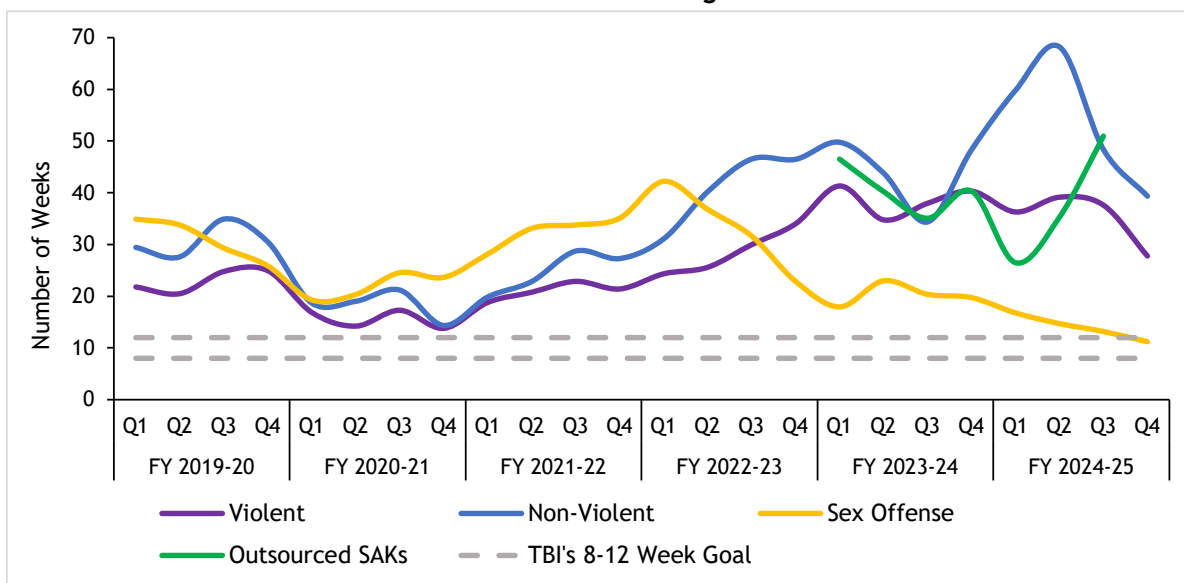
**Figure 5. TBI Average Turnaround Times for Firearms Analysis, by Crime Lab Location
Fiscal Years 2019-20 through 2024-25**



Note: TBI's Knoxville lab currently does not have a firearms unit. The statewide average does not include the average turnaround time for June 2025.

Source: Commission staff analysis of data from Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, June 16, 2025; and email from Susan Sims, administrative assistant, Forensic Services Division, Tennessee Bureau of Investigation, July 10, 2025.

**Figure 6. TBI Statewide Average Turnaround Times for Forensic Biology Requests, Statewide
Fiscal Years 2019-20 through 2024-25**



Source: Commission staff analysis of data from Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, June 16, 2025; and email from Susan Sims, administrative assistant, Forensic Services Division, Tennessee Bureau of Investigation, July 10, 2025.

TBI's 2024 real estate strategic plan outlines future expansion goals for the next 15 to 20 years.

Without addressing the constraint of limited lab space, the state's efforts to further improve forensic evidence processing and public safety will be hindered.

The Comptroller's 2024 performance audit identified workspace expansion as the next significant challenge in the Forensic Services Division because adding more staff means needing more space to accommodate them.¹²¹ To address this issue, TBI has been working on expanding its facilities. The Nashville and Knoxville labs recently completed renovations, reconfiguring existing space to provide more workspace for new hires.¹²² But these renovations did not increase the overall square footage of the facilities. According to TBI in January 2025, the Nashville lab may be able to accommodate one additional forensic biology scientist, while the Jackson and Knoxville labs are currently at capacity.¹²³

TBI is currently working with state agencies to develop long-term plans related to facility space needs.¹²⁴ In March 2024, TBI completed a real estate strategic plan that outlines future expansion goals for the next 15 to 20 years, including the renovation and expansion of the Jackson and Nashville labs, plans for a new, larger lab in Knoxville to replace the current one, and the establishment of a smaller lab in Chattanooga.¹²⁵ The total cost of completing these projects can't be determined because TBI plans to conduct further analysis of the need for additional space at the Nashville lab, and it plans to use a lease with a build-to-suit option in Chattanooga. Based on the real estate plan and information provided from other sources, however, the planned Jackson and Knoxville lab projects combined are estimated to cost between \$44 million and \$66 million.¹²⁶

¹²¹ Tennessee Comptroller of the Treasury 2024.

¹²² Tennessee Comptroller of the Treasury 2024; and interviews with Jenifer Hall, crime laboratory regional supervisor, Nashville, Tennessee Bureau of Investigation, October 28, 2024, and Adam Gray, crime laboratory regional supervisor, Knoxville, Tennessee Bureau of Investigation, November 15, 2024.

¹²³ Tennessee Bureau of Investigation 2025.

¹²⁴ Tennessee Bureau of Investigation 2024a; and interview with Phillip Murphy, director, Real Estate Strategy and Finance, Tennessee Department of General Services, April 7, 2025.

¹²⁵ Interview with Phillip Murphy, director, Real Estate Strategy and Finance, Tennessee Department of General Services, April 7, 2025.

¹²⁶ According to Department of General Services staff, the cost for new crime lab construction would likely range between \$900 per square foot and \$1,500 per square foot. The lower \$900 per square foot estimate is also in line with estimates used in the *Memphis Crime Lab Feasibility Study*. Tennessee Bureau of Investigation 2024a; McCutcheon et al. 2024; email from Phillip Murphy, director, Real Estate Strategy and Finance, Tennessee Department of General Services, June 23 and August 21, 2025, and phone conversation with Peter L. Heimbach, Jr., director of special projects, Real Estate Asset Management, Tennessee Department of General Services, September 11, 2025.

- Jackson: The TBI real estate strategic plan includes a cost of \$10 million for the Jackson lab project. Funding for this project has been appropriated by the General Assembly.¹²⁷ See table 4.
- Knoxville: The real estate plan does not provide an estimated cost for the Knoxville lab, but it provides the total cost of the new Knoxville regional headquarters—which includes the new lab—and it provides the estimated square footage of the new lab space.¹²⁸ Commission staff used two different cost per square foot figures to estimate a cost range for the Knoxville lab: At \$900 per square foot—which corresponds with construction cost estimates provided by both the Department of General Services and the *Memphis Crime Lab Feasibility Study*—the cost for the new lab would be approximately \$34 million. In contrast, at \$1,500 per square foot—the higher end of the cost range for new lab construction provided by the Department of General Services—the cost would be approximately \$56 million. Funding for this project has not been appropriated.¹²⁹ See table 4.
- Chattanooga: TBI is in the process of procuring a lease with a build-to-suit option and has not yet estimated the cost.¹³⁰ Funding for this project has not been appropriated.¹³¹
- Nashville: There are no cost estimates for the Nashville lab—the real estate plan only describes options for expansion at the lab providing square foot estimates. When the planned projects in Jackson, Knoxville, and Chattanooga are complete, TBI will conduct further analysis of needs at the Nashville location and at that time determine which option would be best. Funding for this project has not been appropriated.¹³²

Appendix F shows examples of estimated costs for construction, expansion, and renovation of completed and planned crime labs. Figure 7 discusses how TBI crime labs are funded.

While the cost of completing all lab renovation and expansion projects outlined in TBI's real estate strategic plan can't be determined, the planned Jackson and Knoxville lab projects combined could cost between \$44 million and \$66 million.

¹²⁷ Tennessee Bureau of Investigations 2024a; and emails from Phillip Murphy, director, Real Estate Strategy and Finance, Tennessee Department of General Services, and Brian Senecal, fiscal director, Tennessee Bureau of Investigation, July 30, 2025.

¹²⁸ The TBI real estate strategic plan estimates the lab space in the Knoxville regional headquarters to be 37,378 square feet.

¹²⁹ Emails from Phillip Murphy, director, Real Estate Strategy and Finance, Tennessee Department of General Services, and Brian Senecal, fiscal director, Tennessee Bureau of Investigation, July 30, 2025, and phone conversation with Peter L. Heimbach, Jr., director of special projects, Real Estate Asset Management, Tennessee Department of General Services, September 11, 2025.

¹³⁰ Tennessee Bureau of Investigation 2024a; and email from Phillip Murphy, director, Real Estate Strategy and Finance, Tennessee Department of General Services, June 23, 2025.

¹³¹ Emails from Phillip Murphy, director, Real Estate Strategy and Finance, Tennessee Department of General Services, and Brian Senecal, fiscal director, Tennessee Bureau of Investigation, July 30, 2025.

¹³² Emails from Phillip Murphy, director, Real Estate Strategy and Finance, Tennessee Department of General Services, April 7 and July 30, 2025; and Brian Senecal, fiscal director, Tennessee Bureau of Investigation, July 30, 2025.

Table 4. Cost Estimates of Planned TBI Crime Lab Capacity Expansion Projects

Crime Lab	Estimated Square Feet	Estimated Cost	Notes
West Tennessee			
TBI Jackson Lab	Addition: 3,500 sq.ft. Renovation: 6,000 sq.ft. Future needs: 2,227 sq. ft.	\$ 10,000,000	
East Tennessee			
TBI Knoxville Lab*	New Construction: 37,378 sq.ft. - at \$900 per sq. ft.	33,640,200	- \$900 per sq. ft. estimate is based on estimates for crime lab construction cited by both the Department of General Services and the <i>Memphis Crime Lab Feasibility Study</i> in 2024.
	New Construction: 37,378 sq. ft. - at \$1,500 per sq. ft.	56,067,000	- \$1,500 per sq. ft. estimate for new lab construction was provided by the Department of General Services.
TBI Chattanooga Lab	Build-to-Suit Lease: 49,000 sq. ft.	No estimate available	- TBI does not have an estimate, and the cost per square foot estimates apply to new construction, not build-to-suit leases.
Total	with \$900 per sq. ft. est. for Knoxville	\$ 43,640,200	
	with \$1,500 per sq. ft. est. for Knoxville	\$ 66,067,000	

Note: There are no cost estimates for the Nashville lab. The real estate plan describes multiple options for expansion at the lab providing square foot estimates but not costs. When the other planned projects are complete, TBI will conduct further analysis of needs at the Nashville location and at that time determine which option would be best.

* The Knoxville lab is part of the planned new regional headquarters. TBI estimates the entire headquarters project will total 75,818 square feet, of which approximately 37,378 square feet will be for the crime lab based on TACIR staff analysis of the TBI real estate plan. The entire project is estimated to cost up to \$100 million total, according to TBI's real estate plan.

