



## Legislative Fiscal Bureau

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Joint Committee on Finance

Paper #412

### Crime Laboratory Equipment and Supplies (Justice)

[LFB 2017-19 Budget Summary: Page 271, #12]

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#### CURRENT LAW

The Department of Justice's (DOJ) Crime Laboratory Bureau operates the state's three regional crime laboratories, located in Madison, Milwaukee, and Wausau. The Department's crime laboratory equipment and supplies annual PR appropriation is utilized to support the maintenance, repair, upgrade, and replacement costs of equipment, as well as operating costs, at the three laboratories. This appropriation is supported by revenue from the crime laboratory and drug law enforcement (CLDLE) surcharge and the deoxyribonucleic acid (DNA) surcharge. More specifically, money is transferred from the CLDLE and DNA surcharge fund to the crime laboratory equipment and supplies appropriation. Base funding for crime laboratory equipment and supplies totals \$558,100.

Under s. 968.20 of the statutes, firearms and ammunition seized by law enforcement agencies that are not required for evidence or use in further investigation, and for which the owner of the property has not requested the return, must be shipped to and become the property of the state crime laboratories. [The statutes provide that a seized firearm or ammunition may not be returned to any person who committed a crime involving the use of the firearm or the ammunition.] A person at DOJ may destroy any material for which the laboratories have no use or arrange for the exchange of material with other public agencies.

#### GOVERNOR

Provide \$200,000 PR in 2017-18 and \$300,000 PR in 2018-19 to increase funding for equipment and supplies at the state's three crime laboratories.

## **DISCUSSION POINTS**

1. The bill provides DOJ with \$200,000 PR in 2017-18 and \$300,000 PR in 2018-19 for equipment and supplies at the state crime laboratories. Program revenue for these costs would be supported by a transfer of monies from the CLDLE and DNA surcharge fund. As identified in a separate paper on this fund, under the bill, the fund is projected to conclude the 2017-19 biennium with a balance of \$2,322,100. Therefore, the fund has a sufficient balance to support additional funding for crime laboratory equipment and supplies, as recommended by the Governor. However, it should also be noted that, under the bill, the fund is estimated to operate in a structural deficit during the 2017-19 biennium. In 2017-18, total obligations (\$16,235,700) are estimated to exceed annual revenue (\$15,000,000) by \$1,235,700, and in 2018-19, total obligations (\$16,603,000) are estimated to exceed annual revenue (\$15,000,000) by \$1,603,000.

2. The Department utilizes its crime laboratory equipment and supplies appropriation to support ongoing equipment and software maintenance costs, supply purchases, and the replacement of minor equipment. Base funding for this appropriation is \$558,100 PR annually. In recent years, DOJ has fully utilized the expenditure authority in this appropriation.

3. The Department initially requested the increase in funding in its biennial budget request. According to DOJ, funding under the bill (\$200,000 PR in 2017-18 and \$300,000 PR in 2018-19) would support the following: (a) \$50,000 annually to support the costs of disposing of ammunition that is shipped to the state crime labs after it is seized during an investigation; (b) \$150,000 in 2017-18 for the purchase of a new online case management system; and (c) \$250,000 in 2018-19 for the purchase of enhanced equipment utilized for forensic toxicology. The remainder of this paper is divided into three sections corresponding to the three items identified above, with alternatives in each section.

### **Disposal of Ammunition**

4. Current law requires ammunition seized by law enforcement agencies that are not required for evidence or use in further investigation, and for which the owner of the property has not requested the return, to be shipped to and become the property of the state crime laboratories. The Department utilizes a statewide contract with Veolia Environment S.A., a company that provides waste management services, for ammunition disposal services. The ammunition is collected and packaged at the laboratories by Veolia, and then transported off site for incineration.

5. The Department began annual destruction of ammunition in 2016. Prior to 2016, the crime laboratories would perform less frequent destructions of ammunition, however the ammunition was accruing to high levels. In 2015, the crime labs destroyed 43,371 pounds of ammunition, at a cost of \$275,000 (approximately \$6.34 per pound). In 2016, the crime laboratories destroyed 9,816 pounds of ammunition at a cost of \$61,000 (approximately \$6.21 per pound). It is anticipated that DOJ will need to destroy a comparable amount of ammunition to the amount that was destroyed in 2016 in subsequent years.

6. The Department does not utilize its crime laboratory equipment and supplies appropriation to support the destruction of ammunition sent to the crime labs, since the

appropriation's budget is fully utilized to support other ongoing expenditures. Instead, DOJ primarily utilizes its law enforcement services general program operations GPR appropriation to support these costs. [The Department also utilizes program revenue from the CLDLE surcharge and the DNA surcharge that is received in a different appropriation for the crime labs within DOJ, as well as Attorney General discretionary settlement funds.]

