

**State of Alaska  
FY2006 Governor's Operating Budget**

**Department of Public Safety  
Laboratory Services  
Component Budget Summary**

**Component: Laboratory Services**

**Contribution to Department's Mission**

The mission of the Scientific Crime Detection Laboratory is to provide forensic science services to law enforcement agencies.

**Core Services**

- 1) The Alaska Scientific Crime Detection Laboratory is the only forensic facility available in Alaska to provide forensic services at no charge to all law enforcement agencies.
- 2) Forensic services include the scientific examination and detailed analysis of evidence in criminal cases, assistance with crime scene investigations to include expert testimony in court regarding the results of the testing of evidence, and training of law enforcement officers regarding proper evidence collection and preservation.
- 3) The crime laboratory's areas of expertise are latent fingerprints, trace evidence, footprint/tiretrack, controlled substances, blood alcohol analysis, serology, DNA, firearm/toolmark, crime scene investigations, and fish and wildlife examinations.
- 4) The crime laboratory administers the statewide breath alcohol program, which provides law enforcement agencies with properly calibrated and certified instruments for administering evidential breath tests. Expert testimony in alcohol-related court proceedings and support for non-evidential breath test devices is also provided.
- 5) The Alaska Scientific Crime Detection Laboratory maintains Alaska's DNA Identification System. DNA profiles are routinely uploaded into the National DNA Index System (NDIS) and searched against profiles submitted by other states.
- 6) Crime laboratory personnel are active members in several organizations that have the responsibility for setting the standards for training and certification of analysts nationally in the various forensic disciplines as well as accreditation standards for crime laboratories.

End Results	Strategies to Achieve Results
<p><b>A: Improved utility of forensic science to assist statewide law enforcement with their criminal investigations.</b></p> <p><u>Target #1:</u> 5% increase per year in rate of unsolved cases entered into DNA data base getting "hits".  <u>Measure #1:</u> % change in rate of unsolved criminal investigations aided by DNA data base "hits."</p> <p><u>Target #2:</u> 5% increase per year in the number of latent fingerprints identified using the Automated Fingerprint Identification System (AFIS).  <u>Measure #2:</u> % change in number of fingerprints identified using AFIS.</p>	<p><b>A1: Expand forensic databases.</b></p> <p><u>Target #1:</u> 5% increase per year in the number of DNA forensic profiles entered into the DNA data base per year.  <u>Measure #1:</u> % change in number of profiles entered.</p> <p><u>Target #2:</u> 340% increase in qualified convicted offender profile samples entered into the DNA data base by September 30, 2005.  <u>Measure #2:</u> % change in qualified convicted offender profile samples entered into the data base by September 30, 2005.</p> <p><u>Target #3:</u> 5% increase per year in the number of latent fingerprints submitted by law enforcement officers suitable for entry into AFIS.  <u>Measure #3:</u> % change in number of officer-lifted latent fingerprint cards entered into AFIS.</p>

**Major Activities to Advance Strategies**

- Enter additional convicted offender profiles
- Enter additional forensic profiles
- Train law enforcement to submit more "no-suspect" cases
- Participate in proficiency testing
- Comply with accreditation by monitoring expert witness testimony
- Maintain and follow the laboratory's quality assurance program
- Provide continuing education for analysts
- Perform audits of laboratory operations
- Continue education of laboratory analysts to maintain accreditation
- Perform internal audits of laboratory operations for 4 sequential years, and in the 5th, receive audit by an inspector from the accreditation board
- Provide training to supervisor of Statewide Breath Alcohol Program
- Provide calibration alcohol standards
- Certify DataMaster verification of calibration reports
- As needed, repair or replace instruments used in Statewide Breath Alcohol Program
- Provide necessary supplies and expert testimony to support Statewide Breath Alcohol Program

**FY2006 Resources Allocated to Achieve Results**

**FY2006 Component Budget: \$3,475,200**

**Personnel:**

Full time	33
Part time	0
<b>Total</b>	<b>33</b>

**Performance Measure Detail**

**A: Result - Improved utility of forensic science to assist statewide law enforcement with their criminal investigations.**

