

# Justice

## Forensic Science

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### **LFB Summary Items for Which an Issue Paper Has Been Prepared**

<u>Item #</u>	<u>Title</u>
1, 2, & 3	Crime Laboratory: Toxicology Testing; DNA Testing; and Crime Scene Response (Paper #535)





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Joint Committee on Finance

Paper #535

### **Crime Laboratory: Toxicology Testing; DNA Testing; and Crime Scene Response (Justice -- Forensic Science)**

[LFB 2023-25 Budget Summary: Page 380, #1; and Page 381, #2 and #3]

#### **CURRENT LAW**

The Department of Justice's (DOJ) Division of Forensic Services (DFS) operates the state's three regional crime laboratories, located in Madison, Milwaukee, and Wausau. Under s. 165.75(3) (a) of the statutes, the purpose of the state crime laboratories is to "provide technical assistance to local law enforcement officers in the various fields of scientific investigation in the aid of law enforcement. ...[T]he laboratories shall maintain services and employ the necessary specialists, technical and scientific employees for the recognition and proper preservation, marking and scientific analysis of evidence material in the investigation and prosecution of crimes in such fields as firearms identification, the comparison and identification of toolmarks, chemistry, identification of questioned documents, metallurgy, comparative microscopy, instrumental detection of deception, the identification of fingerprints, toxicology, serology and forensic photography."

#### **DISCUSSION POINTS**

1. The state crime laboratories are responsible for providing scientific and technical assistance to state and local law enforcement agencies, upon their request. The budget in 2022-23 for the state crime laboratories (less amounts budgeted for deoxyribonucleic acid (DNA) analysis) totals \$14,835,200 (all funds) and 99.4 positions. The state crime laboratories' funding is comprised of \$5,780,800 GPR and \$9,054,400 PR, as well as 20.3 GPR and 79.1 PR positions.

2. The three state crime laboratories are currently authorized the following types of specialists (excluding specialists for DNA analysis): (a) fingerprint and footwear examiners; (b) controlled substance analysts; (c) forensic program technicians; (d) toxicologists; (e) forensic imaging specialists; (f) firearms and toolmark examiners; (g) trace evidence examiners; (h) forensic science

training coordinators; and (i) identification technicians. In addition to these specialist positions, additional supervisory and support positions include forensic scientist supervisors, office associates, forensic science program chiefs, justice supervisors, a crime laboratory director, information services personnel, and an executive staff assistant.

3. The Division received \$12,188,300 in American Rescue Plan Act (ARPA) funding. This funding is being used for certain staff, purchasing updated equipment to identify synthetic drugs and drug analogs that are toxic at very low levels, and purchasing and implementing a Laboratory Information Management System (LIMS), which will allow law enforcement and district attorneys to access lab results in real time. The funding will expire at the end of 2024.

4. The state crime laboratories are also authorized positions for DNA analysis activities. These positions include: (a) DNA analysts; (b) forensic scientist supervisors; and (c) forensic program technicians. Table 1 identifies the caseload of the state crime laboratory analysts during calendar year 2021. Many cases referred to the state crime laboratories require more than one type of analysis. As a result, the total number of case types opened and completed by the crime laboratories, as identified in Table 1, is larger than the total number of distinct law enforcement cases referred to the crime laboratories.

**TABLE 1**

**Analyst Caseloads in 2021**

<u>Case Type</u>	<u>Case Intake</u>	<u>Case Output</u>
Controlled substances	4,430	3,522
DNA analysis	3,612	3,526
Toxicology	4,073	4,078
Latent Prints	1,000	963
Firearms	437	399
Photo work order	470	489
Trace evidence	95	87
Crime scene response	155	155
Forensic imaging	84	71
Footwear or tire track	18	19
Toolmarks	7	12
	<u>Samples Received</u>	<u>Leads Reported</u>
DNA databank	20,736	882

5. Employees of the state crime laboratories may undertake an investigation of criminal conduct only upon the request of a sheriff, coroner, medical examiner, district attorney, chief of police, warden or superintendent of any state prison, state agency head, the Attorney General or the Governor. The Department is authorized to decline laboratory services in any case that does not involve a

potential felony charge. The state crime laboratories generally do not accept misdemeanor cases. Following such a request, the laboratories must collaborate fully in the complete investigation of criminal conduct and bring to bear the full range of their forensic skills.