7. As noted above, in 2016, the Department paid \$6.21 per pound of ammunition under the state's contract with Veolia for the disposal of 9,816 pounds of ammunition, for a total cost of \$61,000. In January, 2017, the state's contract with Veolia was updated, and the price of the destruction of ammunition was increased to \$7.00 per pound. Based on the number of pounds of ammunition destroyed by DOJ in 2016, the increase in the contract price would increase DOJ's annual cost of disposal by \$7,800.

8. The bill provides DOJ \$50,000 PR annually to DOJ's crime laboratory equipment and supplies appropriation to support costs associated with the disposal of ammunition. Revenue for the increased expenditures would be supported by the CLDLE and DNA surcharge fund. Given that the disposal of ammunition sent to the crime labs represents an ongoing cost for the Department, and that DOJ is required under statutes to receive this ammunition, the Committee could approve the Governor's recommendation [Alternative A1]. This alternative would increase DOJ's base budget by \$50,000 PR annually.

9. Alternatively, the Committee could reduce the amount of funding provided under the bill for ammunition disposal. The Department currently utilizes its base resources to support the cost of ammunition disposal. However, in January, 2017, the cost of the disposal of ammunition increased under the state's contract with Veolia. Under the revised contract, the price of the disposal of ammunition increased to \$7.00 per pound. This increase is anticipated to increase DOJ's annual costs by \$7,800. Therefore, the Committee could modify the Governor's recommendation, and provide DOJ with \$7,800 PR annually to support the disposal of ammunition [Alternative A2]. Under this alternative, DOJ could continue to utilize base resources to support the majority of the costs of ammunition disposal. If DOJ is unable to utilize base resources to support these costs, the Department could request an expenditure authority increase from the Finance Committee under s. 16.515 of the statutes. Alternative A2 would reduce funding under the bill by \$42,200 PR annually.

10. On the other hand, the Committee could maintain current law and not include additional funding for DOJ for ammunition disposal [Alternative A3]. As discussed above, DOJ currently utilizes base resources to support these costs. Therefore, one could question the Department's need for additional funding at this time. If DOJ requires additional funds in the future for this purpose, the Department could request an expenditure authority increase from the Committee under s. 16.515 of the statutes.

### **Online Case Management System**

11. The bill provides DOJ with \$150,000 PR in 2017-18 to purchase a new online case management system called the Mideo LatentWorks System. The System is a software product primarily designed to manage the analysis of fingerprint and image evidence, although it also has applications for firearms and toolmark evidence. The new system will be utilized to connect all

three state crime labs via video and computer applications, allowing evidence items to be examined, reviewed and discussed between labs in real time. The System will also provide for online documentation of evidence items and a secure chain of custody. The crime labs do not currently have a similar online system in place that connects fingerprint identification and imaging operations across all three crime labs.

12. The Department has identified four primary benefits associated with the purchase of the Mideo LatentWorks System. First, the System would provide the crime labs with a more robust process and infrastructure for evidence documentation and analysis. This will assist the crime labs meet various accreditation requirements of the International Organization for Standardization and the Organization of Scientific Area Committees for Forensic Science. [These two organizations establish standards for the forensic science community and scientific laboratories.] Second, the System would allow the crime labs move towards a paperless system, which could make the labs more efficient. Third, the System would assist the crime labs better incorporate "blind verification" into their processes, which is the process by which the examiner who makes the initial evidence identification is separated from the examiner who performs the verification of those findings. Finally, the System has training modules incorporated into the software, which would ensure that all analysts hired by the crime labs would be trained in the same manner, regardless of the laboratory that provides the training.

13. The Department estimates the costs to purchase and install the System in all three crime laboratories to be \$125,000. After the initial purchase, DOJ estimates that it will incur \$16,000 annually in ongoing costs for maintenance and IT support. The bill provides DOJ with \$150,000 PR in 2017-18 to purchase the new System. In recognition of the benefits that could be provided by the Mideo LatentWorks System to the crime labs, the Committee could approve the Governor's recommendation to provide DOJ with \$150,000 PR in 2017-18 [Alternative B1].