**Target #1:** 5% increase per year in rate of unsolved cases entered into DNA data base getting "hits".

**Measure #1:** % change in rate of unsolved criminal investigations aided by DNA data base "hits."

**Number of DNA Hits (fiscal year)**

Fiscal Year	Quarter 1	Quarter 2	Quarter 3	Quarter 4	YTD
FY2004	4	1	3	3	11
FY2005	3	0	0	0	3

**Analysis of results and challenges:** The number of total hits includes both hits against forensic DNA profiles (unsolved cases) in the data base and against qualified convicted offender DNA profiles. The key to increasing the number of hits is to increase the size of the data base - both with forensic profiles and qualified convicted offender profiles.

Source: Crime Lab

**Target #2:** 5% increase per year in the number of latent fingerprints identified using the Automated Fingerprint Identification System (AFIS).

**Measure #2:** % change in number of fingerprints identified using AFIS.

**Number of Fingerprints Identified using AFIS (fiscal year)**

Fiscal Year	Quarter 1	Quarter 2	Quarter 3	Quarter 4	YTD
FY2004	26	15	14	11	66
FY2005	8	0	0	0	8

**Analysis of results and challenges:** Source: Crime Lab

**A1: Strategy - Expand forensic databases.**

**Target #1:** 5% increase per year in the number of DNA forensic profiles entered into the DNA data base per year.

**Measure #1:** % change in number of profiles entered.

**DNA Forensic Profiles Entered (fiscal year)**

Fiscal Year	Quarter 1	Quarter 2	Quarter 3	Quarter 4	YTD
FY2004	21	19	29	24	93
FY2005	17	0	0	0	17

**Analysis of results and challenges:** Forensic profiles are DNA samples recovered from crime scenes.

Source: Crime Lab

**Target #2:** 340% increase in qualified convicted offender profile samples entered into the DNA data base by September 30, 2005.

**Measure #2:** % change in qualified convicted offender profile samples entered into the data base by September 30, 2005.

**Convicted Offender Profiles Entered (fiscal year)**

Fiscal Year	Quarter 1	Quarter 2	Quarter 3	Quarter 4	YTD
FY2004	1	6	6	3	16
FY2005	9	0	0	0	9

**Analysis of results and challenges:** The Crime Lab currently has a backlog of approximately 7,000 convicted offender profiles. The National Institute of Justice has committed to provide funding to clear 1,500 of those profiles, with funding for the rest of the back log pending congressional action. In addition, an estimated 200 new profiles arrive at the lab each month. Each one must be screened to ensure the offender is convicted of a qualifying offense, and depending on result, the profile is either entered into the DNA data base or not. Currently, the state's DNA data base holds 3,131 offender profiles. If the backlog is successfully eliminated and the number of new profiles being submitted are screened and appropriately handled in a timely manner, by the end of the federal fiscal year the DNA offender profile database should contain in excess of 10,000 samples. Once the backlog is eliminated, this target and measure will be revised. This assumes the state of Alaska receives full federal funding from the National Institute of Justice (NIJ) as anticipated

Source: Crime Lab

**Target #3:** 5% increase per year in the number of latent fingerprints submitted by law enforcement officers suitable for entry into AFIS.

**Measure #3:** % change in number of officer-lifted latent fingerprint cards entered into AFIS.

**Officer Latent Lift Cards Analyzed (fiscal year)**

Fiscal Year	Quarter 1	Quarter 2	Quarter 3	Quarter 4	YTD
FY2004	175	269	124	217	785
FY2005	183	0	0	0	183

**Analysis of results and challenges:** One method of increasing the number of latent prints in AFIS is to encourage law enforcement officers to take more latent fingerprints at crime scenes. This requires appropriate training. In addition to its normal training, the crime lab intends to use training videos, training bulletins, articles in law enforcement newsletters, etc., to provide both training information and encouragement regarding the effectiveness of increased law enforcement officer participation in building this data base.

## Key Component Challenges

The Anchorage Police Department and Department of Public Safety's stated goal of adding 115 new officers between the two agencies in the next 5 years, represents an increase of 26.76 percent in new officers in just these two agencies alone. This represents a potential increase of 26.76 percent in new cases over current cases submitted to the lab for analysis.