Source: McCutcheon 2024; Tennessee Bureau of Investigation 2024a; phone conversation with Peter L. Heimbach, Jr., director of special projects, Real Estate Asset Management, Tennessee Department of General Services, September 11, 2025; and emails from Phillip Murphy, director, Real Estate Strategy and Finance, Tennessee Department of General Services, April 7 and August 21, 2025, and Peter L. Heimbach, Jr., director of special projects, Real Estate Asset Management, Tennessee Department of General Services, September 11, 2025.

Figure 7. Funding for Crime Labs

State crime labs in the US mostly rely on state appropriations and some grant funding. TBI's labs are no exception. In fiscal year 2024-25, 85% of the TBI forensic division's \$37.8 million budget was funded by an annual state appropriation; the remainder mostly came from state grants and federal funds.* Very few publicly funded crime labs in the US charge law enforcement agencies fees for testing evidence, and testing fees charged to defendants in criminal cases are not reliable or consistent funding streams. Further, charging fees for testing evidence in criminal cases raises concerns about due process and fair access to justice.

*\$9,108 (.0002%) of the total budget is DNA processing fees billed to community corrections.

Source: Garrett 2020; Wickenheiser 2021a; and emails from Brian Senecal, fiscal director, Tennessee Bureau of Investigation, January 24, July 22, August 5, and August 8, 2025.

Commission staff analyzed challenges with forensic demand and turnaround times, population growth, and crime rates in each grand division, and its findings align with TBI's real estate strategic plan. TBI needs more physical lab space to further improve forensic evidence processing—expanding existing lab space and investing in smaller, specialized labs are options that could be more cost- and time-effective than building an additional full-service lab. The real estate plan also considers space needs of the Technology and Information Division, including the CDEU that analyzes digital evidence, although the plan does not specifically discuss digital forensics needs. The CDEU expects that its turnaround times for digital forensics will decrease once new staff are hired and trained for the five positions approved by the General Assembly over the last four years. As described above, four of these positions have been filled, and two are still undergoing training. TBI will continue to assess staffing and space needs for its digital forensics unit going forward, and needs will likely depend to a certain extent on whether specific goals are set for turnaround times for digital forensics. TBI has not set internal goals for the CDEU at this time, and staff cautioned that goals for turnaround times for digital forensics need to consider the processes involved in accessing and processing digital evidence that are different from analyzing evidence in the crime labs.¹³³

West Tennessee

TBI's Jackson lab, completed in 2021, has already outgrown its current space. From January 2022 to January 2025, the turnaround time for firearms analysis increased 110.2% at the Jackson lab,¹³⁴ and from 2023 to 2024, the lab experienced the highest percentage increase in evidence

¹³³ Emails from Chet Mason, special agent in charge, Cybercrime & Digital Evidence Unit, Tennessee Bureau of Investigation, May 28, July 8, and August 21, 2025.

¹³⁴ Commission staff analysis of data from Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, June 16, 2025.

TBI's Jackson lab, completed in 2021, has already outgrown its current space, and its forensic biology space is being renovated and expanded; Shelby County has committed \$1.5 million toward developing its own facility for rapid DNA, digital forensics, and firearms testing.

requests among the three TBI labs.¹³⁵ The lab is currently in the process of renovating and expanding its forensic biology space by 3,577 square feet to accommodate three new employees and equipment.¹³⁶ Funding has been appropriated, and the estimated cost is \$10 million with completion expected in 2026.¹³⁷

Over the last four years, Shelby County has submitted the most requests for CODIS database entries, forensic biology, and microanalysis, and since 2022, has led in firearm analysis requests.¹³⁸ Shelby County accounts for the highest percentage of testing requests at the Jackson lab. In 2024, 25.6% of West Tennessee cases came from Shelby County while the remaining 74.4% came from other counties in West Tennessee.¹³⁹ Overall, 35.6% of cases submitted to the lab in 2024 would have been closer to the old Memphis lab location, while the remaining 64.4% were closer to the Jackson lab location.¹⁴⁰ To reduce travel time for law enforcement agencies, when the Memphis lab closed, TBI began receiving evidence at the Memphis TBI field office and transporting it to the Jackson lab.¹⁴¹ This option is available to all Shelby County law enforcement agencies—although they were not all aware that they could use this option—and the office only receives evidence by appointment on Monday mornings during a two-hour period.¹⁴² According to Memphis Police Department representatives, because this isn't always enough time for agencies to drop off evidence that needs testing, in these instances, agencies have to transport the evidence themselves. This could require them to get travel approval from their agency and go through the chain of command—processes that can be time consuming and ultimately reduces their available time to spend on other tasks.¹⁴³

The lengthy turnaround times that the Jackson lab continues to have for some testing disciplines as well as the high volume of testing requests it receives from Shelby County in particular raise the possibility that a new

¹³⁵ Commission staff analysis of data from Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, March 20, 2025.

¹³⁶ Tennessee Bureau of Investigations 2024a; and Tennessee Bureau of Investigation 2025.

¹³⁷ Interview with Phillip Murphy, director, Real Estate Strategy and Finance, Tennessee Department of General Services, April 7, 2025; and Tennessee Bureau of Investigation 2024a.

¹³⁸ Commission staff analysis of data from Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, April 3, 2025.

¹³⁹ Commission staff analysis of data from Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, March 20, 2025.

¹⁴⁰ Ibid.

¹⁴¹ Presentation to Memphis Shelby County Crime Commission Board by Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, April 24, 2024; and testimony at commission meeting by Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, December 19, 2024.

¹⁴² Email from Donna Nelson, crime laboratory regional administrator, Jackson, Tennessee Bureau of Investigation, January 23, 2025.

¹⁴³ Interviews with Lindsey Flores, criminalist, Memphis Police Department, October 14, 2024, and James McCutcheon, associate professor, Department of Criminology and Criminal Justice, University of Memphis, and Sharonda Hampton, assistant chief, Administrative Services, Memphis Police Department, February 21, 2025.

lab in Memphis might be warranted. In fact, in June 2025, the Shelby County Board of Commissioners approved \$1.5 million—of the \$5.5 million requested by the Shelby County District Attorney—in recurring funds to begin working on a facility that will focus on rapid DNA, cell phone forensics, and ballistics for the county.¹⁴⁴

Crime labs are expensive and can take years to build.

The funding and construction of new crime labs can take years and requires significant financial investment. Beyond the high cost of construction, operational expenses including salaries, maintenance, equipment, and accreditation costs, also create significant long-term financial commitments for the entity running the lab. For example, the *Memphis Crime Lab Feasibility Study* estimated that a new full-service crime lab with approximately 30,000 to 60,000 square feet of space would cost between \$40 million and \$50 million for the initial cost—not including initial equipment purchase, operating costs, the cost of searching for personnel, training, utilities, and other unexpected expenditures.¹⁴⁵ MNPD's crime lab—35,000 square feet and completed in 2014—cost \$30 million to build, plus another \$4 million for instrumentation, equipment, and renovations.¹⁴⁶ Further, according to MNPD, constructing a new full-service lab typically takes five to ten years, and from conception to opening, the TBI Jackson lab took approximately six years.¹⁴⁷ Virginia's planned new state crime lab, which will be approximately 288,000 square feet, has a total budget of \$235.7 million.¹⁴⁸ There is no federal funding available for building a crime lab, but there are federal grants for lab instruments.¹⁴⁹

There are tradeoffs that come with operating a local crime lab, and MNPD's lab provides an example in Tennessee. MNPD leadership said the ability to work with one police department, district attorney, and court system enables streamlined communication about evidence submission and acceptance criteria, as well as allows investigators to establish relationships with the district attorney's office.¹⁵⁰ While it can be a challenge for a local lab to offer the same range of testing services as a state lab because some types of analysis are requested too infrequently to justify the resources needed to provide them, local labs like MNPD are also able to more easily

Building a new, full-service crime lab can take five to ten years and cost tens of millions of dollars—Metro Nashville Police Department's lab, completed in 2014, cost \$34 million, and a Memphis study estimated \$40 to \$50 million in costs for a full-service lab, not including equipment.

¹⁴⁴ Staunton 2025.

¹⁴⁵ McCutcheon et al. 2024.

¹⁴⁶ Testimony at commission meeting by Amanda Sweet, director, Forensic Services Division, Metropolitan Nashville Police Department, December 19, 2024.

¹⁴⁷ Interviews with Amanda Sweet, director, Heather Watson, crime lab business manager, and Vanessa Martinucci, crime lab director, Forensic Services Division, Metropolitan Nashville Police Department, July 15, 2024, and Donna Nelson, crime lab regional administrator, Jackson, Tennessee Bureau of Investigation, November 1, 2024.

¹⁴⁸ Email from Linda Jackson, director, Virginia Department of Forensic Science, January 9, 2025.

¹⁴⁹ Interview with Amanda Sweet, director, Heather Watson, crime lab business manager, and Vanessa Martinucci, crime lab director, Forensic Services Division, Metropolitan Nashville Police Department, July 15, 2024.

¹⁵⁰ Ibid.

In July 2025, TBI and the city of Memphis signed an agreement to dedicate two forensic scientists at the Jackson lab—one in DNA and one in firearms—exclusively to Memphis cases, with Memphis covering the cost.

prioritize cases when needed. Funding the salaries of staff members and maintaining an operating budget can also place strain on local governments as operating costs increase.¹⁵¹

Another approach is an agreement between agencies to embed an analyst in a lab to focus on cases from a specific agency or jurisdiction.

Given these costs and timelines, to better serve Memphis and the rest of West Tennessee, another approach is for TBI to enter into a formal agreement or memorandum of understanding (MOU) with the City of Memphis to embed an analyst at the Jackson lab to prioritize the city’s cases. Because law enforcement agencies in Shelby County submit the largest volume of firearms requests, an analyst could be dedicated to Memphis or Shelby County firearms cases.¹⁵² This approach is recommended in the *Memphis Crime Lab Feasibility Study* because it allows for more timely evidence processing while using existing infrastructure.¹⁵³ In July 2025, TBI and Memphis signed an agreement to expand forensic support for criminal investigations by assigning two forensic scientists at the Jackson lab, one in DNA and one in firearms, to work solely on Memphis cases. Memphis will pay for those new scientists.¹⁵⁴ TBI plans to hire two additional scientists at the lab to backfill those positions that are now dedicated to Memphis.¹⁵⁵ Table 5 shows the cost of the agreement compared to constructing a new lab in Memphis.

