
**Oklahoma's State Plan
For the Improvement of
Forensic Science
and Medical Examiner Services
February 2006**



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TABLE OF CONTENTS

| | |
|---|----|
| Purpose | 3 |
| Overview | 3 |
| Organizational Structure | 4 |
| Accreditation by the American Society of Crime Laboratory Directors/Lab Accreditation Board..... | 6 |
| Problem Identification..... | 8 |
| Equipment..... | 9 |
| Recruiting and Maintaining Personnel..... | 10 |
| Continuing Education for Personnel..... | 10 |
| New Roles and Responsibilities of Personnel..... | 11 |
| Demand for Services | 11 |
| CSI Effect..... | 11 |
| Case Turnaround Time | 12 |
| Plan for Use of the Paul Coverdell Forensic Science Improvement Grant Funds..... | 13 |
| Appendix A- Case Turnaround Time for the Controlled Substances Discipline | 15 |
| Appendix B- Case Turnaround Time for the Biology Discipline..... | 17 |
| Appendix C- Case Turnaround Time for the Firearms and Toolmarks Discipline.... | 19 |
| Appendix D- Case Turnaround Time for the Latent Prints Discipline..... | 21 |
| Appendix E- Case Turnaround Time for the Questioned Documents Discipline | 23 |
| Appendix F- Case Turnaround Time for the Toxicology Discipline | 25 |
| Appendix G- Case Turnaround Time for the Trace Evidence Discipline | 27 |

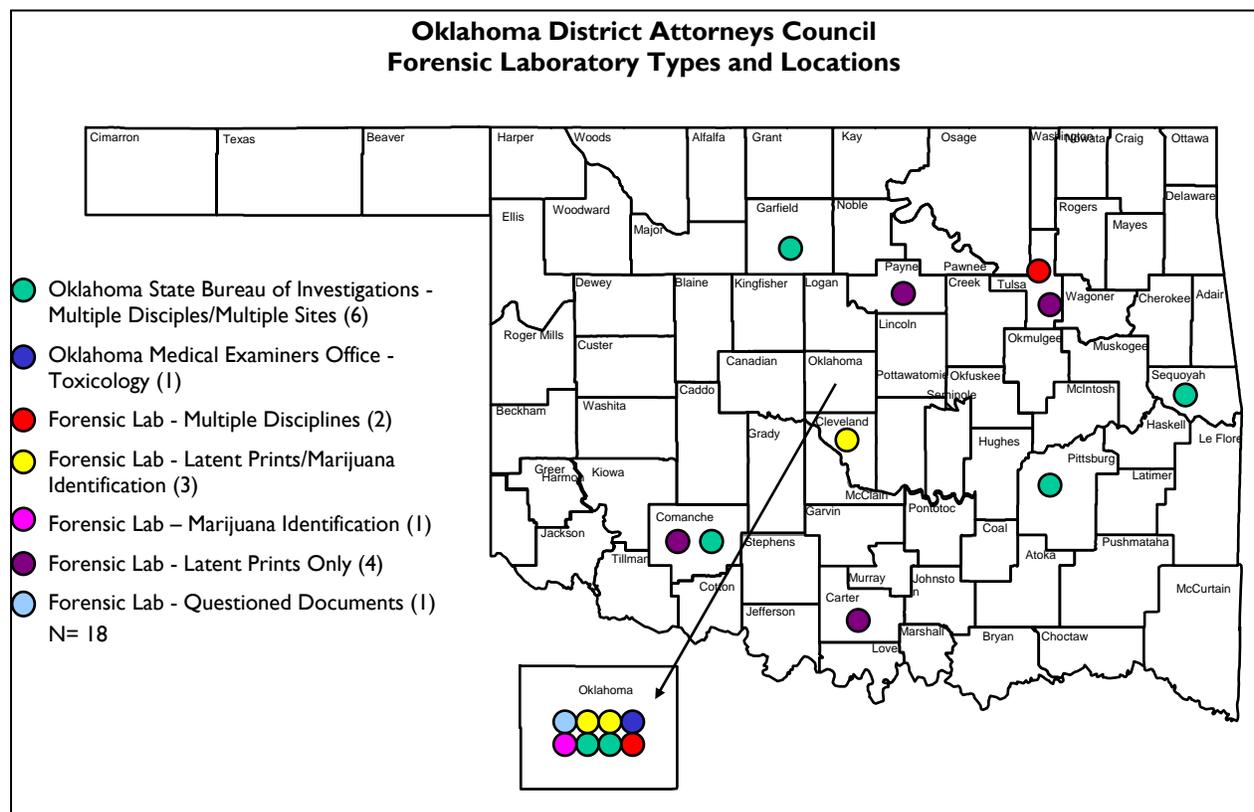
Oklahoma's State Plan for the Improvement of Forensic Science and Medical Examiner Services

Purpose

The State Plan for Improvement of Forensic Science and Medical Examiner Services was developed in order to improve the quality and timeliness of forensic science services to the criminal justice system in Oklahoma and to reduce the backlog of forensic science cases.