## **Toxicology**

6. The crime laboratories provide forensic toxicology services for law enforcement agencies. Forensic toxicology is generally an analysis of bodily specimens to determine the presence of chemicals that are harmful or for which ingestion is in some way defined as a criminal offense. The laboratories identify and quantify the amount of drugs, alcohol, and poisons in biological specimens such as blood, urine, or tissue. The information is used by law enforcement to help determine if laws have been violated and if criminal charges are warranted. Forensic toxicologists also assist in postmortem investigations to establish cause or circumstances of death. Depending on the case, toxicology testing can range from a single blood alcohol test to a determination of the concentration of multiple drugs and their metabolites in a single biological sample. Testing for the presence and quantity of alcohol is the most common toxicological test performed by the crime labs.

7. Full toxicology services are provided by the Madison and Milwaukee Crime Laboratories. The Wausau Crime Laboratory provides toxicology services only as it relates to blood alcohol content. For other toxicological services, the Wausau region is served by the Madison crime laboratory. The Crime Lab currently has 12.0 toxicology positions (8.0 PR and 4.0 FED). Toxicology cases have increased from 3,609 cases in 2019 to 4,073 cases in 2021.

8. In 2018, the Wisconsin State Department of Justice contracted the National Forensic Science Technology Center at Florida International University (NFSTC) to perform a needs assessment of the Wisconsin State Crime Laboratory Bureau (WSCLB). As the division indicates, "four additional full-time positions are required to process the current level of case submissions and perform mandatory technical improvement and non-casework activities per the recommendations of the Needs Assessment report." While not provided, the Division requested these positions in the 2021-23 biennium.

9. The toxicology unit currently has four toxicologists in training in FED ARPA positions and one recent vacancy, which is in the process of being filled. The Division indicates that toxicologists take two years to become fully trained, obtain necessary certifications, and maintain a full caseload, but are able to have a positive impact on caseloads prior to the completion of the training period.

10. Assembly Bill 43/Senate Bill 70 would provide \$154,800 GPR and 4.0 GPR positions in 2024-25 when federal ARPA funds expire to address the demand for forensic toxicology testing performed by the state crime laboratories. The Division indicates that an increase in overdose deaths has been experienced nationwide, "in part due to strains caused by the pandemic, but also because of the increasing variety and prevalence of incredibly deadly fentanyl analogues." More [GPR] resources are needed to respond to this growing public safety challenge. We are requesting additional [GPR] toxicology staff for the Wisconsin State Crime Laboratories. It is critical that our scientists have the resources necessary to keep pace with the opioid epidemic as it continues to evolve."

11. The Department argues that before ARPA funding was available the need for toxicologists was of a high enough demand that the workload was also being handled by the Controlled Substances Unit. In addition, "technical improvement activities have been delayed. Cumulatively, this is not sustainable long-term and will place the success of the unit at risk. Four additional full-time GPR positions when current ARPA positions expire are required to process the current level of case submissions and perform mandatory technical improvement and non-casework activities"

12. The Department indicates that besides analytic work, toxicologists also perform instrument maintenance and performance checks, assessment and validation, quality control of reagents and consumables, court preparation and testimony, evaluation of emerging methodology and technology, engagement with the forensic science community and stakeholders in the state, research and support of other laboratories. Given that the 4.0 toxicologists are currently in training, the long lead time to fully train staff to the level of technical proficiency required for the positions, and the increasing workload of the laboratories as cases become more complex, the Committee could provide \$154,800 GPR and 4.0 GPR in 2024-25 positions to address the demand for forensic toxicology testing performed by the state crime laboratories. [Alternative 1]

13. In the 2021-23 biennial budget, the Governor recommended creation of 4.0 toxicology positions. While the Committee did not provide these positions, \$455,000 PR in 2021-22 was provided for laboratory instrumentation. If funding is not provided for continuation of the 4.0 toxicologist positions, the ARPA positions will end in 2024.

## **DNA Testing**

14. *DNA/Serology.* This type of analysis involves the identification and characterization of biological materials, including blood, semen and other body fluids. Except for identical twins, each individual's genetic profile is unique. The genetic profile of a suspect developed from submitted biological material may be compared to the genetic profile developed from biological material collected from a crime scene to link a suspect to a crime. DNA/serology analysis services are provided by the Madison and Milwaukee crime labs. The Wausau crime lab region is served by Madison crime lab.

15. *DNA Databank.* The DNA Databank stores DNA profiles from samples on all convicted offenders and, beginning on April 1, 2015, the profiles of certain individuals arrested for violent felonies. The state system is connected to the national system to help identify suspects when unknown DNA is found at a crime scene. While the DNA databank is located at the Madison crime laboratory, the databank includes DNA profiles from samples which were analyzed and catalogued at the Milwaukee crime laboratory.