Table 5. Potential Cost of Expanding Crime Lab Capacity for Memphis

	Cost
TBI Jackson Lab Memphis Police Department Agreement	\$320,000 per year
Memphis Lab - New Construction	\$40 million to \$50 million estimated

Note: The cost of the agreement between TBI and Memphis covers the scientists’ salaries and benefits; the estimated cost of the Memphis lab does not include the initial equipment purchase.

Source: McCutcheon 2024; and email from Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, August 8, 2025.

¹⁵¹ Testimony at commission meeting by Amanda Sweet, director, Forensic Services Division, Metropolitan Nashville Police Department, December 19, 2024.

¹⁵² McCutcheon et al. 2024; and commission staff analysis of data from Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, April 3, 2025.

¹⁵³ McCutcheon et al. 2024; Crouse et al. 2020; and interview with Amanda Sweet, director, Heather Watson, crime lab business manager, and Vanessa Martinucci, crime lab director, Forensic Services Division, Metropolitan Nashville Police Department, July 15, 2024.

¹⁵⁴ City of Memphis 2025.

¹⁵⁵ Interview with Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, August 7, 2025, and email from Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, August 8, 2025.

There are examples from other states of similar agreements between crime labs and agencies. In 2023, the city of New Orleans and the Louisiana state crime lab entered into an agreement in which the crime lab hires and trains four DNA analysts to focus on New Orleans cases, and the city will reimburse the crime lab.¹⁵⁶ The partnership aims to process the city's sexual assault and DNA testing kit backlog. In Illinois, the Illinois State Police Forensic Services Command prioritizes Chicago because of its high crime rate. The state dedicates teams to handle cases from the city, reallocate resources, and hire additional staff to address their backlogs.¹⁵⁷ California, Florida, Maryland, Michigan, New York, Texas, and Virginia have similar arrangements for their major metropolitan areas.¹⁵⁸

Middle Tennessee

TBI's Nashville lab offers all forensic services and receives the most forensic evidence requests of any of TBI's three labs.¹⁵⁹ It has a heavier caseload in forensic chemistry and both drug and alcohol toxicology than most crime labs across the country, according to Project FORESIGHT's 2024 benchmark data.¹⁶⁰ Several counties, like Rutherford and Wilson, have high volumes of requests for toxicology and forensic chemistry testing, which are critical to managing drug-related evidence and DUI cases in Middle Tennessee's growing population centers.¹⁶¹ From 2020 to 2023, Rutherford County submitted the most blood alcohol and drug toxicology. Montgomery County has led in latent print requests over the past four years and had the most firearms analysis requests in 2020 and 2021. Since 2021, Wilson County has had the most forensic chemistry requests. See appendix D. Turnaround times at this facility are among the highest statewide in forensic biology, and from January 2022 to January 2025, the turnaround time for firearms analysis increased 49.9%.¹⁶² In 2023 and 2024, TBI renovated the Nashville lab to create additional desk space for 10 new employees in the Forensic Biology, Forensic Chemistry, and

TBI's Nashville lab receives the most evidence requests of any of TBI's labs, and it has a heavy caseload in toxicology and forensic chemistry, with Rutherford and Wilson counties driving much of the demand.

¹⁵⁶ City of New Orleans and Louisiana Department of Public Safety and Corrections 2023; and City of New Orleans 2023.

¹⁵⁷ McCutcheon et al. 2024.

¹⁵⁸ McCutcheon et al. 2024; and Muhlhausen 2019.

¹⁵⁹ Commission staff analysis of data from Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, March 20, 2025.

¹⁶⁰ Speaker 2025; commission staff analysis of data from Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, March 20, 2025; and commission staff analysis of Tennessee Bureau of Investigation "Tennessee Information Based Reporting System," Crime Rates by Jurisdiction, March 21, 2025.

¹⁶¹ University of Tennessee Boyd Center for Business and Economic Research 2024; and commission staff analysis of data from Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, April 3, 2025.

¹⁶² Commission staff analysis of data from Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, June 16, 2025; and email from Susan Sims, administrative assistant, Forensic Services Division, Tennessee Bureau of Investigation, July 10, 2025.

Knoxville's lab faces high demand in forensic chemistry and toxicology—TBI's real estate strategic plan outlines a new Knoxville regional headquarters and a leased Chattanooga lab to better serve East Tennessee.

Firearms and Toolmark Identification Units.¹⁶³ But this renovation did not increase the overall square footage, and the workstations were not fully equipped.¹⁶⁴ The TBI real estate strategic plan includes expansion plans for the Nashville lab in the future after the planned expansions of TBI's other labs and another assessment of needs are complete.¹⁶⁵

East Tennessee

TBI's Knoxville lab has reached the physical limit of the land parcel on which it is located, so TBI cannot add square footage to the current facility, despite reconfiguring its office spaces in 2023 and 2024 to accommodate 11 additional employees.¹⁶⁶ In 2024, Knox County submitted the most requests for drug toxicology.¹⁶⁷ Knoxville's Forensic Chemistry Unit has the most forensic chemistry requests per capita in the state, and the lab doesn't have an in-house firearms unit despite high demand from regional stakeholders, contributing to longer turnaround times and adding strain on the firearms unit of TBI's other labs.¹⁶⁸ To address these needs, the TBI real estate strategic plan includes plans to build an estimated 37,378 square-foot lab that will be part of a 75,818 square-foot regional headquarters in Knoxville to replace the current one, which will add a firearms unit to serve the East Tennessee region.¹⁶⁹ The new headquarters—including the lab—is estimated to cost up to \$100 million; funding for the facility has not yet been appropriated.¹⁷⁰ Lab leadership say having their own firearms unit would help with turnaround times.¹⁷¹

TBI's real estate strategic plan also proposes building lab space in Chattanooga at the agency's planned new regional headquarters to address the area's need for forensic chemistry and toxicology testing, with future capabilities to house forensic biology testing.¹⁷² Hamilton and Knox counties are among the highest requestors for toxicology in the state,

¹⁶³ Tennessee Bureau of Investigation 2025; Tennessee Comptroller of the Treasury 2024; and interview with Jenifer Hall, crime laboratory regional supervisor, Nashville, Tennessee Bureau of Investigation, October 28, 2024.

¹⁶⁴ Tennessee Bureau of Investigation 2025; Tennessee Comptroller of the Treasury 2024; and interview with Jenifer Hall, crime laboratory regional supervisor, Nashville, Tennessee Bureau of Investigation, October 28, 2024.

¹⁶⁵ Tennessee Bureau of Investigation 2024a.

¹⁶⁶ Tennessee Bureau of Investigation 2025; Tennessee Comptroller of the Treasury 2024; and interview with Adam Gray, crime laboratory regional supervisor, Knoxville, Tennessee Bureau of Investigation, November 15, 2024.

¹⁶⁷ Commission staff analysis of data from Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, April 3, 2025.

¹⁶⁸ Tennessee Comptroller of the Treasury 2024; and interview with Adam Gray, crime laboratory regional supervisor, Knoxville, Tennessee Bureau of Investigation, November 15, 2024.

¹⁶⁹ Tennessee Bureau of Investigation 2024a.

¹⁷⁰ Tennessee Bureau of Investigation 2024a; and email from Phillip Murphy, director, Real Estate Strategy and Finance, Tennessee Department of General Services, July 30, 2025.

¹⁷¹ Interview with Adam Gray, crime laboratory regional supervisor, Knoxville, Tennessee Bureau of Investigation, November 15, 2024.

¹⁷² Tennessee Bureau of Investigation 2024a.

with Knox County having the most toxicology requests in 2024.¹⁷³ The added capacity in Chattanooga would relieve pressure on the Knoxville lab, improve regional access, and reduce the need to transfer evidence across the state. The new space will be leased, and the cost is yet to be determined.¹⁷⁴ Appendix G provides a summary of TBI's proposed expansion of its forensic services division lab space.

In addition to expanding capacity, other efforts could help reduce evidence testing delays.

Some alternatives suggested by the US Department of Justice for reducing turnaround times include using external process improvement methods; allowing rapid DNA implementation at law enforcement booking stations; and supporting partnerships, resource sharing, and training. There are examples of successful implementation of these alternatives from Tennessee and other states. See appendix H.

Labs in other states have successfully used process improvement tools to reduce waste and streamline performance.

Crime labs face a continuous demand for analyses and high-quality results while operating with limited resources. As a result, they often look for ways to operate more efficiently.¹⁷⁵ There is usually room for improvement, but knowing where to focus and how to improve can be challenging and takes time and effort. Some crime labs are using process improvement exercises and methodologies to find areas to improve and develop a plan to implement the changes. One widely used process improvement methodology is Lean Six Sigma (LSS), a certification program that is used by businesses to improve processes and efficiency to do more with less. The program helps identify bottlenecks or choke points in operations and then determine how to address them using data-driven decision making rather than intuition.¹⁷⁶ It can be applied to different disciplines and areas of work, like technical and clerical processes.¹⁷⁷ The National Institute for Justice (NIJ) recommends that labs conduct an internal review and examination of their processes to find ways to streamline operations and says that many have used LSS as an effective tool.¹⁷⁸ In a 2019 Report to Congress on the needs of forensic laboratories, the NIJ recommended

Other strategies like external process improvement methods, implementing rapid DNA at booking stations, and regional partnerships can also help reduce turnaround times.

¹⁷³ Commission staff analysis of data from Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, April 3, 2025.

¹⁷⁴ Tennessee Bureau of Investigation 2024a; and email from Brian Senecal, fiscal director, Tennessee Bureau of Investigation, July 30, 2025.

¹⁷⁵ Speaker 2024a.

¹⁷⁶ Speaker 2017; and Rojas Alfaro, Bagnarello Madrigal, and Chacon Hernandez 2020.

¹⁷⁷ Richard and Kupferschmid 2011.

¹⁷⁸ La Vigne 2022.

Labs in other states have used process improvement tools, such as Lean Six Sigma, to reduce backlogs and turnaround times and acknowledge that it takes commitment and resources to implement.