Overview

Currently, there are 18 forensic labs operating within the state. The Oklahoma State Bureau of Investigation (OSBI) has six labs involving multiple disciplines operating regionally throughout the state. Two labs are located in Oklahoma City with the remaining labs located in Lawton, Enid, Tahlequah, and McAlester. In addition, the Oklahoma City Police Department and the Tulsa Police Department, the two major metropolitan jurisdictions in the state, have multiple discipline forensic labs.



The Office of the Chief Medical Examiner has the sole responsibility for investigating sudden, unexpected and suspicious deaths. This process involves scene investigation and medicolegal autopsy (including radiology, toxicology, histology, and microbiology)

complementing the activities of law enforcement agencies, district attorneys, and public health officials.

Three law enforcement agencies operate Latent Print/Marijuana Identification labs. These labs are located in the Norman Police Department, Midwest City Police Department, and the Oklahoma County Sheriff's Office. The Edmond Police Department operates a Marijuana Identification Lab. Four law enforcement departments operate a Latent Print Lab in the communities of Lawton, Stillwater, Ardmore, and Broken Arrow. The Oklahoma County District Attorney's Office has a Questioned Documents lab.

Organizational Structure

A Task Force was established to provide oversight for the Paul Coverdell Forensic Science Improvement Grant Program. The overall goal of the Task Force is to improve the quality, timeliness, and credibility of forensic science services for criminal justice purposes and to reduce the backlog of forensic science cases. The participants on the Task Force include representatives from the following agencies and departments:

- ❑ Ardmore Police Department;
- ❑ Broken Arrow Police Department,
- ❑ District Attorneys Council;
- ❑ Office of the Medical Examiner;
- ❑ Oklahoma Association of Chiefs of Police;
- ❑ Oklahoma City Police Department;
- ❑ Oklahoma County District Attorneys Office;
- ❑ Oklahoma Sheriff's Association;
- ❑ Oklahoma State Bureau of Investigation; and;
- ❑ Tulsa Police Department.

The members representing the District Attorneys Council, the Oklahoma Sheriffs Association, and the Oklahoma Association of Chiefs of Police serve as consumers of forensic science services in the state and provide additional perspective in achieving the overall goal of the Task Force.

The participants from the above referenced agencies and local law enforcement jurisdictions represent forensic labs in the major metropolitan areas as well as medium sized jurisdictions within the state.

The Task Force operates under the purview of the Justice Assistance Grant (JAG) Board. In Oklahoma, the JAG Board is charged with overseeing the Justice Assistance Grant Program, funded through the Bureau of Justice Assistance. The goal of this grant program is to prevent and control crime. The projects funded in Oklahoma under this

grant program have a special emphasis on drug-related crimes, violent crimes and serious offenders. Forensic labs are indelibly intertwined in these types of crimes so the Task Force functions as a committee of the JAG Board.

The JAG Board, comprised of 17 voting and non-voting members, is charged with determining priorities for funding, reviewing grant proposals, and determining awards. The following is a list of the agencies and the representing members of the JAG Board.

| |
|---|
| Justice Assistance Grant Board Membership Roster |
|---|

Voting Members

John David Luton, Chair

District Attorney – District 15

Suzanne McClain Atwood, Executive Coordinator

District Attorneys Council

Terry Cline, Commissioner

Department of Mental Health and Substance Abuse Services

David Wright, Designee

Richard DeLaughter, Director

Office of Juvenile Affairs

Terry Smith, Designee

Drew Edmondson, Attorney General

Office of the Attorney General

Joel-Lyn McCormick, Designee

Sandy Garrett, Superintendent

Department of Education

Gayle Jones, Designee

Richard Kirby

Governor Brad Henry's Representative

DeWade Langley, Director

Oklahoma State Bureau of Investigation

Tom Jordan, Designee

Fred Savage, Chief
El Reno Police Department
Oklahoma Association of Chiefs of Police

Kevin Ward, Commissioner
Department of Public Safety

Justin Jones, Director
Department of Corrections
Bill McCollum, Designee

John Whetsel, Sheriff, Vice-Chair
Oklahoma County
Oklahoma Sheriffs Association

Lonnie Wright, Director
Bureau of Narcotics Dangerous Drug Control

Non-Voting Members

John Richter
U.S. Attorney for the Western District
Leslie Maye, Designee

David O'Meilia
U.S. Attorney for the Northern District
Allen Litchfield, Designee

Sheldon Sperling
U.S. Attorney for the Eastern District

Jim Akagi
Assistant Special Agent in Charge
Drug Enforcement Administration
Mike Roman, Designee

Accreditation by the American Society of Crime Laboratory Directors/Lab Accreditation Board

On May 22, 2002, Oklahoma statute's were changed which created the Forensic Laboratory Accreditation Act, O.S. 74 § 150.37, which required all labs in Oklahoma to become accredited by the American Society of Certified Lab Directors/Laboratory Accreditation Board (ASCLD/LAB) or the American Board of Forensic Toxicologists (ABFT) by July 1, 2005.

