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STATE OF MINNESOTA

FORENSIC LABORATORY ADVISORY BOARD
1430 Maryland Avenue East • St. Paul, MN 55106

Report on the appropriateness of additional regional forensic crime laboratories.

Issue:

Should forensic services be expanded through additional regional laboratories?

Recommendation Summary:

1. It is recommended that an overall increase in forensic laboratory services be made to meet current and projected demand.

2. It is recommended that there be a systematic expansion of regional forensic crime laboratories in the State of Minnesota

3. If state funds are used to support regional forensic services, it is recommended that specific factors be considered.

I. Introduction

Minnesota Session Laws 2007 - Chapter 54, Article 1 states, in part, that the commissioner of public safety shall convene a working group to study and prepare a report on the appropriateness of additional regional forensic crime laboratories. The Forensic Laboratory Advisory Board ("Board"), established under Minnesota Statutes, section 299C.156, must provide advice and assistance to the commissioner and the working group as requested by the commissioner. The working group must submit its report and recommendations to the House of Representatives and Senate committees with responsibility for public safety finance by February 1, 2008.

Note: The Board has been selected by the Commissioner of Public Safety, with the concurrence of the chairs of the legislative committees with responsibility for public safety finance, to serve as the core group reporting on the appropriateness of additional regional forensic crime laboratories. The members of the group who prepared and endorse this report are:

- *Frank C. Dolejsi, Director MN BCA Forensic Science Service, Chair*
- *Sheriff Bruce Andersohn, Anoka County Sheriff*
- *Bart Epstein, Retired Assistant Director MN BCA Laboratory*
- *Christine A. Funk, Assistant State Public Defender*

- *Susan Gaertner, Ramsey County Attorney*
- *Chief Bob Jacobson, New Brighton Police Department*
- *Lt. Brian Kasbohm, Director Hennepin County Sheriff's Crime Laboratory*
- *Steven Lundeen, Lundeen Law Office*
- *Timothy J. O'Malley, Superintendent MN BCA*
- *Honorable Kevin Ross, MN Court of Appeals*
- *Eric Schieferdecker, Assistant Attorney General*
- *Mike Smith, Deputy Director of Special Investigations, MN Department of Corrections*
- *Sheriff Rich Stanek, Hennepin County Sheriff*
- *William Toscano, PhD University of Minnesota*
- *Lowell Van Berkom, Retired Director MN BCA Laboratory*

II. Background

The Board kept in mind an overarching goal of promoting justice by providing high quality, timely forensic science services to all Minnesotans affected by the Criminal Justice System. Veritable justice is at the heart of the Board's recommendations.

Advances in science and technology have led to enhanced abilities to collect, preserve and analyze evidence. As a result, scientific examination of physical evidence recovered from all types of crime scenes has increased exponentially in recent years. Forensic evidence, such as DNA, is now demanded by the criminal justice system and is of decisive importance in achieving justice. This demand for analysis of evidence will continue to rise. Increased capacity to meet that demand will be crucial to meaningful justice: free the innocent and convict the guilty. Punctual forensic analysis will result in the timely exoneration of innocent people and, in turn, their timely release from custody. Moreover, punctual analysis will lead to the prompt arrests of criminals before they commit additional crimes and victimize more Minnesotans. The process for adding capacity should be part of a purposeful, comprehensive, statewide plan.

Current Forensic Services:

The following is a list of state, city and county laboratories that provide crime laboratory services:

- BCA St. Paul - drug identification, trace evidence (hairs, fibers, glass, footprints etc.), latent fingerprints, firearms, questioned documents, toxicology, DNA, mitochondrial DNA, and crime scene processing (homicides and officer involved shootings). The BCA Laboratory also runs the DNA offender database program (referred to as CODIS, Combined DNA Index System) and the statewide breath alcohol testing program. *Note: Accredited by the American Society of Crime Laboratory Director/ Laboratory Accreditation Board (ASCLD/LAB).*
- BCA Bemidji - drug identification, latent fingerprints, firearms, DNA/serology and crime scene processing. (See "Bemidji Laboratory Experience" section at the end of this report.) *Note: Accredited by ASCLD/LAB and CODIS participating lab)*
- Hennepin County Sheriff's Office - crime scene processing, latent fingerprint development and identification, firearms identification, computer forensics and DNA analysis. *Note: Accredited by ASCLD/LAB and CODIS participating lab.*

- Minneapolis Police Department - crime scene processing, latent fingerprint processing and identification and firearms.
- Anoka County Sheriff's Office - crime scene processing, latent fingerprint, computer forensics, and drug identification. The Sheriff indicates that they plan to expand their services to include DNA.
- St. Paul Police Department – drug identification, latent fingerprints, and crime scene processing.
- Ramsey County Sheriff's Office – latent fingerprints and crime scene processing
- Carver County Sheriff's Office – latent fingerprints and crime scene processing
- St. Louis County Sheriff's Office – latent fingerprints and crime scene processing.
- Minneapolis Health Department – drug identification (for Minneapolis PD and some suburbs).
- St. Cloud Police Department – latent fingerprints and crime scene processing.
- Duluth Police Department - latent fingerprints.