LSS to help crime labs reduce waste, optimize resources, and work more efficiently leading to reduced turnaround times and backlogs.¹⁷⁹

Several studies have found LSS can be effective in crime labs. In 2011, one study examined the Louisiana State Police Crime Laboratory's effort to use LSS to find ways to reduce backlogs and turnaround times for DNA requests. The lab used an NIJ efficiency improvement grant to hire consultants to conduct two LSS projects along with purchasing additional equipment and tools. The combined efforts resulted in a 134% completion rate for DNA requests in 2010. Further, operations, processes, and work culture improved, leading to increased efficiency and efficacy, and because of the success of the program, the state administered additional LSS projects in other agencies.¹⁸⁰ Other studies also found that crime labs that committed to the LSS process increased their capacity and reduced turnaround times.¹⁸¹

In addition to the Louisiana state crime lab, representatives from several other state and local government labs have used LSS and highly recommend it, including Arkansas, Florida, North Carolina, Texas, and Wisconsin.¹⁸² Crime lab representatives discussed similar results—increasing efficiency and reducing case backlogs and turnaround times—and agreed it was helpful and valuable. Because the labs can continue to use the practices over time, the value is ongoing. For example, the North Carolina Department of Justice State Crime Laboratory eliminated a backlog of 20,000 DNA samples for offenders in less than 12 months and reduced the turnaround time to two weeks. Every few years, the lab reapplies the evaluation and reviews their processes to find additional places for improvement.¹⁸³

While LSS can be effective, it takes commitment and resources to implement. Representatives of crime labs that have had successful results acknowledge that it requires dedication and, during the evaluation and review process, takes people away from their critical work analyzing evidence.¹⁸⁴ This could be especially difficult for crime labs that are already challenged by staffing shortages and delays. To be successful, the leadership of the organization needs to demonstrate commitment to the process and to making changes, and there needs to be buy-in within

¹⁷⁹ Muhlhausen 2019.

¹⁸⁰ Richard and Kupferschmid 2011.

¹⁸¹ Rojas Alfaro, Bagnarello Madrigal, and Chacon Hernandez 2020; and Speaker 2017.

¹⁸² Sikorsky 2019; and interviews with Sammy Williams, deputy director, administrative operations manager, Arkansas State Crime Laboratory, November 13, 2024, Amanda Thompson, director, special agent, North Carolina Department of Justice, December 6, 2024, Peter Stout, chief executive officer/president, Houston Forensic Science Center, December 9, 2024, and Nicole Roehm, administrator, and Jennifer Naugle, deputy administrator, Division of Forensic Sciences, Wisconsin Department of Justice, December 9, 2024.

¹⁸³ Interview with Amanda Thompson, director, special agent, North Carolina Department of Justice, December 6, 2024.

¹⁸⁴ Interview with Nicole Roehm, administrator, and Jennifer Naugle, deputy administrator, Division of Forensic Sciences, Wisconsin Department of Justice, December 9, 2024.

the organization.¹⁸⁵ There is also a cost—typically organizations hire a consulting firm to facilitate the program and complete the certification.¹⁸⁶ Leadership at the Wake County lab in North Carolina view LSS practices as common sense and determined they could improve efficiency without investing in the program. Instead, the crime lab's leadership focuses on fostering a culture of continuous improvement—characterizing their efforts to improve efficiency as continual situational assessment, awareness, and commitment to improvement despite ever-present obstacles. One example of their success is a reduction of their firearms case backlog since 2005 from 4,500 to 100 cases.¹⁸⁷

In Tennessee, representatives of the TBI and MNPB crime labs say they have considered LSS but have not implemented it. The TBI forensic services director acknowledges its benefits for commercial labs, but because of the variation in evidence, cases, and processes in forensics labs, does not see it as effective for TBI labs. He said they continually review processes and make adjustments to improve them over time.¹⁸⁸ MNPB crime lab leadership said that its forensics biology (DNA) unit participated in the LSS program while the lab was preparing to open, but it would be more effective to streamline and improve operations after a lab opens and people and processes are already in place—it is difficult to streamline processes that are still being developed.¹⁸⁹ The MNPB lab has not further pursued LSS, but it constantly works on streamlining processes using other tools like their management system and data software.

Implementing rapid DNA technology could help reduce caseloads at existing labs and improve investigative processes statewide.

Rapid DNA is the fully automated process of developing a DNA profile from a cheek swab in as little as one to two hours, without the need of a traditional laboratory or human interpretation.¹⁹⁰ Originally designed for use in booking stations, rapid DNA technology enables law enforcement to promptly identify arrestees and search the national CODIS database. This technology reduces DNA sample processing times, helps prevent errors like missed sample collection, and can generate immediate investigative

Rapid DNA generates a CODIS-eligible profile from a cheek swab in under two hours, providing quick investigative leads and reducing crime lab workloads.

¹⁸⁵ Sikorsky 2019; and Richard and Kupferschmid 2011.

¹⁸⁶ Interviews with Nicole Roehm, administrator, and Jennifer Naugle, deputy administrator, Division of Forensic Sciences, Wisconsin Department of Justice, December 9, 2024, Amanda Thompson, director, special agent, North Carolina Department of Justice, December 6, 2024, and Sammy Williams, deputy director, administrative operations manager, Arkansas State Crime Laboratory, November 13, 2024.

¹⁸⁷ Interview with Sam Pennica, director, and Chris Stark, assistant director, Wake County, North Carolina Bureau of Forensic Services, November 7, 2024.

¹⁸⁸ Interview with Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, January 24, 2025.

¹⁸⁹ Email from Vanessa Martinucci, crime laboratory director, Forensic Services Division, Metropolitan Nashville Police Department, February 4, 2025.

¹⁹⁰ Federal Bureau of Investigation 2025a.

TBI is testing rapid DNA technology at its Nashville lab and considering statewide use.

leads.¹⁹¹ The federal Rapid DNA Act of 2017 authorized the upload of qualifying arrestee or offender DNA profiles directly into CODIS, paving the way for broader use across states. Research has highlighted the benefits from expanding DNA databases, noting societal savings of up to \$20,000 per offender DNA submission.¹⁹² Rapid DNA devices successfully produce CODIS-eligible DNA profiles approximately 90% of the time.¹⁹³

Several states have already implemented rapid DNA technology. Louisiana became the first state to receive FBI authority to operate rapid DNA at booking stations.¹⁹⁴ Similarly, Florida received \$2.75 million from the state legislature for an initial pilot program, deploying rapid DNA machines across 11 county jails.¹⁹⁵ Arizona, California, Nevada, South Carolina, and Texas have also adopted rapid DNA technology within law enforcement booking procedures, citing faster suspect identification and reduced crime lab workloads.¹⁹⁶

In Tennessee, TBI is currently validating rapid DNA technology for crime scene evidence at its Nashville lab and exploring implementation policies.¹⁹⁷ State law mandates that arresting agencies collect DNA samples from individuals convicted of certain felony offenses and then send those samples to be processed by TBI.¹⁹⁸ Proposed legislation—Senate Bill 841 by Senator Walley and House Bill 473 by Representative Crawford—seeks to expand DNA collection requirements to include all felony offenses. The Fiscal Review Committee anticipates this legislation would add approximately 60,000 DNA samples annually and require nine additional positions at the TBI's Jackson lab to handle the increased workload.¹⁹⁹ The bill was sent to summer study during the 114th general assembly session. Expanding current state law to allow for the use of rapid DNA at booking stations would enable immediate suspect identification, faster CODIS searches, and provide quicker investigative leads. Implementation would require FBI authorization, new TBI policies and procedures, and upfront investments in equipment and training.

Local governments and agencies can partner and share resources to help investigations and reduce evidence delays.

One approach that can help reduce delays and assist criminal investigations is developing partnerships to share resources. The NIJ suggests

¹⁹¹ Ibid.

¹⁹² End The Backlog 2024; Houck 2020; and Muhlhausen 2019.

¹⁹³ James 2022.

¹⁹⁴ KATC.com 2022; and Chavez 2023.

¹⁹⁵ Florida Sheriffs Association 2023.

¹⁹⁶ Arizona Department of Public Safety 2022; McCutcheon et al. 2024; and Muhlhausen 2019.

¹⁹⁷ Interview with Brad Everett, DNA technical leader, Forensic Services Division, Tennessee Bureau of Investigation, March 26, 2025.

¹⁹⁸ Tennessee Code Annotated, Section 40-35-321.

¹⁹⁹ Fiscal Review Committee, Tennessee General Assembly, House Bill 473 and Senate Bill 841 Fiscal Note, March 1, 2025.

collaboration, cost sharing, and regional agreements as practices to help address workload challenges at forensic labs.²⁰⁰ To help law enforcement agencies—especially smaller ones—process digital evidence, the NIJ suggests developing regional models to increase capacity and agencies contributing to help pay for shared resources. Grants could also be used to support these efforts (see appendix I).

In Tennessee, one example of a regional collaboration for digital forensics is the East Tennessee Regional Forensic Facility and Training Program facilitated by the Jefferson County Sheriff's Office.²⁰¹ Accessing information from phones and other digital devices is essential for solving crimes, and becoming more so, as most people own a phone that contains a wealth of information.²⁰² For example, phones have GPS data that can be used to locate people. The Jefferson County sheriff said they started the program because it was taking several months for TBI to process cell phone evidence, and they wanted to provide a way for local detectives to quickly conduct their own digital forensics analyses, help their own investigations, and remove some of the workload from TBI.

The goal of the program is to reduce the backlog of digital evidence and improve public safety by solving more violent crimes.²⁰³ Participating law enforcement officers and detectives receive training and have access to expensive, specialized equipment that is housed in leased space serving as a resource center at Carson Newman University. As of May 2025, 17 law enforcement agencies in East Tennessee were participating. A \$2 million grant from the state Office of Criminal Justice Programs (OCJP) funded the program for the 2024-25 fiscal year to get started—they used the funds for equipment, software, training, facility leasing, and a part-time analyst who is available to the agencies for assistance. Participating agencies pay their officers' salaries. The state appropriated \$400,000 in non-recurring funding for the program for fiscal year 2025-26; the program's total budget is approximately \$900,000, and the Jefferson County sheriff's office is looking for other sources to cover the remaining funding.²⁰⁴

The Jefferson County sheriff's office reports that the program has been successful and has already helped solve several cases.²⁰⁵ Because officers

To ease digital forensic backlogs, the Jefferson County Sheriff's Office launched the East Tennessee Regional Forensic Facility and Training Program in 2024, giving local law enforcement officers access to specialized equipment and training and enabling them to process digital evidence in hours or days instead of months.

²⁰⁰ Muhlhausen 2019.

²⁰¹ Interview with Jeffrey Coffey, sheriff, Jefferson County Sheriff's Office, November 22, 2024; and emails from Gail Wilczynski, deputy, Jefferson County Sheriff's Office, April 4, 2025, and Jeremiah Morton, assistant director, Office of Criminal Justice Programs, Tennessee Department of Finance and Administration, August 30, 2024.

²⁰² Interview with Jeffrey Coffey, sheriff, Jefferson County Sheriff's Office, November 22, 2024; and email from Gail Wilczynski, deputy, Jefferson County Sheriff's Office, April 4, 2025.

