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# Forensic DNA Backlog Reduction Program: Fiscal Year 2012 Awards and Abstracts

This document lists grants awarded by NIJ in 2012 under the Forensic DNA Backlog Reduction Program. The abstracts are reproduced here exactly as they were submitted by the grantee.

## **FY12 DNA Backlog Reduction Program Abstracts**

This table is a summary of DNA Backlog Reduction Awards issued in FY2012. Following this table are their respective abstracts.

State	FY12 Recipient Name	Award Amount
AL	<a href="#">Alabama Department of Forensic Sciences</a>	\$1,116,829
AR	<a href="#">Arkansas State Crime Laboratory</a>	\$882,246
AZ	<a href="#">Arizona Criminal Justice Commission</a>	\$774,004
AZ	<a href="#">Arizona Department of Public Safety</a>	\$799,517
CA	<a href="#">California Department of Justice</a>	\$3,393,432
CA	<a href="#">City And County of San Francisco</a>	\$358,153
CA	<a href="#">City of Los Angeles</a>	\$1,447,163
CA	<a href="#">City of Oakland</a>	\$408,295
CA	<a href="#">City of San Diego</a>	\$356,590
CA	<a href="#">Contra Costa County</a>	\$244,010
CA	<a href="#">Alameda County</a>	\$264,301
CA	<a href="#">County of Kern</a>	\$294,122
CA	<a href="#">County of San Bernardino</a>	\$80,000
CA	<a href="#">County of San Mateo</a>	\$196,512
CA	<a href="#">County of Santa Clara</a>	\$301,397
CA	<a href="#">County of Ventura</a>	\$121,509
CA	<a href="#">Fresno County Sheriff Department</a>	\$282,218
CA	<a href="#">Los Angeles County Sheriff's Department</a>	\$910,000
CA	<a href="#">Orange County Sheriff Coroner Department</a>	\$446,654
CA	<a href="#">Sacramento County District Attorney</a>	\$540,386
CA	<a href="#">San Diego County</a>	\$201,576
CO	<a href="#">City And County of Denver</a>	\$231,867
CO	<a href="#">City of Colorado Springs</a>	\$136,784
CO	<a href="#">Colorado Department of Public Safety</a>	\$604,525
CT	<a href="#">Department of Emergency Services and Public Protection</a>	\$601,552
DC	<a href="#">Metropolitan Police Department</a>	\$430,520
DE	<a href="#">Delaware Health and Social Services</a>	\$349,869
FL	<a href="#">Broward Sheriff's Office</a>	\$462,911
FL	<a href="#">Florida Department of Law Enforcement</a>	\$3,787,845
FL	<a href="#">Miami-Dade County</a>	\$996,026
FL	<a href="#">Palm Beach County Sheriff's Office</a>	\$376,252
FL	<a href="#">Pinellas County</a>	\$324,127
FL	<a href="#">St. Lucie County Sheriff's Office</a>	\$119,019
GA	<a href="#">Georgia Bureau of Investigation</a>	\$2,268,462
HI	<a href="#">City and County of Honolulu</a>	\$242,239
IA	<a href="#">Iowa Department of Public Safety</a>	\$499,464