As set forth in the legislation, a forensic lab is defined as a lab operated by the state or any unit of municipal, county, city, or any other local government that examines physical evidence in criminal matters and provides opinion testimony in a court of law in forensic disciplines accredited by ASCLD/LAB or ABFT. The legislation required that as of January 1, 2003, all forensic labs shall have a technical peer review system sufficient to meet or exceed the accreditation standards of ASCLD/LAB. A technical peer review system is a system whereby the casework of an employee in a forensic laboratory shall be reviewed for technical correctness by a qualified peer.

By January 1, 2004, all forensic labs shall have a proficiency-testing program sufficient to meet or exceed the accreditation standards of the ASCLD/LAB. A proficiency-testing program is defined as a program whereby the competency of analysis and the quality of performance of a laboratory is evaluated by external testing.

The final component of the law required that by July 1, 2005, that all forensic labs shall be ASCLD/LAB accredited. According to statute, "On or after July 1, 2005, testimony, results, reports, or evidence of forensic analysis produced on behalf of the prosecution in a criminal trial in forensic disciplines accredited by ASCLD/LAB shall be done by an ASCLD/LAB accredited forensic laboratory." Forensic laboratories that exclusively and solely perform forensic toxicology analysis may meet this requirement by being either ASCLD/LAB accredited or accredited by the American Board of Forensic Toxicologists.

These requirements are not applicable to breath testing for alcohol, field testing, crime scene processing, crime scene evidence collection and crime scene reconstruction or laboratories that exclusively and solely perform forensic toxicology analysis. Such labs shall have a peer review system, a proficiency-testing program, and be accredited by either ASCLD/LAB or the American Board of Forensic Toxicology by the above referenced deadlines.

This new standard of accreditation is viewed as a positive measure as it encourages uniform criteria, standards, and operational practices for forensic labs throughout the state. Prior to receiving accreditation, agencies continued to provide an over-burgeoning demand for forensic science services to the criminal justice community as well as incorporate the substantial demands required for accreditation preparation in order to be able to meet the standards in the key areas of management, personnel, operational and technical procedures, equipment and physical facilities. Accreditation is one part of a laboratory's quality assurance program which should also include proficiency testing, continuing education, and other programs to help the laboratory provide better overall service to the criminal justice system.

When the first *Improvement Plan for Forensic Science and Medical Examiner Services* was first established in 2002, shortly after the passage of the O.S. 74 § 150.37, the Oklahoma State Bureau of Investigation was the only agency that was accredited by ASCLD/LAB. As of September 2005, six additional labs have become ASCLD/LAB or ABFT accredited. The chart identifies the accredited labs in Oklahoma and the disciplines in which the labs are accredited.

| AGENCY | Biology | Controlled Substances | Firearms/ Tool | Latent Prints | Questioned Documents | Toxicology | Trace Evidence |
|---|----------------|------------------------------|-----------------------|----------------------|-----------------------------|-------------------|-----------------------|
| Ardmore Police Department | | | | X | | | |
| Broken Arrow Police Department | | | | X | | | |
| Office of the Chief Medical Examiner | | | | | | X | |
| Oklahoma City Police Department | X | X | X | X | | X | |
| Oklahoma County District Attorneys Office | | | | | X | | |
| Oklahoma State Bureau of Investigation | X | X | X | X | | X | X |
| Tulsa Police Department | X | X | X | X | X | X | |

Problem Identification

The first *Improvement Plan for Forensic Science and Medical Examiner Services* was developed by the Forensic Science Improvement Task Force in 2002 prior to the receipt of any funding from the Paul Coverdell Forensic Science Improvement Grant (Coverdell). With the six forensic and medical examiner labs receiving grant funds and achieving ASCLD/LAB and ABFT accreditation, the Plan needed to be revised. In the first plan, the problems identified at that time related primarily to accreditation, such as time constraints in meeting the statutory deadlines and the additional costs of accreditation. However, since obtaining accreditation, the issues facing the labs have changed and a new plan was created.

To meet the goal of improving the quality and timeliness of forensic science services and reducing the backlog of forensic science cases in Oklahoma, it is important to conduct a thorough review of the barriers. The Forensic Science Task Force spent considerable time discussing and exploring current problems and barriers.

Each of the accredited forensic labs used funding from the Coverdell Grant to achieve or maintain accreditation. Even though these agencies received accreditation, the high standards that were set to obtain accreditation must be maintained. This is an ongoing-burden for each agency as additional personnel, time, and money are needed for equipment, personnel, training, facilities, and operational and technical procedures.

In addition to the chronic problem of insufficient staff and insufficient salaries, the accredited forensic labs face the following concerns in regard to improving the quality and timeliness of forensic science services and reducing the backlog of forensic science cases in Oklahoma:

- Equipment
- Recruiting and Maintaining Personnel
- Continuing Education for Personnel
- New Roles and Responsibilities of Personnel
- Demand for Services
- CSI Effect
- Case Turnaround Time

Equipment

Generally, all equipment for any discipline within a forensic lab is costly, not only to purchase, but also to maintain. Best practices for a forensic lab suggest the establishment of an Instrumentation Plan. The Instrumentation Plan identifies the date of purchase of the equipment, the projected period of time for usability for the specified equipment based on rate of usage and manufacturer's recommendations, and the timeline for replacement and/or updating the equipment. The Tulsa Police Department's Forensic Lab has a five-year, ten-year, and fifteen-year Instrumentation Plan which can be used as a model for other forensic labs in the state.