²⁰³ Robinson 2024; interview with Jeffrey Coffey, sheriff, Jefferson County Sheriff's Office, November 22, 2024; and email from Gail Wilczynski, deputy, Jefferson County Sheriff's Office, April 4, 2025.

²⁰⁴ Emails from Gail Wilczynski, deputy, Jefferson County Sheriff's Office, April 4, April 17, and May 22, 2025.

²⁰⁵ WBIR Staff 2024; and interview with Jeffrey Coffey, sheriff, Jefferson County Sheriff's Office, November 22, 2024.

According to the Jefferson County Sheriff's Office, the East Tennessee Regional Forensic Facility and Training Program has been successful and has already helped solve several cases.

from participating agencies are certified to use the equipment and can access the space at any time, they are able to conduct examinations within the first 48 hours of crimes, which is critical to finding suspects. They often have been able to get results in a few hours or days instead of waiting months for results from TBI. According to the OCJP, in one instance, the "partnership led to the identification and arrest of a Tennessee resident who was distributing and manufacturing child pornography within a few hours of evidence collection."²⁰⁶ The program also provides a networking opportunity for law enforcement agencies to exchange information and ideas. The sheriff said they haven't encountered any program problems or challenges yet, other than seeking funding to continue after the first year.²⁰⁷

²⁰⁶ Email from Jeremiah Morton, assistant director, Office of Criminal Justice Programs, Tennessee Department of Finance and Administration, August 30, 2024.

²⁰⁷ Interview with Jeffrey Coffey, sheriff, Jefferson County Sheriff's Office, November 22, 2024.

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Appendix A: Senate Bill 2877 by Senator Kyle and House Bill 2961 by Representative Hardaway

SENATE BILL 2877

By Kyle

HOUSE BILL 2961

By Hardaway

AN ACT to amend Tennessee Code Annotated, Title 4;
Title 8 and Title 38, relative to crime labs.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF TENNESSEE:

SECTION 1.

(a) The Tennessee advisory committee on intergovernmental relations (TACIR), with the assistance of the Tennessee bureau of investigation, the district attorneys general conference, and the department of safety, is directed to perform a study of the feasibility of a Shelby County crime lab and the impact of such a crime lab on public health, safety, education, housing, and the economy for citizens and visitors of Shelby County, the city of Memphis, this state, and the Tennessee, Arkansas, and Mississippi tri-state region.

(b) TACIR shall consult with and seek input from the county commission and the mayor of Shelby County, and all law enforcement agencies with jurisdiction in Shelby County.

(c) All appropriate state departments and agencies shall provide assistance to TACIR in connection with the study required in subsection (a).

(d) TACIR shall submit a report disclosing the findings of the study, including legislative and budget recommendations, to the general assembly no later than January 14, 2025.

SECTION 2. This act takes effect upon becoming a law, the public welfare requiring it.

HB2961
012800

- 1 -

Appendix B: *Memphis Crime Lab Feasibility Study* – Executive Summary

Memphis Crime Lab Feasibility Study: Financial Costs, Evidentiary, Timeframe, and Implementation of Forensic Laboratory Technology

**PCJC Report 2024-02
October 2024**

**Submitted to:
Mayor Paul Young
City of Memphis**

**Chief CJ Davis
Memphis Police Department**

**Project Director: Dr. James C. McCutcheon
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Contract Number: 41062

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Disclaimer: The views expressed in this publication do not necessarily reflect the views or policies of Precision Criminal Justice Consulting, LLC or any associated agencies.

Executive Summary

Introduction

This report presents findings from a comprehensive feasibility study of the proposed crime lab development for Memphis/Shelby County. The study aimed to assess the current forensic infrastructure, operational processes, accreditation requirements, and potential costs associated with establishing a centralized crime lab in the region. It explores the benefits and challenges of centralizing forensic services, focusing specifically on improving efficiency, processing times, and supporting law enforcement efforts.

This feasibility study is part of Memphis/Shelby County's broader efforts to address forensic services in the region and to support the region's crime reduction initiatives. The study examines existing processes in the Memphis Police Department (MPD) and the Tennessee Bureau of Investigation (TBI), assesses space and staffing requirements, considers options for facility construction or refurbishment, and reviews case studies of other crime labs. The objective is to provide informed guidance on the potential structure, operations, and impact of a new crime lab in Memphis/Shelby County.

Study Overview and Purpose

The study sought to review and outline the limitations of the current forensic setup in Memphis. Presently, the MPD manages various forensic units, including latent prints, crime scene investigations, digital forensics, and parts of ballistics analysis. Context is provided around current needs among these units. Other forensic evidence is tested by both TBI and private lab outsourcing. Establishing a centralized crime lab would look to streamline these processes, enhance investigative outcomes, and address the growing demand for forensic services.

The proposed crime lab would likely consolidate forensic functions under one roof, providing facilities for DNA analysis, toxicology, digital forensics, firearms analysis, and evidence management. This study examines costs and what resources would be required, and how adoption of such a lab would integrate with existing law enforcement operations.

Research Questions and Methods

The feasibility study explored several key research questions:

- What is the current state of forensic operations in Memphis/Shelby County, and what challenges do they face?
- How should the proposed crime lab be structured to meet the county's forensic needs, including considerations for accreditation and validation?
- What are the space, staffing, and cost requirements for building a comprehensive crime lab?
- What immediate actions can be taken to improve current forensic processes, and how might these feed into the development of a new facility?

To answer these questions, the study employed multiple research methods, including:

- **Interviews and Observations:** Engaging with staff at existing forensic units in the MPD and TBI to gather qualitative insights into current operations, challenges, and needs.
- **Case Study Analysis:** Reviewing the structure and operations of other crime labs, such as those in Houston, Charlotte-Mecklenburg, Nashville, and Arkansas, to identify best practices and potential pitfalls.
- **Space and Cost Assessment:** Estimating space and cost requirements based on standards outlined in research and by government agencies, as well as analyzing infrastructure needs for specialized forensic units.

Findings and Implementation

The study identified several critical findings related to the feasibility of developing a crime lab in Memphis/Shelby County. The current forensic services face several challenges related to space, equipment, and workflow.

The study findings emphasize that developing a new crime lab would involve more than just constructing a facility; it requires designing a secure, adaptable, and workflow-focused environment. Accreditation is a crucial aspect of the lab's structure, as adherence to national standards ensures the reliability of forensic analysis and supports the integrity of evidence in the judicial process. Validating the equipment and procedures before the lab becomes operational is another essential step to maintain compliance with accreditation standards. This process would likely take longer than a year for most units.

Additionally, the study examined potential actions to improve current forensic processes. Drawing from these findings, the minimum needed is the upgrading of existing facilities to enhance working conditions. While these improvements do not replace the potential need for a new lab, they represent vital steps toward addressing immediate operational bottlenecks, while also representing movement toward a local forensic crime lab.

Preliminary Impacts and Future Considerations

A key aspect of the feasibility study involved evaluating the potential impact of a centralized crime lab on forensic processing times, case backlogs, and law enforcement outcomes in Memphis/Shelby County. If properly funded, the proposed lab's consolidation of forensic services is anticipated to streamline evidence processing, reduce dependence on external resources, and potentially improve turnaround time for some units. Additionally, it could facilitate better inter-agency coordination, enhancing the support provided to ongoing investigations.

However, the study also notes the complexity of implementing such a facility, particularly in terms of space requirements, staffing, liability, and operational costs. Creating a lab that meets current demands while allowing for future expansion is a critical consideration. Flexible design, combined with modern digital infrastructure, would be necessary to keep pace with technological

advances in forensic science. The lab would need to accommodate specialized spaces for DNA analysis, toxicology, digital forensics, and secure evidence storage, all of which have specific environmental and security requirements.

Conclusion

Immediate actions, such as upgrading current facilities can address some existing inefficiencies while laying the groundwork for the future crime lab. The decision to build a new facility involves weighing the potential long-term benefits against the upfront investment in construction, equipment, and staffing. The study's findings underscore the importance of thorough planning, robust digital infrastructure, and adherence to forensic best practices to ensure the lab's effectiveness and sustainability.

Actions discussed in this study involve a need for additional funding, space, equipment, and personnel. In addition, actions that can take place quickly include (1) investment and integration of Rapid DNA, (2) increasing the capacity current criminalist efforts and transportation of evidence, and (3) developing an agreement through a potential MOU with TBI to assist in allocating resources and personnel to test solely or mostly Memphis/Shelby County evidence, such trained personnel could potentially transition to a local lab, depending on the structure of the agreement.

Further steps in this process will involve a detailed cost-benefit analysis, securing funding, and engaging with stakeholders to refine the lab's design and operations. This study serves as an initial framework, offering insights and guidance on the path forward in developing a crime lab that meets the evolving needs of Memphis/Shelby County.