The Department of Public Safety is seeking federal funding for a much needed crime lab expansion of approximately 6,000 square feet. The current lab is near capacity in terms of physical space to house employees and equipment. This expansion will allow for employee and equipment expansion to meet future demands coming to the lab. An example is in the 26.76 percent growth expected by APD and AST. Without positioning the lab to meet these future demands it will mean backlogs in evidence analysis with corresponding reduction in cases prosecuted with a corresponding reduction in criminals going to jail.

### Increased Demand for DNA Testing

Because of the effectiveness of Alaska's DNA database and testing program, the number of evidence submittals requesting DNA testing continues to increase as does the backlog of cases requiring DNA testing. In order to help meet this critical need, federal grant funds were used to purchase equipment to implement recently developed technology to make the analysis of DNA evidence more efficient. This technology will be used on casework beginning October of 2004 and will enable analysts to more precisely measure and optimize the amount of DNA needed for analysis using a significantly faster protocol. A new high throughput genetic analyzer has also been purchased with federal grant money and should be ready to be used on casework midway through FY2005. The laboratory recently received two additional NIJ grants worth a total of \$268,519 for forensic backlog reduction and DNA capacity building. These funds will be used for DNA equipment and supplies, new computers, training, and for contract services. The laboratory hopes to substantially reduce the number of backlogged DNA cases by increasing throughput and reducing analysis time.

### Increased Demand for Drug and Alcohol Testing

The number of requests for drug and alcohol testing has increased in the past two years. The drug section, which was current with its casework in FY2003, now has a substantial backlog of cases. Contributing to this backlog has been a large increase in the number of clandestine methamphetamine laboratories being seized around the state. To meet this challenge, a vacant criminalist position assigned to the section of the laboratory handling crime scenes and fingerprints will transferred to the drug section. A vacant forensic technician position has been reclassified as a criminalist to help with the laboratory's breath and blood alcohol program.

### National Integrated Ballistic Information Network (NIBIN)

The Bureau of Alcohol, Tobacco, and Firearms has installed equipment at the crime laboratory that will enable the laboratory to join The National Integrated Ballistic Information Network (NIBIN). NIBIN utilizes computer technology to enable law enforcement agencies to compare crime gun evidence. Through the use of the Integrated Ballistic Identification System (IBIS), digital images of the markings made by a firearm on bullets and cartridge casings are acquired and searched against a database of images of firearms evidence recovered from crime scenes. This can yield valuable investigative information. The NIBIN system performs a preliminary automated initial comparison and provides a list of candidate matches that have the potential for linking crimes committed with the same firearm. The crime laboratory's forensic firearms examiner will confirm all candidate matches and provide any court testimony that may be required. To be successful, images of cartridge casings and bullets fired from all seized crime guns need to be entered into IBIS along with firearm evidence collected from crime scenes. The Anchorage Police Department's Property and Evidence section currently averages over 1,600 firearms every year. Many additional firearms are seized by law

enforcement agencies outside the Anchorage Bowl area. The crime laboratory currently receives only a tiny fraction of these weapons and does not have the manpower to use this new equipment.

A federal Project Safe Neighborhood grant will be used to fund a forensic technician position to make NIBIN technology available in Alaska.

#### **Multi-Jurisdictional Task Force Grant for Fingerprint Analysis**

Funding for personal services via a \$48.9 Multi-Jurisdictional Task Force grant from the Alaska State Troopers will provide 75 percent of the cost of a laboratory position that performs latent fingerprint analysis on cases involving controlled substances and violent crimes. The crime laboratory will provide \$16.3 for the 25 percent matching funds.

#### **Crime Scene Training for Law Enforcement**

The Alaska Police Standards Council (APSC) sponsors forensic training presented by the crime laboratory to law enforcement in remote areas. This forensic training would not be available to rural law enforcement without this support, as most small rural Alaska police departments do not have the resources to attend classes in Anchorage. Interagency Receipts of \$9.6 from APSC will fund this training.

#### **Crime Lab Improvement Program Federal Grant (Capital Budget Item)**

The US Department of Justice awarded a \$1,250,000 federal grant for the Crime Laboratory Improvement Program (CLIP) to the Alaska Scientific Crime Detection Laboratory in FY2001 with state authority to expend this grant in FY2002. The CLIP grant expiration date has been extended to September 30, 2005, with \$310,327.03 remaining.