All forensic equipment has an estimated life span and can become obsolete and outdated. Manufacturers only support old equipment for a finite period of time and after that time the equipment is no longer usable. In addition, old or slow equipment that may still be usable can create backlogs in a department with large caseloads.

With the constantly evolving developments in the medical and forensic science fields, the equipment changes as well. It is critical for labs to consider securing instrumentation, computer equipment, and software that allows faster analyses.

However, the cost to obtain new equipment can be prohibitive and the old, outdated equipment must still be used in order to process the cases. The inability to update or purchase equipment due to a lack of funds significantly impacts a lab's ability to process cases and is an on-going difficulty for forensic labs.

Recruiting and Maintaining Personnel

Another problem area for forensic labs is personnel. Appropriate personnel qualifications are essential for producing reliable results. Forensic labs frequently experience personnel shortages which impact the ability of the lab to process cases contributing to the overall backlog of cases. In addition, as criminal investigations have become increasingly more complex due to the constantly improving technology and the higher demand for physical evidence by the legal system, cases take more time to complete. In order to compensate for the complexity factor, more personnel are required to complete a similar number of cases in the same time span.

Entry-level personnel can often be found for positions, but training can be time consuming, costly, and difficult to retain. In order to hire, personnel must have a bachelor's degree in a natural science or criminalistics field to practice forensic science services. Persons with a degree other than a natural science or criminalistics degree may be acceptable on a case by case basis, depending on other extensive classwork that may have been obtained.

Entry level staff must successfully complete adequate competency testing in all applicable areas of examinations prior to performing independent case-connected examinations. Competency testing often includes evaluation of knowledge of existing literature, written and/or oral examinations, examination and identification of known and unknown material, and moot court. During this training period, entry level personnel are not analyzing cases and thus contributing to the backlog of cases.

On the other hand, qualified and experienced personnel are difficult to employ. The market demand for qualified and experienced forensic lab personnel is high so it is difficult to retain experienced personnel. Entry level personnel frequently develop knowledge and expertise and then move to a larger market for an increase in pay, thus creating a shortage.

Continuing Education for Personnel

The continuing education that is required for personnel in forensic labs is another common issue. Accredited labs must maintain adequate levels of training for all staff, but especially in the DNA discipline because of the rapid changes that occur in this field. The acceptable venues for training are few and the cost to attend is considerable which places an ongoing financial burden on the agency. Funding for training is often the first to go when budgets are tight; yet the training is required.

New Roles and Responsibilities of Personnel

As a result of accreditation, existing personnel must assume new roles and responsibilities in the lab in order to maintain accreditation. Some of the new roles include Quality Assurance Manager, Safety Manager, and Quality Control Manager.

Unfortunately, these new roles can, at times, turn into another full time job. It is important to note that while the result improves the quality of the forensic science services, it can also contribute to the backlog of cases. The new responsibilities must be balanced with the analysis of forensic evidence, which can be difficult. The agencies are finding that that being accredited requires forensic lab staff to complete significantly more paperwork through added processes and procedures while remaining at the same staffing levels at the same time that caseloads are increasing as well.

Demand for Services

The demand for forensic science and medical examiner services continues to increase and in many instances become more complex. Due to equipment and personnel issues, caseloads continue to increase creating a backlog of cases. Forensic labs are inundated with cases involving controlled substances, latent print, firearms, questioned documents, and DNA.

CSI Effect

A recent area of concern is a phenomenon called the *CSI Effect*. With the growing popularity of television shows like CSI, the expectations about forensic sciences have become unrealistic. The CSI Effect, known to those in the legal and forensic science fields, is a phenomenon related to the popularity of crime scene investigation television series that has caused victims, jurors and sometimes even law enforcement officers and prosecutors to have unrealistic expectations about forensic evidence, DNA testing, and the level of investigations at crime scenes.

The *CSI Effect* is so common and widespread that it impacts the way in which attorneys and forensic analysts all over the country present their evidence in court. Due to the popularity of the show, many jurors expect to be wowed by the forensic evidence. This is often not the case, but it has caused attorneys and analysts to present their evidence in a more entertaining manner. Additionally, these one-hour shows have caused victims and jurors to expect forensic results to be available within a day or less. In reality, some forensic evaluations take weeks or even months, depending on the discipline and caseload of the analysts. The attorneys and analysts have to be prepared to counteract the *CSI Effect* through re-education and training of the jury members.

Case Turnaround Time

An ongoing area of concern is case turnaround time. In Oklahoma, the first Case Turnaround Survey was disseminated in July 2003 to all of the forensic labs throughout the State to obtain a baseline average for case turnaround time for the various forensic lab disciplines. After the data was collected and reviewed, the Task Force set a standard, or goal, for each discipline. Since the first survey, the Case Turnaround Survey has been an effective tool to assess the shifts in case turnaround time.