16. Table 2 below describes the main categories of persons that must have biological samples collected.

**TABLE 2**

**Circumstances Requiring DNA Samples 1995 to Present**

<u>Date</u>	<u>Circumstances</u>
Prior to January 1, 2000	Certain sex offenders and persons ordered by a judge following conviction or adjudication of certain serious crimes.
After January 1, 2000	Individuals who have either been found guilty of a felony or are in prison for any felony committed in Wisconsin.  Individuals committed as sexually violent persons.
After April 1, 2015	Individuals who have been found guilty of a misdemeanor.  Individuals who are arrested for or charged with a felony defined as a violent crime (the sample would be tested only after a probable cause determination).

17. Biological samples collected as a result of one of the reasons discussed above (except if the biological specimen is obtained from an individual at arrest, or when a juvenile is taken into custody, for a violent crime) are analyzed by the crime laboratories. The crime laboratories enter the data obtained from the DNA analysis into the DNA databank. The laboratories may compare the data obtained from one specimen with data obtained from other specimens. The laboratories may also make the data obtained from the analysis available to those in connection with criminal or delinquency investigations, including law enforcement agencies, prosecutors, defense attorneys, and the subject of the data.

18. In addition to analyzing biological specimens submitted as a requirement under state law, the crime laboratories must analyze the DNA in human biological specimens that are provided pursuant to any of the following requests: (a) a law enforcement agency regarding an investigation; (b) a defense attorney regarding his or her client's specimen, pursuant to a court order; and (c) an individual regarding his or her own specimen, subject to rules established by the Department. The laboratories may compare the DNA data from the provided specimen with data obtained from other specimens. The data obtained from one of these provided specimens may be used in a criminal or delinquency proceeding. However, the DNA data obtained from a specimen provided pursuant to one of the requests enumerated above may not be included in the DNA databank.

19. To handle the volume of DNA analysis, the crime labs employ 61.5 DNA analysts (31.5 GPR and 30.0 PR). Total estimated training time is two years and 3.5 months. Upon successful completion of competency testing, the trainee is able to contribute to the technical review process and is considered fully trained. Currently, four DNA analysts are in training.

20. As of July 1, 2022, there were 358,611 DNA profiles in the state's convicted offender database, comprised of 334,894 offender profiles and 23,717 arrestee profiles. "Casework" DNA

profiles are developed from biological specimens from crimes scenes that are not tied to a specific individual. As DNA profiles are added to the convicted offender DNA database, DOJ is increasingly able to match "casework" DNA profiles with either known profiles in the convicted offender DNA database or with other "casework" profiles in the casework index. As of July 1, 2022, there were 24,756 casework DNA profiles in the state database.

21. The convicted offender DNA database and the casework DNA profiles have become increasingly effective crime-solving tools. In calendar year 2021, there were 841 matches or "hits." Of these 841 hits, there were 800 instances of hits that matched unknown profiles with known convicted offender profiles and 41 instances of hits that involved evidentiary profiles matching evidentiary profiles derived from different cases.

22. In 2020, the DNA Units of the Division of Crime Labs validated probabilistic genotyping. The Division indicates that this tool allows the lab:

"to resolve previously uninterpretable DNA profiles that may occur when a DNA sample is very small or includes a mixture of multiple individuals' DNA. This increased capability resulted in more complex interpretations for DNA analysts as more cases resulted in conclusive results and more detailed reports, but also increased the amount of time and effort required to complete a DNA case. Additionally, requests for DNA analysts to testify in court has steadily increased in recent years due to the desire to have forensic testimony presented in criminal cases. The increase in testimony takes DNA analysts away from the laboratories and limits the amount of time available to perform analysis."

23. Further, DFS indicates the DNA Units have received an increasing number of sexual assault case submissions, which take additional time to analyze and interpret, as evidence likely contains mixtures of DNA. Four additional DNA analyst positions will allow the DNA Units to process more DNA cases using advanced probabilistic genotyping technology, meet the demands of DNA testimony, and process evidence in sexual assault cases in a timelier manner.

24. The Division states that these positions are needed to respond to workload needs and changes of DNA field, increase capacity for solving cold cases as scientific advances have significantly decreased the amount of DNA needed for testing. Given the needs of the law enforcement and the criminal justice system for high quality DNA analysis, the Committee may wish to provide additional DNA analysts. [Alternative 2] This alternative would provide \$237,300 GPR in 2023-24 and \$309,700 GPR in 2024-25 and 4.0 positions annually to address workload issues for forensic DNA testing performed by the State Crime Laboratories.