### **Significant Changes in Results to be Delivered in FY2006**

#### **Growth of Alaska's DNA Registration System**

Alaska's DNA database law (AS 44.41.035) was expanded in July 2003 to include collecting DNA samples from all convicted felons along with those individuals convicted of any misdemeanor crime against a person. This has greatly increased the number of convicted offender samples submitted to the crime laboratory. Approximately 6,000 new convicted offender samples will be sent to the lab for analysis in 2005, and a total of 1,570 new convicted offender samples were submitted in FY2004 compared to 869 offender samples in FY2003. No additional state funds were appropriated to pay for collection kits and the handling of this additional influx of samples to the laboratory. We expect a significant increase in CODIS data base "hits" when these samples come back in 2005, increasing the number of "cold case" prosecutions in 2006.

The crime laboratory is dependant on federal grant money from the National Institute of Justice for outsourcing convicted offender DNA samples to a qualified private laboratory that meets FBI mandated DNA quality assurance standards. Because of lengthy delays in receiving approval from NIJ, no significant numbers of new convicted offender DNA profiles were added to the database in 2004. These samples will be returned to the lab and placed into the CODIS database in early to middle of the year, 2005. This delay in funding and analysis has hindered the lab's ability to provide law enforcement with investigative leads through the matching of DNA recovered at unsolved crime scenes to DNA profiles of known convicted offenders. In September of 2004, NIJ authorized the laboratory to ship the first 1,570 convicted offender samples on our backlog to a private vendor in Utah for testing. DNA profiles from the first of these samples were recently returned to the crime laboratory and entered into the database. NIJ has approved \$231,425 for testing a total of 7,500 Alaskan convicted offender DNA samples.

Recent congressional approval of a new federal DNA initiative is expected to fully fund the testing of Alaska's convicted offender backlog of samples along with all future samples collected during the next several years. The size of Alaska's DNA Registration System is expected to more than triple during FY2005. This will have a tremendous impact on the number of cases being solved through the use of the DNA database into fiscal year 2006. The DNA database currently contains profiles from approximately 300 unsolved cases.

The crime scene team has seen its numbers reduced through retirement and attrition. In order to meet law enforcement demand for crime scene investigation assistance, the team needs not only to be rebuilt but expanded. Our concept is to place lab personnel trained in crime scene investigation in the field to aid and become an integral part of the teams that investigate crime in this state. By placing technicians in the field the lab will be more responsive, attend more crime scenes, and increase evidence submitted to the labs AFFIS and DNA databases, therefore aiding in more investigations.

## Major Component Accomplishments in 2004

### Toxicology Testing

The crime laboratory has successfully re-implemented toxicology as a service it provides to law enforcement. Blood and urine specimens are screened at the crime lab for the presence of common drugs of abuse and specimens testing positive are sent to the Washington State Patrol Laboratory (WSP) for confirmation. A grant funded by the Alaska Highway Safety Office (AHSO) is being used to reimburse the WSP Laboratory. Between October 1, 2003 and June 30, 2004, forty-four samples were sent to the WSP toxicology lab for drug confirmation. About half of these cases were subsequently set for trial in the various jurisdictions. Many of these cases resolved with a guilty plea. The cost for these toxicology services totaled approximately \$9,000, with 90 percent paid for by the federal grant.

Several court cases for drug-impaired driving were anticipated during this time period, however all but one case resolved before trial. The drug-impaired driving case that did go to trial resulted in a guilty verdict for the defendant in Kenai District Court. The defendant was driving under the influence of alcohol and Xanax™, a benzodiazepine. The case lasted three days and the defense put on seven witnesses, so it was a rigorous challenge to the toxicology services system.