ID	<a href="#">Idaho State Police</a>	\$236,376
IL	<a href="#">DuPage County Office of The Sheriff</a>	\$300,326
IL	<a href="#">Illinois State Police</a>	\$2,705,768
IL	<a href="#">Northeastern Illinois Regional Crime Laboratory</a>	\$300,326
IN	<a href="#">Indiana State Police</a>	\$785,405
IN	<a href="#">Indianapolis-Marion County Forensic Services Agency</a>	\$438,674
KS	<a href="#">Johnson County Kansas</a>	\$247,374
KS	<a href="#">Kansas Bureau of Investigation</a>	\$319,064
KY	<a href="#">Commonwealth of Kentucky</a>	\$616,282
LA	<a href="#">Louisiana State Police</a>	\$1,422,382
MA	<a href="#">City of Boston</a>	\$312,244
MA	<a href="#">Massachusetts State Police</a>	\$1,398,801
MD	<a href="#">Anne Arundel County MD</a>	\$109,845
MD	<a href="#">Baltimore County</a>	\$243,057
MD	<a href="#">City of Baltimore</a>	\$511,749
MD	<a href="#">Maryland State Police</a>	\$455,908
MD	<a href="#">Montgomery County</a>	\$109,500
MD	<a href="#">Prince George's County</a>	\$342,522
ME	<a href="#">Maine State Police</a>	\$200,000
MI	<a href="#">State of Michigan</a>	\$2,830,324
MN	<a href="#">Hennepin County, Minnesota</a>	\$100,000
MN	<a href="#">Minnesota Department of Public Safety</a>	\$654,004
MO	<a href="#">Missouri Board of Police Commissioners</a>	\$394,912
MO	<a href="#">Missouri State Highway Patrol</a>	\$628,345
MO	<a href="#">St. Charles County</a>	\$85,000
MO	<a href="#">St. Louis County</a>	\$167,708
MO	<a href="#">St. Louis Metropolitan Police Department</a>	\$350,937
MS	<a href="#">Mississippi Department of Public Safety</a>	\$483,001
MT	<a href="#">Montana Department of Justice</a>	\$200,000
NC	<a href="#">City of Charlotte</a>	\$268,405
NC	<a href="#">North Carolina Department of Justice</a>	\$1,741,320
ND	<a href="#">North Dakota</a>	\$200,000
NE	<a href="#">Nebraska State Patrol</a>	\$324,535
NH	<a href="#">New Hampshire Department of Safety</a>	\$200,000
NJ	<a href="#">Union County</a>	\$1,332,960
NM	<a href="#">New Mexico Department of Public Safety</a>	\$702,235
NV	<a href="#">Las Vegas Metropolitan Police Department</a>	\$1,009,635
NY	<a href="#">City of New York, Office of Chief Medical Examiner</a>	\$1,400,000
NY	<a href="#">County of Erie</a>	\$527,416
NY	<a href="#">County of Suffolk</a>	\$234,676
NY	<a href="#">County of Westchester</a>	\$267,323

NY	<a href="#">Monroe County</a>	\$278,224
NY	<a href="#">Nassau County</a>	\$227,418
NY	<a href="#">New York State Police</a>	\$1,273,853
NY	<a href="#">Onondaga County</a>	\$159,676
OH	<a href="#">City of Columbus</a>	\$248,307
OH	<a href="#">City of Mansfield</a>	\$100,000
OH	<a href="#">Cuyahoga County</a>	\$100,000
OH	<a href="#">Hamilton County</a>	\$198,646
OH	<a href="#">Lake County</a>	\$100,000
OH	<a href="#">Montgomery County</a>	\$231,754
OH	<a href="#">Ohio Attorney General</a>	\$1,171,330
OH	<a href="#">Stark County</a>	\$100,000
OK	<a href="#">City of Oklahoma City</a>	\$187,000
OK	<a href="#">City Of Tulsa</a>	\$231,520
OK	<a href="#">Oklahoma State Bureau of Investigation</a>	\$624,041
OR	<a href="#">Oregon State Police</a>	\$621,886
PA	<a href="#">Allegheny County Pennsylvania</a>	\$290,221
PA	<a href="#">City of Philadelphia</a>	\$1,000,761
PA	<a href="#">Pennsylvania State Police</a>	\$1,400,794
PR	<a href="#">Instituto de Ciencias Forenses</a>	\$614,345
RI	<a href="#">Rhode Island Department of Public Safety</a>	\$200,000
SC	<a href="#">Beaufort County Council</a>	\$150,000
SC	<a href="#">County of Greenville</a>	\$100,000
SC	<a href="#">Richland County Government</a>	\$135,000
SC	<a href="#">South Carolina Law Enforcement Division</a>	\$1,220,628
SD	<a href="#">Office of The Attorney General</a>	\$200,000
TN	<a href="#">Tennessee Bureau of Investigations</a>	\$2,190,753
TX	<a href="#">City of Austin</a>	\$204,031
TX	<a href="#">City of Houston</a>	\$1,208,170
TX	<a href="#">Dallas County</a>	\$682,135
TX	<a href="#">Harris County</a>	\$645,592
TX	<a href="#">State of Texas</a>	\$3,234,426
TX	<a href="#">University of North Texas Health Science Center At Fort Worth</a>	\$548,144
UT	<a href="#">Utah Department of Public Safety</a>	\$372,125
VA	<a href="#">Virginia Department of Forensic Science</a>	\$1,165,649
VT	<a href="#">Vermont Department of Public Safety</a>	\$200,000
WA	<a href="#">Washington State Patrol</a>	\$1,287,439
WI	<a href="#">Wisconsin Department of Justice</a>	\$871,137
WV	<a href="#">West Virginia State Police</a>	\$363,585
WY	<a href="#">Wyoming Office of the Attorney General</a>	\$200,000

**Funding Total: \$74,347,305**

**FY12 Recipient Name:** Alabama Department of Forensic Sciences

**Award Number:** 2012-DN-BX-0062

**Award Amount:** \$1,116,829

**Abstract:** The State of Alabama - and ADFS specifically - continues to face serious budgetary constraints, already having experienced a 43% reduction in State level funding for forensic services over the last 4 years. ADFS is also beginning to see the reality of increased database sample submissions arising from the implementation of an 'all felony arrestee' DNA testing statute, which was implemented on September 30, 2010.