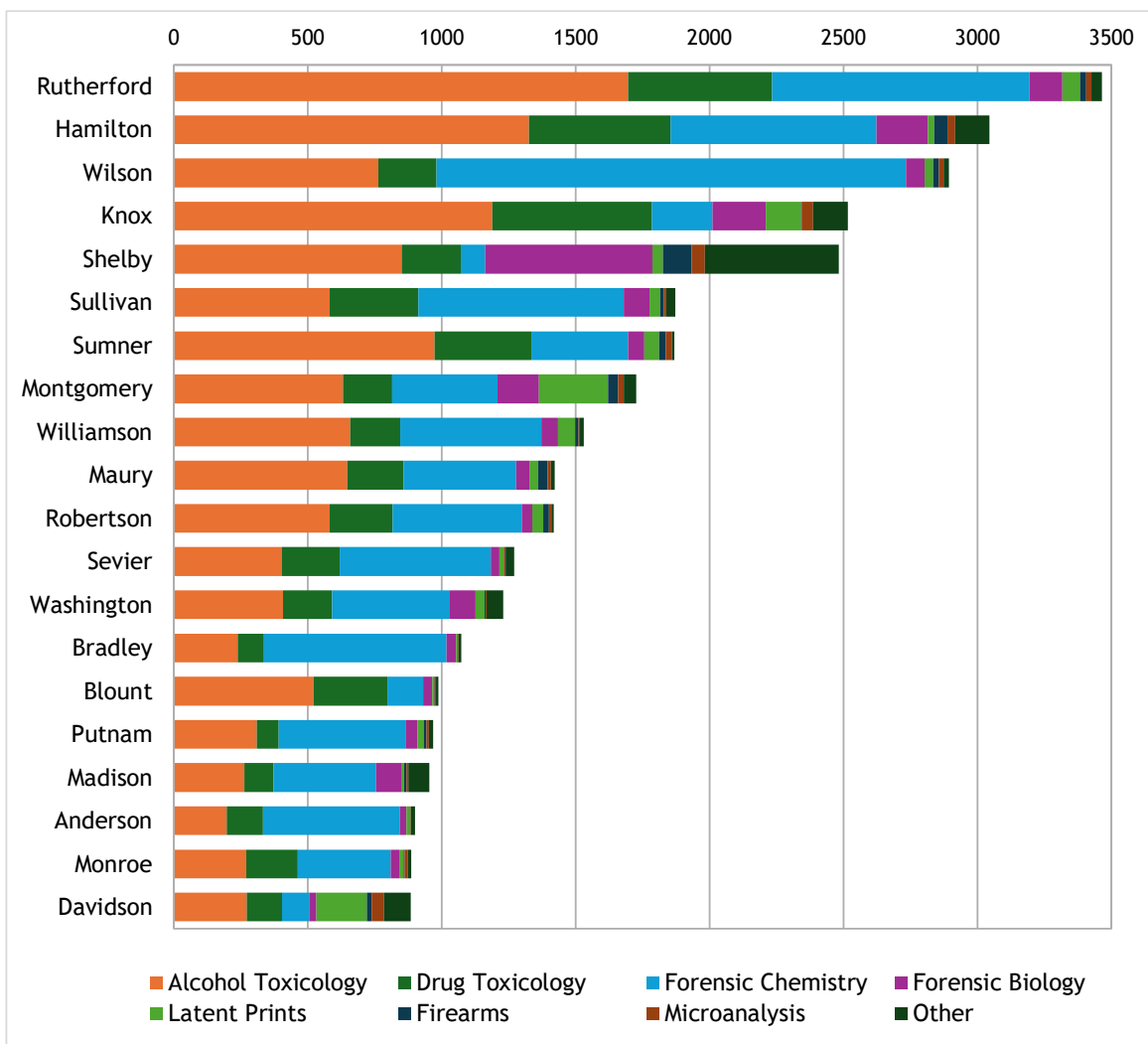
Appendix C: Change in TBI's Inventory Backlog Between June 2021 and June 2025

Forensic Discipline	Backlog					Average Year-over-Year Percent Change in Backlog
	June 2021	June 2022	June 2023	June 2024	June 2025	
Statewide Total						
Forensic Chemistry	9,950	13,610	12,307	6,435	2,231	-21.46%
Forensic Biology (FB) - Violent	234	308	501	496	409	18.94%
FB - Non-Violent	169	263	390	466	455	30.26%
FB - Sex Offense	644	911	623	393	371	-8.17%
Toxicology - Alcohol	1,566	1,248	2,036	1,272	1,589	7.56%
Toxicology - Drug	1,512	2,538	1,631	1,240	1,171	0.65%
Firearms Analysis	660	684	655	569	530	-5.15%
Firearms NIBIN Entry	334	301	121	48	34	-39.79%
Latent Prints	229	175	301	138	159	2.37%
Microanalysis	128	187	202	128	57	-9.50%
Nashville Lab						
Forensic Chemistry	3,086	4,308	3,821	2,492	736	-19.24%
Forensic Biology (FB) - Violent	89	133	253	305	256	36.04%
FB - Non-Violent	46	97	183	298	369	71.55%
FB - Sex Offense	122	197	124	80	88	-0.27%
Toxicology - Alcohol	432	550	1,182	626	678	25.87%
Toxicology - Drug	701	1,490	977	520	382	1.20%
Firearms Analysis	555	530	510	399	272	-15.47%
Firearms NIBIN Entry	334	301	121	48	34	-39.79%
Latent Prints - Violent	68	39	56	55	54	-0.67%
Latent Prints - Non-Violent	161	136	245	83	105	6.25%
Microanalysis - Arson	28	25	27	24	13	-14.91%
Microanalysis - Gunshot Residue	83	136	161	76	22	-10.40%
Microanalysis - Other Testing	17	26	14	28	22	21.34%
Jackson Lab						
Forensic Chemistry	1,450	1,260	1,181	1,029	472	-21.59%
Forensic Biology (FB) - Violent	57	87	114	79	86	15.46%
FB - Non-Violent	38	71	65	44	34	5.84%
FB - Sex Offense	287	368	301	172	118	-16.06%
Toxicology - Alcohol	596	281	263	71	178	4.61%
Toxicology - Drug	185	637	75	109	80	43.71%
Firearms Analysis	105	154	145	170	258	27.46%

Forensic Discipline	Backlog					Average Year-over-Year Percent Change in Backlog
	June 2021	June 2022	June 2023	June 2024	June 2025	
Knoxville Lab						
Forensic Chemistry	5,414	8,042	7,305	2,914	1,023	-21.41%
Forensic Biology (FB) - Violent	88	88	134	112	67	-1.08%
FB - Non-Violent	85	95	142	124	52	-2.38%
FB - Sex Offense	235	346	198	141	165	-1.83%
Toxicology - Alcohol	538	417	591	575	733	11.00%
Toxicology - Drug	626	411	579	611	709	7.02%

Source: Commission staff analysis of data from Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, January 3, 2025; and email from Susan Sims, administrative assistant, Forensic Services Division, Tennessee Bureau of Investigation, July 10, 2025.

Appendix D: Top 20 Counties for TBI Requests in 2024



Note: "Other" may include CODIS requests, Breath Alcohol Instrument Certification requests, and Law Enforcement Use of Force and Crime Scene assistance requests. Additionally, Davidson County sends most of its evidence to the MNPd crime lab for testing rather than sending it to TBI's labs.

Source: Commission staff analysis of data from Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, April 3, 2025.

Appendix E: Population and Crime Data in Tennessee by County

County	Number of All Crimes, 2024	Estimated Population, 2024*	Crime Rate (per 1,000), 2024	All Crime Clearance Rate, 2024	Number of Violent Crimes, 2024	Violent Crime Rate (per 1,000), 2024	Projected Population by 2044
Tennessee	476,976	7,249,819	65.79	38.00	42,222	5.82	8,102,194
Anderson	3,791	81,586	46.47	57.08	244	2.99	86,233
Bedford	2,673	54,212	49.31	48.37	214	3.95	67,228
Benton	533	16,258	32.78	71.48	36	2.21	14,229
Bledsoe	237	15,162	15.63	58.65	6	0.40	16,599
Blount	5,352	145,806	36.71	49.07	489	3.35	161,201
Bradley	6,977	113,002	61.74	57.13	372	3.29	128,853
Campbell	906	40,713	22.25	69.54	65	1.60	36,181
Cannon	208	15,300	13.59	69.71	4	0.26	15,549
Carroll	884	29,131	30.35	59.16	48	1.65	28,111
Carter	1,793	57,855	30.99	32.68	139	2.40	49,837
Cheatham	1,628	42,821	38.02	65.29	118	2.76	44,258
Chester	575	17,761	32.37	69.74	40	2.25	17,584
Claiborne	862	33,303	25.88	56.84	82	2.46	30,047
Clay	195	7,791	25.03	84.62	5	0.64	6,648
Cocke	1,797	38,033	47.25	50.70	170	4.47	36,048
Coffee	4,128	61,756	66.84	58.09	301	4.87	74,100
Crockett	447	14,068	31.77	47.20	53	3.77	13,275
Cumberland	2,214	66,216	33.44	63.05	162	2.45	68,625
Davidson	88,682	718,657	123.40	31.17	7,806	10.86	849,853
Decatur	402	11,783	34.12	62.94	33	2.80	10,823
Dekalb	677	21,676	31.23	68.98	67	3.09	24,079
Dickson	2,687	57,764	46.52	46.26	234	4.05	65,584
Dyer	2,737	36,585	74.81	49.98	216	5.90	33,218
Fayette	1,111	45,288	24.53	49.86	131	2.89	48,060
Fentress	769	20,188	38.09	57.74	88	4.36	19,230
Franklin	1,639	45,472	36.04	62.78	122	2.68	46,881
Gibson	1,910	51,471	37.11	49.01	182	3.54	53,965
Giles	1,385	30,984	44.70	53.36	100	3.23	31,600
Grainger	447	25,172	17.76	58.61	27	1.07	24,464
Greene	3,742	73,658	50.80	50.03	245	3.33	72,178
Grundy	481	16,533	29.09	26.20	58	3.51	12,881
Hamblen	4,909	67,078	73.18	60.30	404	6.02	71,485
Hamilton	26,727	387,822	68.92	30.33	2,100	5.41	435,789
Hancock	228	7,100	32.11	25.44	13	1.83	6,099
Hardeman	1,307	25,722	50.81	57.08	124	4.82	21,640

County	Number of All Crimes, 2024	Estimated Population, 2024*	Crime Rate (per 1,000), 2024	All Crime Clearance Rate, 2024	Number of Violent Crimes, 2024	Violent Crime Rate (per 1,000), 2024	Projected Population by 2044
Hardin	1,331	28,424	46.83	57.55	120	4.22	27,070
Hawkins	1,439	60,268	23.88	33.63	59	0.98	55,867
Haywood	1,095	17,240	63.52	38.36	122	7.08	14,549
Henderson	1,361	28,276	48.13	58.56	119	4.21	26,833
Henry	1,170	32,833	35.63	60.77	62	1.89	31,119
Hickman	1,070	26,231	40.79	80.28	89	3.39	25,150
Houston	244	8,459	28.85	54.51	27	3.19	7,867
Humphreys	860	19,365	44.41	60.35	74	3.82	19,518
Jackson	257	12,672	20.28	65.76	31	2.45	11,805
Jefferson	2,019	59,685	33.83	61.81	129	2.16	61,528
Johnson	499	18,587	26.85	33.47	55	2.96	16,118
Knox	25,110	509,793	49.26	45.09	2,034	3.99	585,418
Lake	234	6,173	37.91	71.79	21	3.40	5,321
Lauderdale	1,495	25,425	58.80	46.96	238	9.36	19,527
Lawrence	986	47,344	20.83	39.86	81	1.71	49,914
Lewis	386	13,281	29.06	54.92	24	1.81	13,668
Lincoln	1,425	36,612	38.92	54.04	132	3.61	38,702
Loudon	1,811	62,803	28.84	54.50	123	1.96	69,974
Macon	1,419	27,441	51.71	65.40	130	4.74	33,427
Madison	8,403	99,748	84.24	37.86	719	7.21	92,987
Marion	878	31,912	27.51	66.97	71	2.22	28,422
Marshall	1,953	37,994	51.40	49.92	157	4.13	45,528
Maury	6,970	114,406	60.92	47.69	529	4.62	160,262
McMinn	2,754	56,726	48.55	64.16	194	3.42	57,945
McNairy	1,072	27,133	39.51	53.36	111	4.09	25,320
Meigs	440	14,060	31.29	57.05	40	2.84	15,159
Monroe	2,352	49,567	47.45	48.94	175	3.53	48,865
Montgomery	14,839	247,488	59.96	43.81	1,044	4.22	354,830
Moore	157	6,874	22.84	40.13	6	0.87	6,908
Morgan	469	22,394	20.94	70.58	64	2.86	18,777
Obion	1,812	30,622	59.17	60.82	158	5.16	27,908
Overton	584	23,681	24.66	68.66	63	2.66	23,568
Perry	103	9,108	11.31	32.04	10	1.10	9,578
Pickett	55	5,194	10.59	65.45	9	1.73	4,619
Polk	717	18,725	38.29	67.78	54	2.88	18,579
Putnam	3,649	85,513	42.67	37.05	225	2.63	97,684
Rhea	1,071	34,409	31.13	58.92	69	2.01	33,695
Roane	2,037	57,232	35.59	53.85	128	2.24	53,651