### Drug Recognition Expert (DRE) Program

The crime laboratory coordinated efforts to enable Alaska to become the 37<sup>th</sup> state in the nation to have a DRE program during FY2004. The DRE program required that a proposal be written to justify to the International Chiefs of Police (IACP) why and how the program would be implemented in Alaska. This proposal was presented to the Technical Advisory Panel of IACP in April 2004 and accepted. One Alaska police officer was trained as a DRE in California and Arizona in November 2003. Three more Alaska police officers were trained as DREs in Oregon and Washington in May 2004. The final portion of their training occurred in Anchorage in June 2004. With one DRE officer hired into Alaska in May 2004, the total number of trained Alaska DRE officers came to five by the end of FY2004.

### CODIS (Combined DNA Index System)

Alaska's COMBINED DNA Index System (CODIS) generated 11 hits in FY2004, aiding 14 different investigations. Five of these hits matched crime scene profiles to convicted offenders and the remaining six linked two or more cases together. One of these database hits linked a convicted offender to an unsolved 1992 Anchorage homicide.

### AFIS (Automated Fingerprint Identification System)

The number of hits in the Alaska Automated Fingerprint Identification System (AAFIS) increased from 41 in FY2002 to 65 in FY2003 to 66 in FY2004.

### Alaska Palm Identification System

The laboratory used federal grant money to purchase a forensics palm print identification system. This system has an initial database of 6,500 individuals and can store up to 20,000 individuals. The 6,500 individuals are from Anchorage Police Department files and the Alaska State Crime Laboratory files. Cold cases are being reviewed and any latent palm impressions are being searched in the system. One hit led to identification in an Anchorage Police Department case. The hit linked a suspect who was printed for a burglary charge to a print lifted from a stolen vehicle.

### Significant Cases Aided in 2004

A DNA profile generated by the crime lab from unidentified human remains recovered near Anchorage was matched to a DNA profile entered into the National Missing Persons DNA Database by the FBI Laboratory from a mother who had reported her daughter missing. This enabled investigators to identify the remains and was the first multi-jurisdictional "hit" in the nation using National Missing Persons DNA Database.

### Publications

Members of the laboratory staff co-authored a paper titled "Population Studies on Three Native Alaska Population Groups Using STR Loci" that was published in the *Forensic Science International Journal*, Volume 129, pages 51-57, in September 2002.

### Services provided by the Scientific Crime Detection Laboratory during FY2004:

#### 1) Criminalistics:

Number of case submittals	87
Number of reports issued	75

2) Firearms/Toolmarks:		
Number of case submittals		119
Number of reports issued		81
3) Trace Evidence:		
Number of case submittals		59
Number of reports issued		38
4) Serology/DNA:		
Number of case submittals		774
Number of reports issued		803
5) DNA Identification System:		
Number of convicted offender samples received		5076
Number of CODIS entries performed		177
Number of Convicted Offender Profiles Entered		15
Number of No suspect DNA Profiles Entered		95
Number of Database Hits		11
Number of Investigations Aided		14
6) Controlled Substances:		
Number of case submittals		1185
Number of reports issued		1103
7) Blood Alcohol:		
Number of case submittals		421
Number of reports issued		570
8) Latent Prints:		
Number of reports issued		850
9) Crime Scene Investigations:		
Number of major scenes		25
10) Breath Alcohol Testing Program:		
Number of instruments in service		86
Number of DWI tests		4560
Number of minor consuming tests		142
Number of trained instructors		107
Number of trained operators		1188
11) Court:		
Number of times testified		147
Number of hours away from lab		1028

## Statutory and Regulatory Authority

- 1) DPS - DNA ID System (AS 44.41.035)
- 2) DPS - Fingerprint System (AS 44.41.025)
- 3) DPS - Powers and duties of department (AS 44.41.020)
- 4) State Troopers - Department to assist Other Agencies (AS 18.65.090)
- 5) State Troopers - Fingerprint Information (AS 18.65.050)
- 6) DPS - Forensic Alcohol Testing Regulations (13 AAC 63)

**Contact Information**

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**Laboratory Services  
Component Financial Summary**