The Federal funding from this award will greatly offset these serious shortfalls, and will be used to realize the following goals:

1. Reducing the forensic DNA case backlog through analyst overtime and the purchase of Biology supplies.
2. Reducing the DNA database sample backlog through analyst overtime and the purchase of database supplies.
3. Increasing the capacity of the statewide DNA laboratory system by purchasing equipment which will further streamline the DNA testing process; specifically biological safety cabinets, a refrigerator for DNA storage, a biological glassware sterilization unit, microcentrifuges, vortexes, pipettes, wide field microscopes, two (2) robotic barcode printers for the tracking of DNA analysis samples, a bone grinder for challenged samples, additional LIMS computers, and an upgrade to the DNA Databank LIMS program.
4. Purchasing service contracts for six (6) CE's and one (1) BioRobot Universal.
5. Providing the required continuing education for Forensic Scientists to maintain their continuing education compliance in accordance with the FBI Director's Quality Assurance Standards.

The ADFS expects to reduce the statewide DNA case backlog by at least 480 cases by the end of the award period. The ADFS DNA Database laboratory also expects to process at least 8,800 DNA database samples (which includes 800 QC samples) using Federal funding. The statewide turnaround time on Biology casework is expected to be reduced by an additional 20 days, with the analyst throughput in the casework sections expected to increase a minimum of 7%.

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**FY12 Recipient Name:** Arkansas State Crime Laboratory

**Award Number:** 2012-DN-BX-0037

**Award Amount:** \$882,246

**Abstract:** The Arkansas State Crime Laboratory Forensic Serology and DNA Sections analyze evidence submitted by law enforcement agencies for the state of Arkansas. These two sections complement one another in the screening and DNA analysis of biological evidence. The Arkansas State Crime Laboratory is proposing to utilize the "FY 2012 DNA Backlog Reduction Program" to purchase the necessary equipment to increase the capacity to extract, and prepare samples for quantification and amplification, to purchase software for familial and mixture interpretation, an External DNA audit, and to continue to fund the 6 Forensic Serologists and 2 Forensic DNA Analysts and 1 Forensic DNA Technician that were originally funded from the FY2011 Backlog Reduction Program. The goals of this program are to 1. Improve the capability

and capacity of the Forensic DNA Section. 2. Maintain the Quality Assurance Program for the DNA and CODIS section. 3. Decrease the backlog in the Forensic Serology and DNA Sections.

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**FY12 Recipient Name:** Arizona Criminal Justice Commission

**Award Number:** 2012-DN-BX-0111

**Award Amount:** \$774,004

**Abstract:** This application for use of the DNA Backlog Reduction Program grant funding is submitted by the Arizona Criminal Justice Commission (ACJC) acting at the State Administrating Agency for the Department of Justice on behalf of the following local laboratories through these police departments, Mesa, Phoenix, Scottsdale and Tucson. These agencies are committed to establishing the highest standards of laboratory analysis of evidence and are working as a collaborative group focuses on establishing improved procedures and reducing DNA case backlog. Funding is currently allocated to each participating agency based on a minimum of \$100,000 and the number of Uniform Crime Report (UCR) Part 1 violent crimes reported to the Federal Bureau of Investigation (FBI) for 2010. The Commission will provide grant oversight and be responsible for reporting to the National Institute of Justice (NIJ) on the progress of this grant.

The federal funding from this award will be used for the following goals.

Goals:

1. Reduce the number of backlogged DNA cases through analyst, lab technician and screener overtime and outsourcing.
2. Increase the laboratories' capacity by purchasing equipment (robotic extraction instrumentation and a thermal cycler).
3. Provide required continuing education for analysts.