Current capacity:

The advisory board report to the legislature dated June 29, 2007 (attached) recommended that forensic analysis should occur within thirty days. The BCA, which is the largest forensic laboratory in the state, and offers the widest range of scientific specialties, has not been able to meet that goal.

Gap Analysis:

Over 60% of the thousands of cases worked by both BCA laboratories in 2007 took more than 30 days to complete. Since 2002, the BCA has seen an overall 31% increase in cases with a 144% increase in DNA cases. Other city and county laboratories have also experienced significant increases.

In addition, it is estimated that in a majority of property crimes, evidence is not submitted or even collected due to lack of capacity. For example, of the 30,000 burglaries reported in 2007, evidence from fewer than 1,000 of these crimes was submitted to the BCA and Hennepin County laboratories.

Consequences:

Delays in forensic analysis result in innocent persons, who have been incarcerated, remain in custody for protracted lengths of time despite exonerating evidence. FBI studies indicate that up to 30% of suspects are cleared on the basis of DNA analysis. On the flip side of that issue, the longer it takes to identify a suspect, the greater the likelihood that more crimes will be committed and more persons victimized. Forensic science is the invisible partner in the criminal justice system whose full potential is not being realized.

III. Recommendation Details

The Board sought to assess the current forensic science laboratory state of affairs, anticipate future demand for services as well as the resources needed to meet those demands, and make recommendations regarding key factors and criteria for legislators to consider if state funding is appropriated. Many of the suggestions in this report could apply to all laboratories that provide forensic analysis for use in criminal court proceedings. However, the Board's intent was to provide guidance for legislative decisions relating to state funded laboratories. In other words, the recommendations are not intended to regulate laboratories funded exclusively by local units of government or the private sector.

1. The Board recommends an overall increase in forensic laboratory services to meet current and projected demand.

The Board strongly endorsed continued investment in the BCA laboratory and concluded that regional expansion should not be accomplished at the detriment of the BCA.

BCA Forensic Science Service Workload Report
Cases Received

Section	FY02	FY03	FY04	FY05	FY06	FY07	FY08 Estimate[1]	% increase FY02-08
Alcohol	6282	6257	6248	6410	6512	6387	7194	15%
Arson	168	188	163	161	202	237	254	51%
Nuclear DNA	1199	1717	1674	1941	2256	2792	2920	144%
Drugs	3603	3575	3984	4267	4210	4119	3380	N/A
Firearms	469	524	661	814	958	910	686	46%
Latent Prints	830	1117	1177	1230	1465	1521	1530	84%
Documents	60	102	89	97	102	89	82	36%
Toxicology	1404	1775	2063	2481	2596	2554	2320	65%
Trace	106	136	143	141	129	148	186	75%
mt-DNA[2]					75	111	230	N/A
Crime Scene	78	104	92	86	75	74	104	N/A
Total	14199	15495	16294	17628	18580	18942	18886	31%

[1] Estimate based on doubling the cases received in the first six months of FY08.
[2] FBI funded, cases from MN and other states.

2. The Board recommends a systematic expansion of regional forensic crime laboratories in the State of Minnesota.

Why regionalization? Beyond capacity, there are other considerations affecting regional expansion, some positively correlated to increased productivity. These include:

- *Proximity to law enforcement clients*

  The BCA regional laboratory in Bemidji has experienced a three-fold increase in case submissions for the counties it serves compared to the number of case submissions from

those same counties before the Bemidji laboratory became operational. In addition, client surveys indicate improvement in time and cost savings in getting their evidence to the laboratory. The process, which used to take up to one full day for most agencies, now takes 1–2 hours.

- *Proximity to crime scenes*

  Investigators, chiefs, sheriffs, county attorneys, and others served by the Bemidji laboratory have been interviewed. Consistently, they report improved service from the BCA after the Bemidji laboratory opened. The number one reason cited was the improved response time of the BCA crime scene team. Investigators value this because the team has been able to provide information about the scene during the first critical hours after an incident and, thereby, help provide direction to an investigation.