14. As noted above, while the bill provides DOJ \$150,000 in 2017-18 to support the purchase of the new System, DOJ estimates that the System will initially cost \$125,000 to purchase and install the System, and then \$16,000 annually thereafter for maintenance and IT support. Further, funding provided to DOJ for the purchase of the new System is provided on the Department's supplies and services budget line. The Committee may wish to modify the funding that is provided under the bill to more closely align the amount that is provided for the purchase of the new System with DOJ's cost estimate. Further, the Committee may wish to modify the funding under the bill to account for the one-time nature of the costs to purchase the equipment, and the ongoing nature of future maintenance costs. In order to do so, the Committee could do the following: (a) provide DOJ with \$125,000 PR in 2017-18 and \$16,000 PR in 2018-19 (as opposed to providing \$150,000 PR in 2017-18); and (b) provide funding in 2017-18 as one-time financing and provide funding in 2018-19 as ongoing supplies and services [Alternative B2]. Under this alternative, funding under the bill would be reduced by \$25,000 PR in 2017-18 and increased by \$16,000 PR in 2018-19.

15. On the other hand, the Committee could maintain current law and not include additional funding for DOJ to purchase the Mideo LatentWorks System [Alternative B3]. It could be argued that the crime labs are able to provide adequate forensic services to the state without the

Mideo System. In addition, as noted above, while the CLDLE and DNA surcharge fund has a sufficient balance to support the additional expenditures recommended by the Governor, the fund is projected to operate in a structural deficit during the 2017-19 biennium. To the extent that the fund continues to operate with a structural deficit in future fiscal years, the balance in the fund may be depleted. This alternative would reduce funding under the bill by \$150,000 PR in 2017-18.

### **Forensic Toxicology Equipment**

16. 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.

17. 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. In 2015-16, the crime labs opened 4,306 toxicology cases, and completed 3,927 cases.

18. Currently, the Madison Crime Laboratory has gas chromatography/mass spectrometry (GC/MS) equipment to confirm and quantitate drugs in blood, urine, and other blood samples. In contrast, the Milwaukee Crime Laboratory has liquid chromatography/mass spectrometry (LC/MS) equipment for this purpose. Chromatography is a separation technique, and is utilized to separate different drugs, as well as other components of the biological sample, from each other. Gas chromatography makes this separation happen when the samples are in a gaseous phase. Accordingly, this technique requires samples to be heated until they become a gas. Rather than requiring a sample to be converted to a gas for analysis, LC/MS analyzes the sample in its liquid form. The use of chromatography, coupled with mass spectrometry (which is an analytical technique utilized to identify atoms or molecules in a sample based on their mass), allows the crime laboratories to identify and quantify drugs in a biological sample.

19. The Department has expressed concerns regarding the current GC/MS equipment at the Madison Crime Laboratory. To this point, DOJ indicates the following:

"For a number of years, GC/MS was the gold standard of forensic toxicology analysis; however, it has limitations. GC/MS requires samples to be heated until they become a gas. This is problematic for compounds that are not stable at high temperatures. Examples of this are aspirin, psilocybin (an ingredient in psychedelic mushrooms), and quetiapine (active ingredient in Seroquel, which is used to treat psychosis). GC/MS is also problematic for compounds that are nonvolatile, or compounds that do not easily turn into a gas. Two of the

morphine metabolites, morphine-3-glucuronide and morphine-6-glucuronide, are examples. Compounds that dissolve more easily in water can be analyzed by GC/MS, but they must undergo a series of steps to convert them to the form that can be analyzed by GC/MS. Additionally, many compounds require a sample preparation step called derivatization. This process makes the compounds of interest more stable and distinguishable for analysis by GC/MS."

20. In addition, DOJ indicates that toxicologists are having difficulty detecting certain drugs that are relatively new, due to the sensitivity level of GC/MS. Specifically, the crime labs are having difficulty detecting certain synthetic drugs such as synthetic cannabinoids, substituted cathinones (the psychoactive ingredient in "bath salts"), fentanyl analogs, 6-monoacetylmorphine (the primary metabolite of heroin, which is an indicator of recent heroin use), and buprenorphine (the active ingredient in Suboxone, a drug used for maintenance therapy in opiate addicts). These drugs are typically not present in blood in very high concentrations. Therefore, with equipment with greater sensitivity, the crime labs could reduce the risk of a false negative test result.

21. Due to the issues noted above, the Milwaukee Crime Laboratory handles some of the toxicology cases that would normally be handled by the Madison Crime Laboratory, since the Milwaukee Crime Laboratory has liquid chromatography/mass spectrometry equipment.

22. The bill provides DOJ with \$250,000 PR in 2018-19 to purchase liquid chromatography/mass spectrometry equipment for the Madison Crime Laboratory to replace its GC/MS equipment. Liquid chromatography allows compounds that are not stable at high temperatures to be analyzed, and allows for the analysis of nonvolatile compounds because the compounds do not need to be heated to their gaseous state. Further, DOJ indicates that the primary benefits of analyzing samples with LC/MS, as opposed to GC/MS, are four-fold: (a) LC/MS technology enables the detection and quantification of smaller amounts of drugs through increased sensitivity; (b) the sample preparation procedure for LC/MS is significantly shorter than the sample preparation procedure for GC/MS; (c) the testing time for LC/MS is significantly shorter than the testing time for GC/MS; and (d) LC/MS technology allows toxicologists to screen for a larger number of drugs at once.