*All dollars shown in thousands*

	FY2004 Actuals	FY2005 Management Plan	FY2006 Governor
<b>Non-Formula Program:</b>			
<b>Component Expenditures:</b>			
71000 Personal Services	2,002.8	2,201.2	2,584.2
72000 Travel	28.9	47.5	96.9
73000 Services	342.7	374.1	556.1
74000 Commodities	192.8	154.2	236.0
75000 Capital Outlay	35.2	2.0	2.0
77000 Grants, Benefits	0.0	0.0	0.0
78000 Miscellaneous	0.0	0.0	0.0
<b>Expenditure Totals</b>	<b>2,602.4</b>	<b>2,779.0</b>	<b>3,475.2</b>
<b>Funding Sources:</b>			
1002 Federal Receipts	1.6	80.7	405.7
1003 General Fund Match	13.3	13.3	13.3
1004 General Fund Receipts	2,518.6	2,618.2	2,912.5
1007 Inter-Agency Receipts	68.9	66.8	68.7
1108 Statutory Designated Program Receipts	0.0	0.0	75.0
<b>Funding Totals</b>	<b>2,602.4</b>	<b>2,779.0</b>	<b>3,475.2</b>

**Estimated Revenue Collections**

Description	Master Revenue Account	FY2004 Actuals	FY2005 Management Plan	FY2006 Governor
<b>Unrestricted Revenues</b>				
None.		0.0	0.0	0.0
<b>Unrestricted Total</b>		<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Restricted Revenues</b>				
Federal Receipts	51010	1.6	80.7	405.7
Interagency Receipts	51015	68.9	66.8	68.7
Statutory Designated Program Receipts	51063	0.0	0.0	75.0
<b>Restricted Total</b>		<b>70.5</b>	<b>147.5</b>	<b>549.4</b>
<b>Total Estimated Revenues</b>		<b>70.5</b>	<b>147.5</b>	<b>549.4</b>

**Summary of Component Budget Changes  
From FY2005 Management Plan to FY2006 Governor**

*All dollars shown in thousands*

	<u>General Funds</u>	<u>Federal Funds</u>	<u>Other Funds</u>	<u>Total Funds</u>
<b>FY2005 Management Plan</b>	<b>2,631.5</b>	<b>80.7</b>	<b>66.8</b>	<b>2,779.0</b>
<b>Adjustments which will continue current level of service:</b>				
-FY 05 Bargaining Unit Contract Terms: GGU	14.9	0.0	0.5	15.4
-FY06 Cost Increases for Bargaining Units and Non-Covered Employees	58.9	0.0	1.4	60.3
<b>Proposed budget increases:</b>				
-Establish Crime Scene Investigation Team	220.5	0.0	0.0	220.5
-Increase Federal Authority for New Grants	0.0	325.0	0.0	325.0
-DNA Specialist (Criminalist) funding from Anchorage Police Department	0.0	0.0	75.0	75.0
<b>FY2006 Governor</b>	<b>2,925.8</b>	<b>405.7</b>	<b>143.7</b>	<b>3,475.2</b>

**Laboratory Services  
Personal Services Information**

Authorized Positions		Personal Services Costs		
<u>FY2005</u>				
<u>Management</u>		<u>FY2006</u>		
<u>Plan</u>		<u>Governor</u>		
Full-time	30	33	Annual Salaries	1,754,364
Part-time	0	0	COLA	27,400
Nonpermanent	0	2	Premium Pay	27,868
			Annual Benefits	907,435
			<i>Less 3.00% Vacancy Factor</i>	(81,618)
			Lump Sum Premium Pay	26,451
<b>Totals</b>	<b>30</b>	<b>35</b>	<b>Total Personal Services</b>	<b>2,661,900</b>

**Position Classification Summary**

Job Class Title	Anchorage	Fairbanks	Juneau	Others	Total
Administrative Assistant	1	0	0	0	1
Administrative Clerk II	1	0	0	0	1
Administrative Clerk III	1	0	0	0	1
Criminalist I	1	0	0	0	1
Criminalist II	4	0	0	0	4
Criminalist III	11	0	0	0	11
Criminalist IV	4	0	0	0	4
Forensic Lab Supervisor	1	0	0	0	1
Forensic Technician	4	1	0	1	6
Latent Fingerprint Ex III	3	0	0	0	3
Latent Fingerprint Ex IV	1	0	0	0	1
Maint Spec Bfc Jrny II/Lead	1	0	0	0	1
<b>Totals</b>	<b>33</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>35</b>