Results:

The four crime laboratories in this application can expect to reduce the overall backlog by 588 cases (210 in-house and 378 outsourced) by the end of the grant period. The laboratories expect to increase extraction capacity with the instrumentation purchases to 14 samples in 30 minutes instead of the manual extraction method currently used that takes two days from start to finish. The laboratories expect to increase throughput by 10 percent with the new equipment, use of overtime and outsourcing.

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**FY12 Recipient Name:** Arizona Department of Public Safety

**Award Number:** 2012-DN-BX-0063

**Award Amount:** \$799,517

**Abstract:** The Arizona Department of Public Safety (AZ DPS) Crime Laboratory System provides complete DNA profiling services from three of its Regional Crime Laboratories: the Central Regional Crime Laboratory, Phoenix; the Southern Regional Crime Laboratory, Tucson; and the Northern Regional Crime Laboratory, Flagstaff. These DNA services, include STR analysis of autosomal nuclear DNA, Y-STR analysis of the Y chromosome and mitochondrial DNA analysis of evidence submitted by 295 law enforcement and prosecutorial agencies

statewide, including municipal police departments, county sheriffs, tribal police, and state law enforcement. Also, the AZ DPS Crime Laboratory, by statute, maintains the DNA Database for the State of Arizona and has been processing convicted offender DNA samples since 1993 and DNA arrestee samples for those arrested for certain violent crimes beginning in 2008.

The AZ DPS Crime Laboratory System for the last four years has faced severe budget reductions due to the dire economic conditions in the State of Arizona. As a result, the AZ DPS Crime Laboratory DNA programs have been reduced as follows:

- The DNA Arrestee Database Program has 100% elimination of funds – a loss of \$980,000.00 per year.
- The DNA convicted offender database program has a 49% reduction in funds – a loss of \$1.8 million per year.
- The DNA casework program received a 12% reduction in funds – a loss of \$600,000.00 per year.
- In addition to the above, a hiring freeze has resulted in a 24% vacancy factor, with 11 DNA positions vacant.

Therefore, the Federal funding from this Grant request would be utilized to accomplish the following goals, eliminating bottlenecks and producing the expected results below:

- Reduce the projected backlog of DNA Database samples by utilizing two laboratory technicians to free DNA analysts to concentrate solely on DNA sample processing. Over the eighteen month period of the Grant and with DNA supplies purchased from the Grant funds, 14,200 DNA database samples will be processed which otherwise would have been backlogged.
  - Reduce the number of DNA casework samples backlogged by utilizing one laboratory technician to free DNA casework analysts to concentrate solely on DNA casework and to implement Laser Microdissection (LMD) to increase sample throughput 50% in sex assault cases. This frees DNA analyst's time to concentrate on additional violent crimes and backlogged burglary cases. 1,600 additional DNA cases will be processed over the 18 months of the Grant, reducing the current DNA casework backlog.
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**FY12 Recipient Name:** California Department of Justice

**Award Number:** 2012-DN-BX-0048

**Award Amount:** \$3,393,432

**Abstract:** The California Department of Justice (CA DOJ) Bureau of Forensic Services (BFS) seeks funding from the National Institute of Justice (NIJ) FY2011 Forensic DNA Backlog Reduction Program for casework backlog reduction of \$2,017,379.57 and data bank funding of \$1,232,958.86. This funding includes an initial allocation for the data bank of \$1,018,029 with a shift of an additional \$214,929.86 from the casework allocation of \$2,375,403. The total requested allocation of \$3,393,432 includes indirect costs of \$89,093.57. All work is to be accomplished in the eighteen month period of the award sought.

Our goals for this grant are to:

- reduce the existing DNA casework backlog
- reduce the overall turnaround time for handling, screening, analyzing and reviewing forensic DNA samples

- increase the number of data bank familial searches, thereby reducing that backlog
- expand our rapid analysis of DNA samples
- upgrade and expand our CODIS capabilities
- improve and expand the capabilities of the CODIS Hit Outcome Project (CHOP)
- improve our quality control capabilities
- provide required training for our analysts

The CA DOJ BFS proposes to achieve these goals by:

- funding overtime for existing casework and data bank analysts
- funding overtime for IT personnel
- purchasing equipment and supplies needed for RADS validations
- purchasing equipment for casework
- purchasing electronic notebooks for a pilot project to oversee quality control tasks
- funding a new LIMS to interface with existing systems to provide oversight, auditing and data mining capabilities over all phases of sample tracking
- funding attendance at conferences and other training opportunities

The CA DOJ BFS expects to complete 104 additional DNA cases using grant funding for overtime by the end of the award period, increase our rapid analysis of DNA service program, and to reduce casework turnaround time by 10%. The JBDL expects to work 2,524 additional database samples using grant funding, increase familial search capacity, and increase the efficiency of data bank sample handling and processing.