- *Access to attorneys*

  Both prosecutors and defense lawyers have opined that the cause of justice will be better served by providing lawyers close proximity to regional forensic laboratories. Such access will encourage and facilitate meetings of the lawyers and scientists at all stages of a criminal proceeding. These meetings will provide both sides with important information as to the strengths and weaknesses of the evidence. This information can result in early case resolution, as well as clarity of evidence presentation in trial.

- *Access to courts*

  Scientists from regional laboratories do not have to travel the distances that are required under a single state facility approach. Less time is spent traveling and more time is spent working in the laboratory. Additionally, travel expenses are reduced. In cases where the laboratory is in the same location as the court, the scientist can often be on call instead of traveling to court only to find the case has been settled or rescheduled.

- *Increased submissions*

  Although anecdotal, proximity is a reason cited to explain why some evidence is not being submitted to the BCA laboratory in St. Paul.

- *Local control*

  Laboratories operated and/or funded, in part, by cities or counties could better establish priorities aligned with local needs.

- *Training and Quality*

  Some benefits of regionalization are not readily measurable. For example, a significant benefit of the BCA's Bemidji laboratory is the ongoing education of law enforcement personnel, both through formal training sessions and informal means. During the first year

in operation, the Bemidji laboratory held a series of evidence collection and packaging classes at no cost to the agencies. Over 300 officers participated in the training. The result was an immediate increase in the quality of evidence collection and packaging. Along these same lines, officers delivering evidence in person receive instant feedback from the laboratory intake staff on proper evidence handling and packaging techniques.

3. **If state funds are used to support regional forensic services, the Board recommends that the following factors be considered:**

   - *Capacity and Need*

     Overall statewide capacity and backlog should be considered when determining the need for regional laboratories.

   - *Demographic Structure and Existing Services*

     The distance traveled by law enforcement to deliver evidence, the distance the scientist must travel to testify in court and the value of having scientific expertise close at hand for consultation and training are considerations.

     Population distribution, crime rates, and current accessibility to forensic resources should be considered when determining the location of regional crime laboratories.

   - *Local or Regional Commitment of Resources*

     By requiring a tangible local commitment as a condition of state fiscal support, the legislature will ensure local buy-in and support for regional crime laboratories. Regions with pronounced needs would likely be willing to make a case to local taxpayers for support. Additional local resources in geographic regions with added needs could readily tie into a comprehensive statewide approach and foster equal justice statewide.

   - *Operational Governance and Scientific Independence*

     Two of the important aspects of regionalization of forensic services in Minnesota are the issues of governance and scientific independence. Scientific independence is essential to preserve the integrity and impartiality of regional forensic crime laboratories. Laboratory personnel, therefore, should report to, and be directed by, professionals within the laboratory chain of command. The governance structure should protect regional laboratories from even the appearance of conflict or outside influence by clearly articulating these lines of authority.

     A regional laboratory's governance structure should help position that laboratory to withstand later scrutiny regarding scientific independence. This may require the state to play an oversight role. That role could take several forms, but should relate to meeting minimum standards of operation and/or accreditation requirements. Such oversight need not interfere with local units of government establishing priorities based on local needs.

- *Compensation Parity*

  As additional state-funded laboratories become operational around the state, compensation parity among those employed in all laboratories would be imperative. Initial investments in staff are substantial. For some disciplines, scientists must train for up to 24 months prior to conducting independent analyses. Consequently, during that first phase of a scientist's employment, laboratory costs are high and benefits in terms of productivity are low. In fact, turn-around time temporarily suffers as some existing staff time is dedicated to training new staff. Further, training costs are not exclusively in house. Often new scientists must travel to the FBI laboratory in Virginia for certified instruction.

  Compensation parity would promote equal justice and discourage harmful competition. Laboratories would have the incentives to appropriately invest in staff, because of increased odds of a return on that initial investment through years of high quality, productive service. The outcome would be consistent service and fair treatment statewide. Compensation parity for employees of state-funded laboratories could be accomplished several ways including:

  - Scientists could be state employees, thereby compensated evenhandedly, regardless of location, or
  - State funding could be conditioned upon an agreement to compensate scientists not employed by the State in a manner consistent with state benefits and pay grids.

- *Accreditation*

  Crime laboratory accreditation demonstrates that a forensic laboratory's management, personnel, operational and technical procedures, equipment, and physical facilities meet established standards. The objectives of forensic laboratory accreditation are:

  - To improve the quality of lab services provided to the criminal justice system.
  - To meet or exceed established criteria, assess levels of performance, and strengthen operations.
  - To provide independent, impartial, and objective assessments of laboratories through comprehensive operational reviews.
  - To identify to the public and to users of laboratory services, those laboratories that have demonstrated levels of competency through the accreditation process.