After the initial survey, Case Turnaround Surveys were conducted in July 2004, December 2004, and June 2005 with the participating forensic labs. The information from the surveys has been compiled for review, as well as detailed information gathered on each agency and each discipline. The progress, or lack of progress, is monitored by the Task Force and the Grants Division Staff for grant reporting purposes.

The following chart identifies the turnaround time results for five completed surveys for each discipline compared to the goals set by the Task Force:

Since the time that this data was obtained, it is obvious that fluctuations occur in the turnaround time among and within the different disciplines for varying reasons. However, from the chart above it can be determined that significant and consistent progress has been made in Disciplines of Latent Prints, Firearms and Toolmarks, and Trace Evidence. The Latent Prints Discipline has reduced the case turnaround time from a peak of 41 days down to 19.1 days as obtained in the most recent survey. The Firearms and Toolmarks Discipline initially had a 75 day turnaround time which increased to a high of 119 days. In this last survey, the turnaround time was reduced to 32.5 days. The Trace Evidence Discipline has also had a significant reduction in case turnaround time from a high of 150 days to 45 days.

CASE TURNAROUND TIME COMPARISON BY FORENSIC LAB DISCIPLINE

| | Controlled Substances | Biology | Firearms and Tool Marks | Latent Prints | Questioned Documents | Toxicology | Trace Evidence |
|----------------|------------------------------|----------------|--------------------------------|----------------------|-----------------------------|-------------------|-----------------------|
| July 03 | 21 | 115 | 75 | 41 | 62 | 17 | 145 |
| July 04 | 21 | 115 | 75 | 41 | 83 | 23 | 150 |
| Dec 05 | 20 | 56 | 95 | 35 | 65 | 40 | 58 |
| June 05 | 33 | 90 | 119 | 16 | 66 | 44 | 52 |
| Dec 05 | 18.5 | 98.5 | 32.5 | 19.1 | 63.9 | 33.3 | 45 |
| Goal | 30 Days | 90 Days | 30 Days | 20 Days | 120 Days | 20 Days | 120 Days |

The case turnaround time for the Questioned Documents, Toxicology, and Controlled Substances Disciplines have remained relatively stable over time. In the Questioned Documents Discipline, labs continue to meet the goal of 120 days for turnaround as is true with Controlled Substances. While Controlled Substances are meeting the set goal, Toxicology is not.

The Biology/DNA Discipline appears to be in fluctuation and has not attained stability. Two of the three labs report difficulty in the recruitment and retention of personnel. Both labs report either vacancies or a shortage of personnel. With inexperienced employees, training is lengthy and directly impacts the turnaround time since they cannot perform independent casework. When all positions are filled and employees trained, it is anticipated that an improvement in timeliness will be demonstrated.

Problems or barriers in any discipline may continue or arise related to improving timeliness. The following information was obtained from individual labs regarding the problems or barriers for each discipline. It is anticipated that efforts and initiatives will continue to improve case turnaround time.

Plan for Use of the Paul Coverdell Forensic Science Improvement Grant Funds

The Task Force has used, and continues to use, a consensus decision-making process in determining the use of the Formula and Discretionary Grant Funds. The foundation of the Task Force has been to utilize the Coverdell funds in a manner that achieves the broadest impact for the State.

The funds from the FY2002 Forensic Science Improvement Formula Grant were used for accreditation costs for ASCLD/LAB. In order to determine the size of the subrecipient awards, the funds were based on the number of disciplines and number of employees for each agency. The FY2002 Forensic Science Improvement Discretionary Grant funds were used to enhance training of personnel in all disciplines through continuing education training.

The FY2003 Forensic Science Improvement Formula and Discretionary Grant funds were used to strengthen the infrastructure, or equipment, of the forensic science and medical examiner labs, and/or to train personnel.

With the FY2004 Forensic Science Formula Grant, the funds were used to continue to enhance lab security, strengthen the infrastructure of each forensic science and medical examiner lab, and/or to train personnel.

The FY2005 Forensic Science Formula Grant, the funds will be used to:

- enhance the knowledge and expertise of personnel through ongoing education and training;
- strengthen the infrastructure of the laboratory through the purchase of equipment which will decrease the case turnaround time; and,
- provide overtime pay for personnel to reduce the case backlog and improve case turnaround time.

In determining award amounts for subrecipients, the Task Force set a minimum base so that the smallest lab would receive adequate funds in order to develop an effective project. The minimum allocation was \$1500.00 which applies to the Oklahoma County District Attorney's Office which has one analyst. The remaining funds were equitably divided based on the percentage of analysts in each lab compared to the total number of analysts in the participating labs.

On account of the short time frame in which application for the 2005 Paul Coverdell Forensic Science Improvement Grant was due, the Ardmore Police Department was not able to secure permission through the Ardmore City Council to make application, requiring them to forfeit the funds under this application.