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**FY12 Recipient Name:** City and County of San Francisco (CA)

**Award Number:** 2012-DN-BX-0034

**Award Amount:** \$358,153

**Abstract:** The San Francisco Police Department Criminalistics Laboratory (SFPD Crime Lab) is the agency that is responsible for analyzing evidential material associated with criminal investigations for the local law enforcement agencies. The SFPD has one Crime Lab that primarily services the City and County of San Francisco Police Department, as well as the Sheriff's Department and other local law enforcement agencies operating within the City and County of San Francisco.

The SFPD is facing budgetary constraints related to its operational budget for equipment purchases, laboratory instruments and training. The Federal funding from this award will be used for the following goals:

1. Reduce the forensic biology/DNA case backlog by streamlining data analysis using automated interpretation software and fund overtime work.
2. Increase the efficiency of the laboratory by purchasing equipment.
3. Hiring a contractor for LIMS development, system integration and increasing efficiency which will, in turn, decrease bottlenecks.
4. Providing the continuing education required for each DNA analyst.



The SFPD can expect to reduce the DNA backlog by standardizing systems, increasing efficiency and optimizing the case turn-around time. By the end of the award period, the turn-around time is expected to be reduced to 60 days or less.

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**FY12 Recipient Name:** City of Los Angeles (CA)

**Award Number:** 2012-DN-BX-0039

**Award Amount:** \$1,447,163

**Abstract:** The Los Angeles Police Department Serology/DNA Unit (LAPD SDU) intends to reduce its backlog by 340 cases and increase its laboratory capacity to meet existing and future demand for Deoxyribonucleic Acid (DNA) screening and testing. To accomplish its objectives, the LAPD will provide training, purchase equipment, utilize analyst overtime (for casework and limited support of in-house training), and procure contract laboratory services for DNA analysis. Moreover, this strategy reduces bottlenecks that have in the past, prevented the LAPD from meeting its goals.

Training will ensure that Criminalists acquire the skills necessary to perform DNA typing, and will enable those who are already trained, to meet continuing education requirements that are necessary to keep the laboratory's accreditation. Independent of this or any grant, the City has hired additional criminalists in support of DNA testing. Once these newly hired Criminalists are trained, they can perform evidence screening that will improve efficiency and reduce turnaround time. Those Criminalists who are already trained to perform DNA typing will be able to increase the number of samples that they analyze, further reducing turnaround time.

To improve the overall capacity of the DNA analysis, the LAPD SDU continues to reorganize the testing process. The acquisition of additional robotic platforms will further increase capacity, increase sample throughput capabilities, and improve our casework analysis efficiency. In order to fulfill the robotic needs, the following instruments will be purchased with funds from this grant: one high capacity, high throughput DNA amplification set-up and normalization robot and three high capacity, high throughput DNA differential extraction robots. To handle increased sample throughput, one Applied Biosystems (ABI) 3130 genetic analyzer will be upgraded from a four capillary instrument to a 16 capillary instrument. In addition, ten lap top computers along with the required software will be purchased in order to increase our capacity to analyze DNA profile data. To enable the LAPD DNA Analysts to analyze raw data from the genetic analyzers, ten new Gene Mapper ID (GMID) licenses will be purchased from (ABI) to be installed on the 10 new lap tops. With an ever increasing number of mixture DNA profiles being produced, particularly the increase in profiles obtained from "touch" DNA samples, the LAPD is faced with deconvoluting a large number of mixture DNA profiles. To deal with the increase in mixture DNA profiles, the LAPD will purchase 10 copies of ArmedXpert software to deconvolute mixture DNA profiles, saving the DNA Analysts considerable time now spent doing mixture calculations by hand, improving sample throughput and casework efficiency. In order to improve upon administrative efficiency and document control, the LAPD intends to purchase Radio Frequency Identification (RFID) equipment to track and control casework and other important files. To enhance our capacity and efficiency in entering sample data into the automation instrumentation, and transferring that data from instrument to instrument, the LAPD plans to purchase a Sample Information Management System (SIMS). A SIMS will allow the LAPD to

enter sample information once and then have that information, along with the relevant data, transferred from one instrument to the next instrument in the process. This will greatly speed the process and prevent clerical errors that can often occur when the sample information is entered by hand multiple times at each individual step.