County	Number of All Crimes, 2024	Estimated Population, 2024*	Crime Rate (per 1,000), 2024	All Crime Clearance Rate, 2024	Number of Violent Crimes, 2024	Violent Crime Rate (per 1,000), 2024	Projected Population by 2044
Robertson	2,444	80,519	30.35	78.76	199	2.47	89,385
Rutherford	22,613	377,038	59.98	31.88	1,384	3.67	543,096
Scott	507	23,383	21.68	71.01	43	1.84	20,662
Sequatchie	692	17,700	39.10	63.73	49	2.77	20,132
Sevier	5,527	100,138	55.19	54.04	332	3.32	111,364
Shelby	126,208	907,505	139.07	20.13	14,924	16.45	871,062
Smith	830	20,822	39.86	75.42	46	2.21	21,376
Stewart	558	14,461	38.59	80.82	38	2.63	14,325
Sullivan	10,119	164,167	61.64	50.56	778	4.74	167,019
Sumner	7,589	212,569	35.70	68.03	450	2.12	270,144
Tipton	3,181	62,615	50.80	53.98	296	4.73	59,630
Trousdale	417	12,548	33.23	45.32	32	2.55	14,547
Unicoi	516	17,791	29.00	74.03	29	1.63	16,140
Union	621	21,141	29.37	54.43	32	1.51	20,578
Van Buren	272	6,632	41.01	69.12	9	1.36	7,184
Warren	1,957	43,369	45.12	63.82	222	5.12	45,362
Washington	7,122	140,815	50.58	57.15	515	3.66	151,815
Wayne	214	16,085	13.30	85.98	14	0.87	14,232
Weakley	1,351	33,290	40.58	67.73	93	2.79	28,825
White	641	29,249	21.92	53.20	41	1.40	30,376
Williamson	7,079	270,805	26.14	52.13	376	1.39	386,178
Wilson	6,952	169,752	40.95	63.22	326	1.92	238,667

*2024 estimated population data is sourced from Tennessee Bureau of Investigation "Tennessee Information Based Reporting System."

Source: Tennessee Bureau of Investigation "Tennessee Information Based Reporting System," Crime Rates by Jurisdiction, July 29, 2025; Tennessee Bureau of Investigation "Tennessee Information Based Reporting System," All Crime Clearance Rates, July 29, 2025; Tennessee Bureau of Investigation "Tennessee Information Based Reporting System," Violent Crime Rates, July 29, 2025; and University of Tennessee Boyd Center for Business and Economic Research 2024.

Appendix F: Examples of Cost Estimates for Construction, Expansion, and Renovation of Crime Labs

Crime Lab	Estimated Cost	Estimated Square Feet	Estimated Cost per Square Foot	Lab Capabilities	Status
Tennessee					
MNPD Lab - New Construction	\$30,000,000	35,000	\$857	Forensic Biology, Forensic Chemistry, Toxicology, Latent Print, Firearms and Tool Mark, Evidence Receiving, and Tenprint	Opened in 2015
TBI Jackson Lab - New Construction	\$25,500,000	43,717	\$583	Forensic Biology, Forensic Chemistry, Breath Alcohol, Toxicology, Firearms and Tool Mark, CODIS, Crime Scene, and Evidence Receiving	Opened in 2021
TBI Jackson Lab - Expansion and Renovation	\$10,000,000	3,500 addition; 6,000 renovation; (and additional 2,227 for potential future needs)	\$1,053	Expanded Forensic Biology to accommodate 10 additional positions up to 23 total positions; and Latent Prints	Approved and in progress in 2025
TBI Knoxville Lab - New Construction (part of new regional headquarters)	\$33,640,200	37,378 for lab space; 75,818 for entire headquarters*	\$900**	Forensic Biology, Forensic Chemistry, Breath Alcohol, Toxicology, Latent Prints, Firearms, Crime Scene, and Evidence Receiving	Planned
	\$56,067,000		\$1,500**		
TBI Nashville Lab - New Construction or Renovation	no estimate	17,000 - 34,000 new construction; 12,000 - 15,000 renovation	NA	Forensic Biology, Forensic Chemistry, and Toxicology	More analysis will be conducted in the future to determine needs

Crime Lab	Estimated Cost	Estimated Square Feet	Estimated Cost per Square Foot	Lab Capabilities	Status
TBI Chattanooga Lab - Build-to-Suit Lease	no estimate	49,000	NA	Forensic Biology, Forensic Chemistry, Toxicology, and Evidence Receiving	Planned - in process of procuring lease with build-to-suit option
Memphis Lab - New Construction	\$40,000,000 to \$50,000,000	30,000 - 60,000	\$833 to \$1,333***	Property and Evidence, Latent Prints, Crime Scene, Digital Forensics, Ballistics, Toxicology, DNA, and Firearm Toolmark Analysis	Not Planned
Other States					
Ohio Bureau of Criminal Investigation in partnership with Bowling Green State University - New Construction	\$14,000,000	30,000	\$467	Crime Scene, Crimes Against Children, Criminal Intelligence, Narcotics, Special Investigations, and Criminal Polygraph Examination	Opened in 2014
North Carolina Department of Justice Western Regional Lab - New Construction	\$19,800,000	36,000	\$550	Latent Prints, Drug Chemistry, Toxicology, and DNA Analysis	Opened in 2017
South Carolina Law Enforcement Division Crime Lab - New Construction	\$62,000,000	117,672	\$527	Computer Crimes, Crime Scene, DNA Casework, DNA Database, Drug Analysis, Evidence Control, Firearms, Latent Prints, Questioned Documents, Toxicology, Trace Evidence, and Implied Consent	Opened in 2022
Arkansas State Crime Laboratory - New Construction	\$182,000,000	190,000	\$958	Evidence Receiving, Latent Prints, DNA, CODIS, Toxicology, Chemistry, Firearms and Toolmarks, Physical Evidence, Medical Examiner, and Administrative Offices	Planned

Crime Lab	Estimated Cost	Estimated Square Feet	Estimated Cost per Square Foot	Lab Capabilities	Status
Virginia Department of Forensic Science Lab - New Construction	\$235,700,000	288,000	\$818	Breath Alcohol, Controlled Substances, Digital and Multimedia Evidence, DNA Data Bank, Evidence Receiving, Firearms and Toolmarks, Forensic Biology, Forensic Training, Latent Prints and Impressions, Mitochondrial DNA, Toxicology, Trace Evidence, Statewide Administration; and Medical Examiner	Planned

* The Knoxville lab is part of the planned new regional headquarters. TBI estimates the entire headquarters project will total 75,818 square feet, of which approximately 37,378 square feet will be for the crime lab based on TACIR staff analysis of the TBI real estate plan. The entire project is estimated to cost up to \$100 million total, according to TBI's real estate plan.

**According to Department of General Services staff, the cost for new crime lab construction would likely range between \$900 per square foot and \$1,500 per square foot. The lower \$900 per square foot estimate is also in line with estimates used in the *Memphis Crime Lab Feasibility Study*.

***The *Memphis Crime Lab Feasibility Study* cited \$800 to \$1,000 per square foot for the cost of a lab in Memphis.

Note: The initial equipment purchase is not necessarily reflected in the estimated costs.

Source: McCutcheon et al. 2024; Tennessee Bureau of Investigation 2024a; Metropolitan Government of Nashville and Davidson County "Metro Nashville Police Crime Laboratory"; Knight 2025; SmithGroup 2021; Attorney General Jeff Jackson "Western Crime Laboratory"; Jones 2025; Skanska "Central Laboratory Construction"; Raven 2023; South Carolina State Law Enforcement Division "Forensic Services"; testimony at commission meeting by Amanda Sweet, director, Forensic Services Division, Metropolitan Nashville Police Department, December 19, 2024; emails from Mike Lyttle, assistant director, Forensic Services Division, Tennessee Bureau of Investigation, August 8, 2025, Phillip Murphy, director, Real Estate Strategy and Finance, Tennessee Department of General Services, June 23 and August 21, 2025, Peter L. Heimbach, Jr., director of special projects, Real Estate Asset Management, Tennessee Department of General Services, September 11, 2025, Amanda Thompson, director, special agent, North Carolina Department of Justice, July 3, 2025, and Linda Jackson, director, Virginia Department of Forensic Science, January 9, 2025; and phone conversation with Peter L. Heimbach, Jr., director of special projects, Real Estate Asset Management, Tennessee Department of General Services, September 11, 2025.

Appendix G: Summary of TBI's Proposed Expansion of Forensic Services Division (FSD) Lab Space

TBI Region	Project	Project Type	Delivery Model	Square Footage Summary	High-Level Rationale
West	Jackson Phase 1: FSD Forensic Biology focused expansion (current project)	New construction and renovation of existing	Current capital project	3,500 sq. ft. extension and 6,000 sq. ft. renovation of current facility (per current plan)	This proposed expansion to the facility can sustain TBI's projected growth and incremental space needs through Fiscal Year 2027 and beyond for Forensic Biology*.
East	Chattanooga: New Regional HQ with lab focused on drug-related evidence and Forensic Biology	New construction	Restructured build-to-suit lease and purchase obligation or option	49,000 sq. ft. estimated need (note: current lease procurement was planned for 35,000 sq. ft.)	• Drug conditions in Hamilton County and surrounding areas are worrisome. • New labs (Forensic Chemistry and Toxicology Alcohol) will eliminate the current need to ship drug samples and evidence to Nashville and Knoxville. • This analysis recommends that Forensic Biology lab is incorporated to mitigate future risk.
Upper East	Knoxville: Replacement Regional HQ with expanded testing types	New construction (already programmed with cost estimates)	Alternative model (i.e., partnership structure)	75,818 sq. ft. (smaller than the previous study estimated at 107,000 sq. ft.)	• Current lab is outdated and undersized. • New lab will allow for introduction of Firearms and Latent Prints testing, which are more cost-effective to regionalize. • Partnership model with UT and/or other educational institutions could reduce upfront capital required and open new grant opportunities.