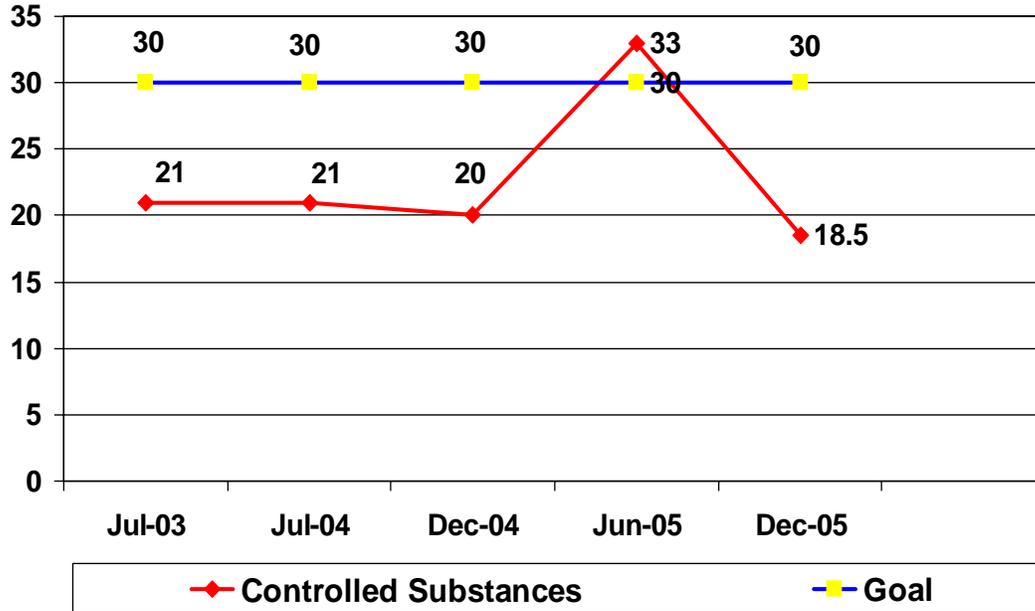
In order to receive the Coverdell Forensic Science Improvement Grant Funds, there must be a demonstrated improvement over current operations in the quality and timeliness of forensic science or medical examiner services. The State of Oklahoma continues to assess case turnaround time using the Case Turnaround Survey.

The members serving on the Forensic Science Improvement Task Force that represent the District Attorneys Council, the Oklahoma Sheriffs Association, and the Oklahoma Association of Chiefs of Police serve as consumers of forensic science services in the state and provide additional perspective in achieving the overall goals of the Task Force. Anecdotal information from these representatives indicates that there has been significant improvement in forensic science services. Assistant District Attorney Michael Gahan said that in his area the delays in preliminary hearings for incarcerated defendants caused by delays in analyzing forensic evidence have been eliminated. In addition, the law enforcement representatives, Sheriff Mike Burgess and Assistant Chief Dwaine Vincent, concurred that the jail is backed-up less often because evidence in drug cases is pending at a forensic lab.

APPENDIX A

Case Turnaround Time for the Controlled Substances Discipline

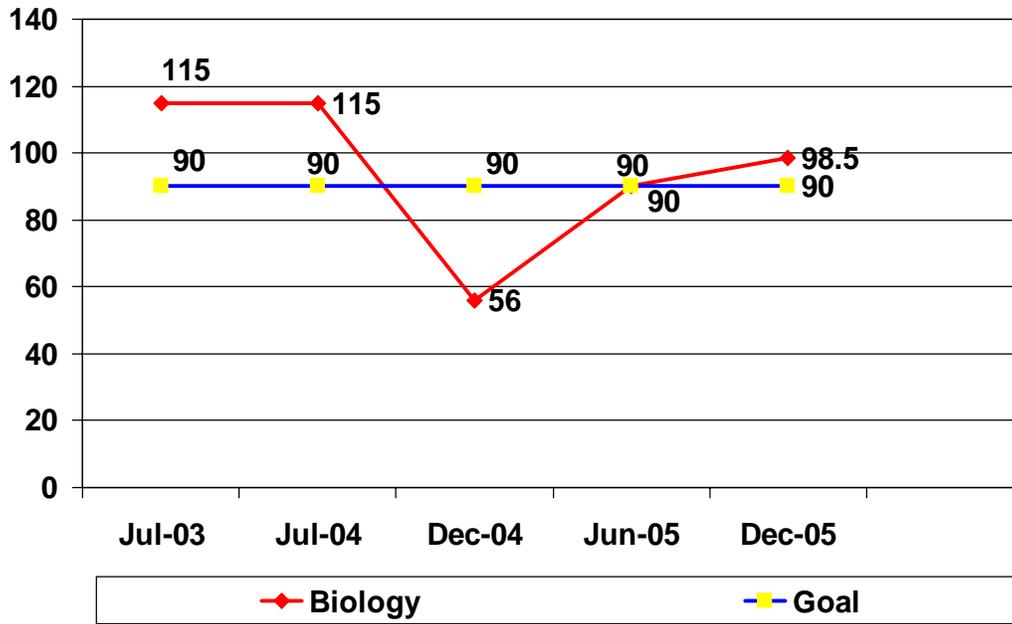
Oklahoma District Attorneys Council
Case Turnaround Time
for the Controlled Substances Discipline
July 2003 to December 2005