### **Crime Scene Response Unit**

25. The Madison, Milwaukee and Wausau crime laboratories have a Crime Scene Response Unit (CSRU), which provides 24 hour, seven days a week crime scene investigation assistance to law enforcement agencies at major violent crime scenes and autopsy examinations investigations in all 72 counties. The CSRUs primarily respond to homicides, officer-involved shootings, and clandestine grave sites. In calendar year 2021, the CSRUs responded to 155 requests for assistance by law enforcement. Depending on the type of scene, anywhere from three to five crime lab employees responded to each scene. In addition to responding to requests for assistance, the CSRUs also provide



training to local officers in crime scene investigation techniques.

26. The CSRU currently has 5.0 positions (4.0 PR and 1.0 FED). The unit has no current vacancies. In addition to assigned staff, volunteers for the CSRUs are drawn from the staff of various units within the WSCLB. Currently, there are twenty-two individuals employed by the WSCLB from multiple disciplines and all three Bureau locations that volunteer as members of the CSRU. These individuals receive specialized forensic training in crime scene photography, blood stain pattern, casting, body fluid collection, blood borne pathogens, fingerprint and footwear development and recovery, bullet trajectory, buried body recovery, and processing vehicles.

27. While these volunteers are on call, they earn \$2.25 per hour. When on a crime scene, employees are paid their normal hourly rate. According to the crime labs, despite the amount of time a volunteer may spend on call, their required caseload is not adjusted accordingly. Therefore, over time, the additional duties associated with working on the CSRU may place a burden not only volunteers, but also on the staff within the volunteer's unit at the laboratory.

28. Given that one crime scene response team can be up to five employees, the conversion of the temporary ARPA funded position to GPR would provide the crime lab with one full-time team or provide two full teams with the assistance of one volunteer to respond to crime scenes in two different areas at the same time.

29. Given the assistance CSRUs provide to local law enforcement and any subsequent court case, the Committee could provide an additional crime scene response specialist position. [Alternative 3] This alternative would provide \$48,700 GPR and 1.0 GPR position in 2024-25, which would continue a filled position when federal ARPA funds expire.

30. If the Committee believes that additional staff support for the crime labs is appropriate, but could be provided with fewer staffing, the Committee could provide \$118,700 GPR and 2.0 GPR positions in 2023-24 and \$298,600 GPR and 5.0 GPR positions in 2024-25 and allow DFS to determine the areas of highest need. This would allow the crime labs to provide some additional support to the crimes labs, but at a lower level of positions. [Alternative 4]

31. If no action is taken, base resources plus standard budget adjustments would remain to support crime laboratory functions (\$10.6 million GPR and 57.3 GPR positions annually, \$0.8 million FED and 12.0 FED positions in 2023-24 and \$0.4 million FED and 0.0 FED positions in 2024-25, \$16.1 million PR and 121.0 PR positions annually). [Alternative 5]

## ALTERNATIVES

1. Provide \$154,800 GPR and 4.0 GPR in 2024-25 positions to address the demand for forensic toxicology testing performed by the state crime laboratories when federal ARPA funds expire.

ALT 1	Change to Base	
	Funding	Positions
GPR	\$154,800	4.00

2. Provide \$237,300 GPR in 2023-24 and \$309,700 GPR in 2024-25 and 4.0 positions annually to address workload issues for forensic DNA testing performed by the State Crime Laboratories resulting from new technologies, including probabilistic genotyping and forensic investigative genetic genealogy. Funding would support: (a) personnel costs \$217,300 in 2023-24 and \$289,700 in 2024-25 and (b) supplies and services, \$20,000 annually.

<b>ALT 2</b>	<b>Change to Base Funding</b>	<b>Positions</b>
GPR	\$547,000	4.00

3. Provide \$48,700 GPR and 1.0 GPR positions in 2024-25 for a crime scene response specialist when federal ARPA funds expire.

<b>ALT 3</b>	<b>Change to Base Funding</b>	<b>Positions</b>
GPR	\$48,700	1.00

4. Provide \$118,700 GPR and 2.0 GPR positions in 2023-24 and \$298,600 GPR and 5.0 GPR positions in 2024-25 to provide increased staff support for the state crime laboratories.

<b>ALT 4</b>	<b>Change to Base Funding</b>	<b>Positions</b>
GPR	\$417,300	5.00

5. Take no action.

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