  Currently, Minnesota statute 299C.156 encourages forensic laboratories to be accredited. *The Board recommends mandatory accreditation.*

- *Training*

  Forensic science laboratories should hire and maintain highly trained forensic scientists and provide continuing education. Certification of forensic scientists should be encouraged. Certification is a voluntary process of peer review by which a practitioner is

recognized as having attained the professional qualifications necessary to practice in one or more disciplines of forensic science. The Board recommends these specific steps:

- All forensic scientists should have a minimum of a Bachelor of Science degree from an accredited university in forensic science, chemistry, biology, or comparable field of study to be hired and work in a forensic science laboratory.
- All forensic scientists must pass annual proficiency testing in their area(s) of expertise and participate in any appropriate correctional action or remedial training to resolve identified deficiencies.
- Continuing education must be made available to all forensic scientists on an annual basis. Forensic scientists should receive at least 15 hours of training annually. Forensic scientists should participate in regional or national forensic meetings or conferences.
- Certification of forensic scientists is encouraged.

Note: Congress has passed legislation that tasks the National Academy of Sciences to report on the state of forensic science and to make recommendations for improvement. That report will be completed in late 2008. One of the issues that will be addressed is certification of forensic scientists.

Bemidji Laboratory Experience

Experience gained in operating the Bemidji laboratory has taught some lessons about the design, size, and make-up of a laboratory built to serve a multi-jurisdictional area. The types of evidence involved in violent crime do not lend themselves to easy transport due to size, packaging, or the presence of bio-hazards. The forensic disciplines provided on site at the Bemidji laboratory (DNA, latent prints, firearms, drug chemistry, and crime scene) allows for most of the evidence involved to be analyzed in one location. This becomes very important when evidence needs to be analyzed by more than one discipline, as the evidence does not have to be transported great distances to complete all analyses. Scientists exchanging evidence can have face-to-face consultations regarding how to handle an item to preserve all potential evidence.

The size of the staff in each section of the laboratory should also be carefully considered. Two person sections can easily become a one person section for extended time periods due to vacations or medical leave. Similarly, one person sections may be totally shut down for the same reasons. In these situations, the laboratory needs to have a plan on how to continue services. Small staffs also mean that a few scientists are constantly being called on to work rush cases for court or for an investigation in which a dangerous suspect is at large. This puts added stress on those few. The Bemidji laboratory has emphasized the importance of having sufficient depth in staffing to ensure no interruption in services due to temporary staffing shortages.

ATTACHMENT to February 1, 2008 Report on the appropriateness of additional regional forensic crime laboratories.

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June 29, 2007

Forensic Analysis Processing Time Period Guidelines:

BACKGROUND:

299C.156 Subdivision 7 "Forensic analysis processing time period guidelines" mandates that the board shall recommend forensic analysis processing time period guidelines applicable to the Bureau of Criminal Apprehension and other laboratories, facilities, and entities that conduct forensic analyses by July 1,2007.

The Board has met four times since the last report. Two subcommittees were formed to address the issue of forensic analysis processing time period guidelines. Guidelines were presented to the Forensic Laboratory Advisory Board by the subcommittees and the Board voted to recommend the following:

GUIDELINE:

This guideline applies to all Minnesota laboratories, facilities, and other entities that conduct forensic examinations of physical evidence for the purpose of determining the connection of the evidence to a potential crime.

The completion of the forensic analysis, including the reporting of scientific conclusions to the requesting agency should occur within thirty days after the agency provides the testing entity with the evidence to be tested. *This guideline is a recommended goal and not a strict standard. Failure to meet this goal is not intended to form a basis for relief not otherwise provided by law.*

DISCUSSION:

There are a number of factors over which a laboratory has little or no control that may impact forensic analysis processing time. Consequently, such factors could justify exceeding the 30 day recommended goal. The following are offered as examples:

- Government laboratories do not have control over the volume of evidence being submitted by law enforcement agencies (a capacity issue).
- Completion of examinations may be dependent on the collection of standards and controls by the law enforcement agency if they were not provided with the original submissions.
- Some items of evidence require sequential examination by several scientific disciplines.
- It may not be technically or physically feasible to complete some scientific testing within 30 days (either due to the complexity of the examination or the size and complexity of the case).
- The Minnesota rules of evidence require that if the scientist determines that the evidence will be consumed in the analysis that the examination may not proceed without notification from both the prosecution and defense, when a defendant has been charged.
- Scientists are subpoenaed regularly to testify in court on cases they have examined. These court appearances may delay examinations.