23. The cost to purchase the LC/MS equipment is \$250,000, with estimated ongoing costs of \$30,000 per year for a service agreement and maintenance. In order to enhance the Madison Crime Laboratory's ability to provide forensic toxicological services, the Committee could approve the Governor's recommendation and provide DOJ with \$250,000 PR in 2018-19 to purchase LC/MS equipment [Alternative C1]. This alternative would increase DOJ's base budget by \$250,000 PR in 2018-19.

24. Funding under the bill is provided on an ongoing basis, and would, therefore, be included in DOJ's base budget for the 2019-21 biennium. However, according to DOJ, the cost to purchase new LC/MS equipment is \$250,000, with ongoing costs of \$30,000. In order to reflect the one-time nature of the purchase of LC/MS equipment, the Committee could reallocate \$220,000 PR in 2018-19 that is provided to DOJ under the bill from ongoing supplies and services funding to one-time financing [Alternative C2]. Funding provided as one-time financing would not be included in DOJ's base budget for the 2019-21 biennium. This alternative would not modify the amount of

funding that is provided under the bill.

25. On the other hand, the Committee could maintain current law and not include additional funding for to purchase new forensic toxicology equipment [Alternative C3]. The crime labs currently have equipment to provide forensic toxicology services to law enforcement. Further, the Milwaukee Crime Laboratory already has equipment that allows it to handle toxicology cases that would be bettered performed with LC/MS equipment. In addition, as noted above, while the CLDLE and DNA surcharge fund has a sufficient balance to support the additional expenditures recommended by the Governor, the fund is projected to operate in a structural deficit during the 2017-19 biennium. To the extent that the fund continues to operate with a structural deficit in future fiscal years, the balance in the fund may be depleted. This alternative would reduce funding under the bill by \$250,000 PR in 2018-19.

## ALTERNATIVES

### A. Disposal of Ammunition

1. Include the Governor's recommendation to provide \$50,000 PR annually to DOJ's crime laboratory equipment and supplies appropriation to support the costs of disposing of ammunition that is sent to the crime laboratories.

ALT A1	Change to	
	Base	Bill
PR	\$100,000	\$0

2. Provide \$7,800 PR annually to DOJ to support the costs of disposing of ammunition that is sent to the crime laboratories.

ALT A2	Change to	
	Base	Bill
PR	\$15,600	-\$84,400

3. Maintain current law.

ALT A3	Change to	
	Base	Bill
PR	\$0	-\$100,000

## B. Online Case Management System

1. Include the Governor's recommendation to provide \$150,000 PR in 2017-18 to DOJ's crime laboratories equipment and supplies appropriation to support an online case management system for the crime labs. Under this alternative, funding would be provided to DOJ's supplies and services budget line.

ALT B1	Change to	
	Base	Bill
PR	\$150,000	\$0

2. Provide \$125,000 PR in 2017-18 and \$16,000 PR in 2018-19 to support the costs of purchasing a new online case management system for the crime laboratories. Funding provided in 2017-18 would be one-time financing, and funding provided in 2018-19 would be ongoing supplies and services funding.

ALT B2	Change to	
	Base	Bill
PR	\$141,000	- \$9,000

3. Maintain current law.

ALT B3	Change to	
	Base	Bill
PR	\$0	- \$150,000

## C. Forensic Toxicology Equipment

1. Include the Governor's recommendation to provide \$250,000 PR in 2018-19 to DOJ's crime laboratories equipment and supplies appropriation for the purchase of new forensic toxicology equipment. Under this alternative, funding would be provided to DOJ's supplies and services budget line.

ALT C1	Change to	
	Base	Bill
PR	\$250,000	\$0

2. Modify the Governor's recommendation by providing \$250,000 PR in 2018-19 for the purchase of forensic toxicology equipment, but provide \$220,000 PR in one-time financing and

\$30,000 PR in ongoing supplies and services funding. Under this alternative, \$30,000 PR would be included in DOJ's base budget for the 2019-21 biennium.

<b>ALT C2</b>	<b>Change to</b>	
	<b>Base</b>	<b>Bill</b>
PR	\$250,000	\$0

3. Maintain current law.

<b>ALT C3</b>	<b>Change to</b>	
	<b>Base</b>	<b>Bill</b>
PR	\$0	-\$250,000

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