APPENDIX B

Case Turnaround Time for the Biology Discipline

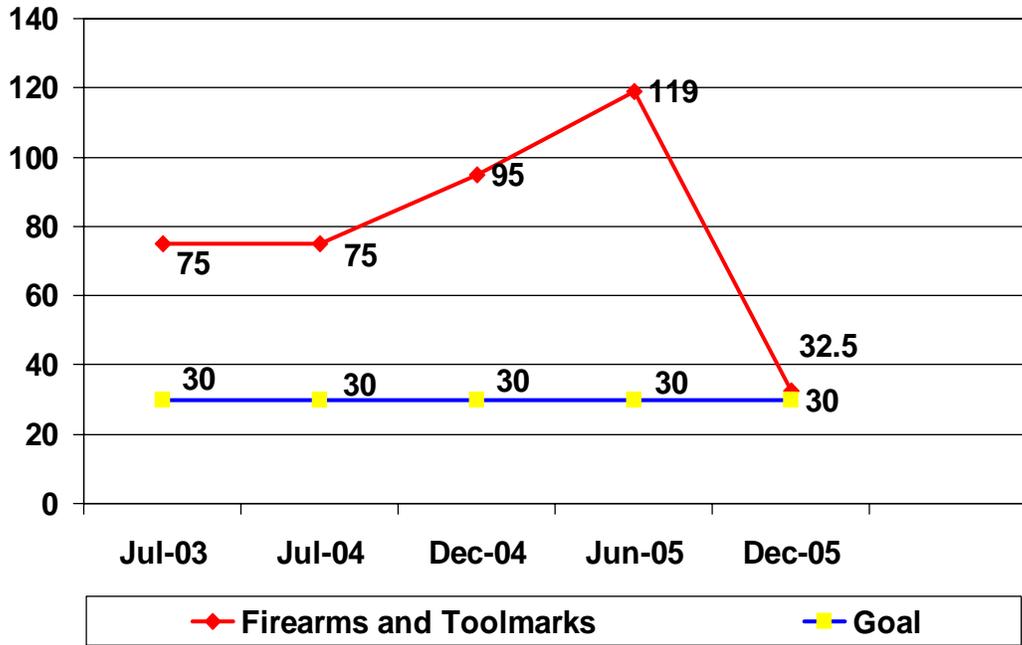
Oklahoma District Attorneys Council
Case Turnaround Time for the Biology Discipline
July 2003 to December 2005



APPENDIX C

Case Turnaround Time for the Firearms and Toolmarks Discipline

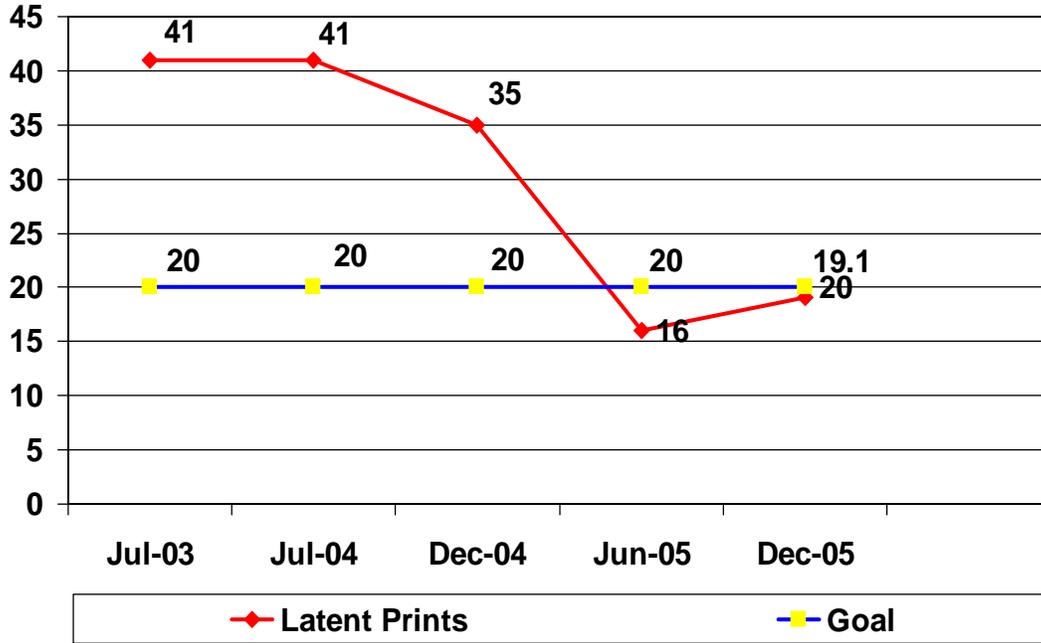
Oklahoma District Attorneys Council
Case Turnaround Time for the Firearms and Toolmarks Discipline
July 2003 to December 2005