TBI Region	Project		Project Type	Delivery Model	Square Footage Summary	High-Level Rationale
Middle	Option 1	Nashville: Build new Forensic Biology lab at the new Technology and Information Division (TID) structure and reconfigure existing labs for larger Forensic Chemistry and Toxicology footprints	New construction and renovation	Future capital project	New: 17,000 sq. ft. on floor one; 17,000 sq. ft. on floor two for forensic biology; up to a total of 34,000 sq. ft. Renovated: 15,000 sq. ft. going from three labs to two labs	• Current third floor FSD wing houses three labs today (Forensic Biology, Toxicology and Forensic Chemistry) in addition to Firearms; current space with three labs could be reconfigured to house two labs in the future (Toxicology and Forensic Chemistry), giving both ample room for growth. • Building a new Forensic Biology lab as part of the TID expansion allows for a larger, purpose-built lab to accommodate all aspects of Forensic Biology growth needs (i.e., hooded lab benches, staging/extraction/support areas, administrative cubes/offices and collaboration spaces). • Option may alleviate the need for full HVAC and infrastructure upgrades at existing RS Gass facility.

TBI Region	Project		Project Type	Delivery Model	Square Footage Summary	High-Level Rationale
Middle	Option 2	Nashville: Build new data center at the new TID structure or elsewhere and reconfigure existing Criminal Justice Information Services (CJIS) and data center space within RS Gass for Forensic Biology; reconfigure existing labs to accommodate larger Forensic Chemistry and Toxicology footprints	New construction and renovation	Future capital project	New: 17,000 sq. ft. on floor one; 17,000 sq. ft. on floor two for CJIS, new data center, and other uses; up to total of 34,000 sq. ft. Renovated: 12,000 sq. ft. for forensic biology lab in existing RS Gass data center area; 15,000 sq. ft. going from three labs to two	• Keep all labs within the existing RS Gass facility for ease of access to evidence receiving, team collaboration, and security purposes. • Relocating CJIS and TID data center space enables a modernized, purpose-built facility (likely optimizing space within a smaller footprint given technology advancement).
Middle	Option 3	Nashville: Repurpose part of the legacy State Health Lab for TBI (Forensic Biology lab plus TID facility relocated from Mainstream Drive)	Renovation	Future capital project	Renovated: 12,000 sq. ft. for forensic biology lab; 20,000 sq. ft. for TID facility deactivated; approximately 100,000 sq. ft. for future needs	• Forensic biology lab can be purpose-designed as large as needed. • TID facility could be larger as well, accommodate warehousing/logistics needs for Criminal Investigations Division (CID) and Drug Investigation Division (DID). • Optimal use of legacy state asset • Significant square footage mothballed for future, unforeseen needs.

*Expanded forensic biology lab should be able to support up to 23 authorized positions, which is approximately 35% more than anticipated authorized positions in fiscal year 2026-27.

Source: Tennessee Bureau of Investigation 2024a.

Appendix H: Cost Estimates for Alternatives to Building New Crime Labs

Entity	Program	Estimated Cost	Status	Funding Source	Sources
Rapid DNA					
Arizona Department of Public Safety Scientific Analysis Bureau	Rapid DNA Law Enforcement Program; trains officers and crime scene technicians to operate rapid DNA instrument; four rapid DNA instruments to supplement existing program	\$600,000	Implemented in 2022	Arizona Fiscal Year 2022 one-time budget appropriation	Arizona Department of Public Safety 2022
Florida Sheriffs Association	Purchase rapid DNA technology for 11 jails (booking stations)	\$2.75 million	Initial pilot program in 2023	State grant	Florida Sheriffs Association 2023; Florida Chapter 2023-234; and Florida Statute, Section 943.032
Houston Forensic Science Center	Three-year, subscription-like agreement with ThermoFisher to use a rapid DNA instrument	\$246,380	Approved as of 2021	Federal grants	Houston Forensic Science Center 2021; and interview with Peter Stout, chief executive officer/president, Houston Forensic Science Center, July 31, 2025
Kentucky State Police Forensic Laboratory	Statewide rapid DNA system that could process 2,000 cases annually	\$3 million per year to fully implement	Started as a pilot program in 2019	State budget and grants	Schreiner 2019
Louisiana State Police Crime Laboratory	Rapid DNA technology in booking stations	\$200,000 per rapid DNA machine	Started in 2022	State budget and grants	KATC.com 2022; and Chavez 2023
New Hanover County Sheriff's Office in North Carolina	Equipment and contract with an accredited forensic laboratory to perform confirmatory analysis and testing on DNA samples	\$400,000 (\$120,000 for instrument)	Planned to implement in 2023	Justice Assistant Grant program through the US Department of Justice	Cross 2022
Spokane County Sheriff's Office Forensic Unit	Rapid DNA program	\$480,000	Grant awarded in 2022	US Department of Justice Office of Justice Programs	United States Attorney's Office, Eastern District of Washington 2022

Entity	Program	Estimated Cost	Status	Funding Source	Sources
Agreements Between Crime Labs and Local Governments					
Tennessee Bureau of Investigation and City of Memphis	Salary and benefit costs for two dedicated state-employed forensic scientists to work on Memphis cases	\$320,000 per year	Proposed and implemented in 2025	City of Memphis	City of Memphis 2025
Louisiana State Police Crime Lab and City of New Orleans	Cooperative Endeavor Agreement for four full-time DNA analysts for one-year appointments	\$387,000 per year for four analysts	Started in 2023	City of New Orleans Police Department	City of New Orleans 2023; City of New Orleans and State of Louisiana, Department of Public Safety and Corrections 2023
Maryland State Police Forensic Sciences Division and Local Government Agencies	Controlled Dangerous Substances Allied Forensic Scientist Program; five forensic scientists	Varies depending on forensic scientist salary	As of 2024, ongoing	Partnering county law enforcement agencies	Maryland State Police 2024
Process Improvement					
Houston Forensic Science Center	Hired consultant to conduct a Lean Six Sigma project in forensic biology and train staff and have incorporated the tools and methodology into ongoing processes and quality improvement at the lab	\$594,000	Spent funds 2016 through 2018; continue to use the tools and methodology	Federal grants	Interview with Amy Castillo, chief operating officer, Houston Forensic Science Center, August 11, 2025
Louisiana State Police Crime Laboratory	Increasing Efficiency of Forensic DNA Casework; hire external consultants to conduct two Lean Six Sigma projects, purchase additional equipment to increase throughput, validate robotics, and add tools that facilitate a paperless environment	\$600,000	Grant received in 2008; final report in 2011	National Institute of Justice efficiency improvement grant, consisting of a 25% state fund match (approximately \$450,000 federal and \$150,000 state)	Richard and Kupferschmid 2011
Palm Beach County Sheriff's Office and Boca Raton Police Department	Forensic DNA Unit Efficiency Improvement Program; develop evidence screening lab to improve the capacity and efficiency of the forensic biology unit	\$519,544	2009 through 2011	National Institute of Justice; Boca Raton Police Services Department provided the required 25% match	Palm Beach County Board of County Commissioners 2009

Entity	Program	Estimated Cost	Status	Funding Source	Sources
Resource-Sharing Partnerships					
Jefferson County Sheriff's Office in Tennessee	East Tennessee Regional Forensic Facility and Training Program; regional collaboration for digital forensics	\$2 million to implement; \$932,631 operating budget	Implemented in 2024	Office of Criminal Justice Programs grant and state appropriation	Interview with Jeffrey Coffey, sheriff, Jefferson County Sheriff's Office, November 22, 2024; and emails from Gail Wilczynski, deputy, Jefferson County Sheriff's Office, April 4 and May 22, 2025, and Jeremiah Morton, assistant director, Office of Criminal Justice Programs, Tennessee Department of Finance and Administration, August 30, 2024
Jefferson County Regional Crime Laboratory in Colorado	Intergovernmental agreement between Jefferson County and the cities of Arvada, Lakewood, and Wheat Ridge to share forensic laboratory services among agencies in the county and supplement the Colorado Bureau of Investigation's state lab	\$1.76 million	Started in 2013; as of 2025, ongoing	Jefferson County covers base lab budget \$1.15 million; partner agencies contribute annually based on use	Hendershot 2025
Verdugo Regional Crime Lab (Glendale, California) and Azusa Police Department	MOU with Glendale to formalize joint use of forensic computer examination resources; Azusa employees would work at crime lab periodically	20% of the software licensing and assessment fees for the crime lab's computer forensics tools; no more than \$15,000 per year	Implemented in 2023	Azusa Police Department	Wenrick 2023

Appendix I: United States Department of Justice Funds Granted to Local Law Enforcement Agencies in Tennessee

Awarding Agency	Award Name	Award Purpose	Fiscal Year 2022-23 Grants	Fiscal Year 2023-24 Grants
Bureau of Justice Assistance	Paul Coverdell Forensic Science Improvement Grants Program	Seeks to improve forensic science and medical examiner/coroner services, including services provided by laboratories operated by states and units of local government	\$452,448	\$431,797
	National Sexual Assault Kit Initiative	Provides jurisdictions with resources to address their cold case sexual assaults/homicides	\$1,500,000	\$1,000,000
	DNA Capacity Enhancement for Backlog Reduction (CEBR) Formula Program	Assists states and local government to increase the capacity of public forensic DNA and DNA database laboratories to process more samples	\$2,862,095	\$2,276,910
	Edward Byrne Memorial Justice Assistance Grant (JAG) Program	Supports a range of program areas	\$8,421,245	\$7,206,986
National Institute of Justice	Research and Development in Forensic Science for Criminal Justice	Provides funding for basic or applied research and development in forensic science for criminal justice purposes	\$680,350	-
Office of Juvenile Justice and Delinquency Prevention	Internet Crimes Against Children Task Force Program	Helps state and local law enforcement agencies develop an effective response to technology-facilitated child sexual exploitation and Internet crimes against children	\$632,355	\$562,071
Office for Victims of Crime	Expanding Access to Sexual Assault Forensic Examinations	Supports the development of Sexual Assault Nurse Examiner/Sexual Assault Forensic Examiner programs, training, and technical assistance	\$494,444	-

Source: United States Department of Justice "Grants and Funding"; and Grants.gov "OVC FY24 Expanding Access to Sexual Assault Forensic Examinations."