APPENDIX D

Case Turnaround Time for the Latent Prints Discipline

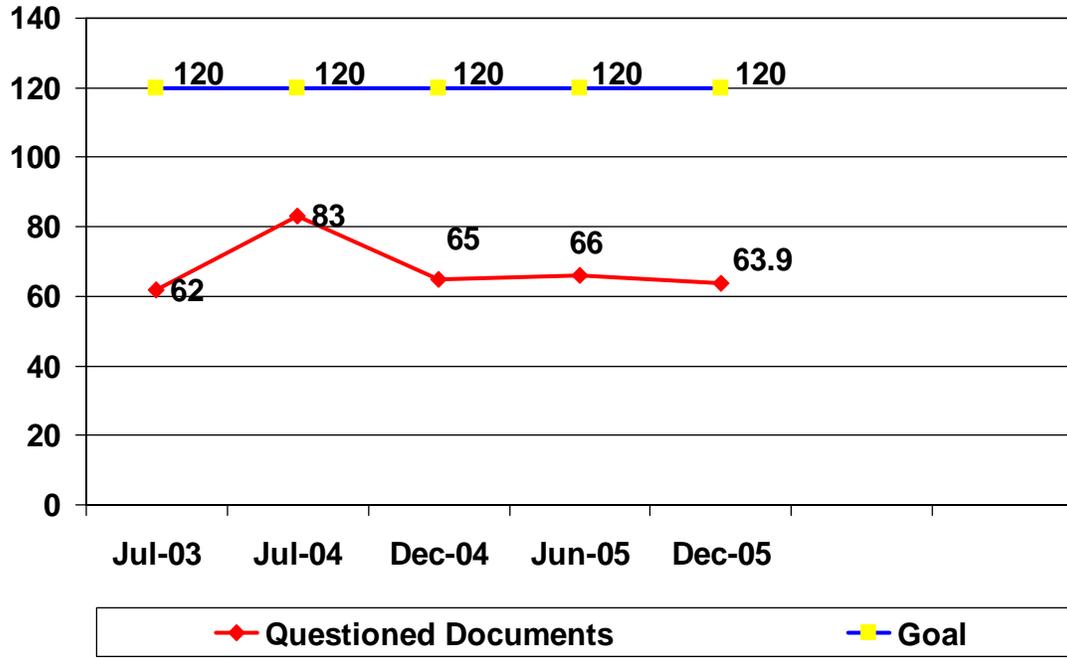
**Oklahoma District Attorneys Council
Case Turnaround Time for the Latent Prints Discipline
July 2003 to December 2005**



APPENDIX E

Case Turnaround Time for the Questioned Documents Discipline

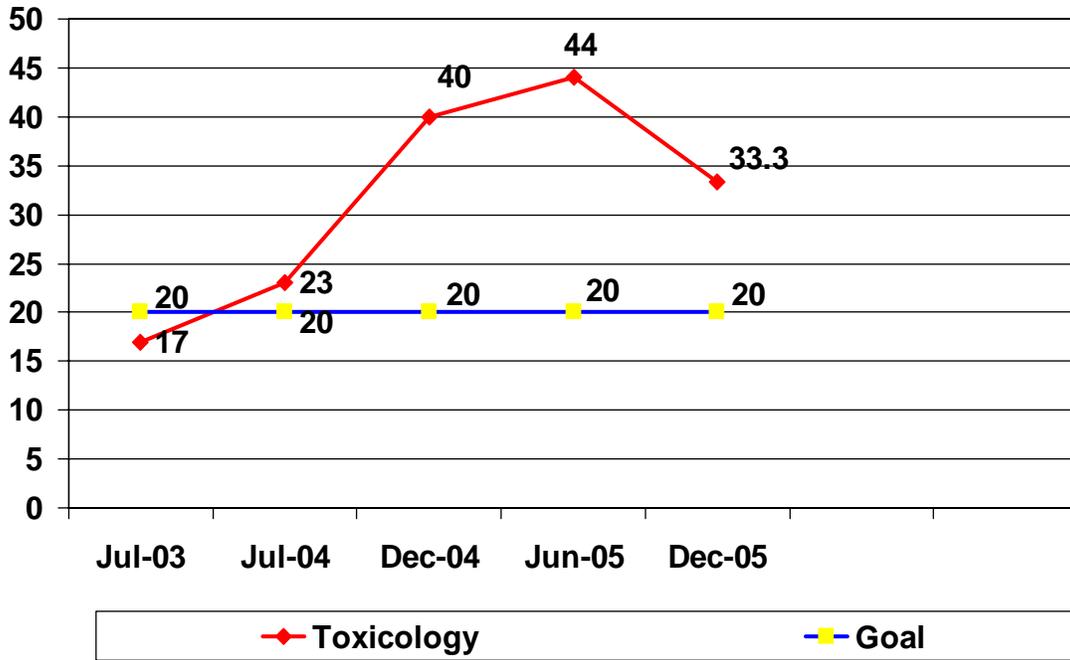
Oklahoma District Attorneys Council
Case Turnaround Time for the Questioned Documents Discipline
July 2003 to December 2005



APPENDIX F

Case Turnaround Time for the Toxicology Discipline

Oklahoma District Attorneys Council
Case Turnaround Time for the Toxicology Discipline
July 2003 to December 2005



APPENDIX G

Case Turnaround Time for the Trace Evidence Discipline

Oklahoma District Attorneys Council
Case Turnaround Time for the Trace Evidence Discipline
July 2003 to December 2005