For sexual assault rape kits currently being received into evidence, a new LAPD policy puts the emphasis on screening and performing the DNA analysis in-house on as many cases as possible. This is a departure from past protocols when much of our sexual assault evidence was sent to contract laboratories for analysis, both screening and DNA. This has increased our monthly case load significantly, requiring more overtime for the analysis of backlogged cases in-house.

The LAPD SDU will also reduce its backlog by providing Criminalists with overtime to process, record, screen and analyze samples in-house; overtime to process, record and in some cases screen casework to be outsourced to City approved contract laboratories; and, to perform CODIS review prior to uploading profiles. Because screening and/or DNA typing of samples from active cases takes priority over other duties, Criminalists now scramble to find the time to analyze and upload results from the contract labs to the CODIS database. By providing overtime, the LAPD will ensure that the Criminalists can perform the CODIS review.

With the addition of our new policy related to in-house analysis of sexual assault cases, contract laboratory services will allow the LAPD SDU to reduce the resulting increase in backlog of non-sexual assault related cases, as well as the existing backlog that continues to grow due to an increasing demand for DNA analysis. The use of contract laboratory services will ensure that the Criminalists have the time to receive training and work on active cases. Services to be provided by the contract laboratory will include DNA typing but will not include the data review for CODIS upload. Since Criminalists will have the opportunity to work on active cases, the number of cases that will eventually become part of the backlog will be fewer.

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**FY12 Recipient Name:** City of Oakland (CA)

**Award Number:** 2012-DN-BX-0054

**Award Amount:** \$408,295

**Abstract:** Forensic Biology casework capacity and case completion turnaround times at the Oakland Police Department's Criminalistics Laboratory have improved significantly over the last year as a result of instrumentation purchased through grant funds received from the National Institute of Justice's DNA Backlog Reduction and Capacity grant programs.

Forensic Biology Unit staffing has increased to a level that is appropriate to analyze the physical evidence in association with the crimes committed in Oakland. The implementation of electronic sample documentation and the automated DNA processes as a result of the acquisition of DNA extraction robots, DNA sample manipulation robots, real-time PCR for human DNA quantitation, and higher capacity capillary electrophoresis instruments and computer software to aid the Criminalists in data interpretation have resulted in an increase in the number of biological samples analyzed. Additionally, information from laboratories utilizing the Six-Sigma approach to case work (funded by NIJ) was utilized to formulate a POD system in the Forensic Biology

Unit (starting October 1, 2011). The case productivity increase by 40% from year 2010 to 2011. It is clear that these processes significantly increase our capabilities.

Through enactment of the proposed FY 2012 DNA Backlog Grant initiative, the Laboratory will analyze one hundred seventy (170) of the backlogged case requests. This will be accomplished by:

1. Reducing the forensic DNA case backlog through Criminalist overtime and purchasing supplies (100 backlogged cases).
2. Retaining Biology Unit staff by continuing to fund salaries and benefits of 1.0 FTE Criminalist and 1.0 FTE Forensic DNA Technician. This Criminalist will conduct analyses on 70 backlogged cases during the life of this grant.
4. Providing the required continuing education for each Criminalist and Technician

The Forensic Biology Unit scientific staff's continuing education is needed to comply with the Laboratory's ASCLD-LAB accreditation, individual scientist's certification, NDIS requirements for CODIS data entry, and the FBI DNA Quality Assurance Standards' mandatory educational requirements. The Laboratory does not have an independent budget for training. It is anticipated that case completion time would improve to less than 100 days on average upon the attendance of conferences, implementation of the new technologies learned, and training of new Forensic Biology Unit staff.

The Forensic Biology Unit case completion time for the entire year 2011 was 385 business days on average; based on the date of the request from the investigator to the publication of the report. This is higher than previous years due to the completion of several (51) very old cases in which the Criminalist was awaiting additional information from the requestor. Post implementation of the POD system the turnaround time was reduced to 278 days on average. If awarded the FY12 DNA Backlog Reduction grant, a grant-funded Forensic Technician (appointed under the Backlog FY11 Grant) will continue to operate the automated DNA processes. Thus, increasing the number and capacity of available Criminalists that will be devoted to data interpretation and case completion.

The Biology Unit was able to complete the analyses on 215 cases in approximately 100 business days from the receipt of the request. The ultimate goal of the Oakland Police Department's Criminalistics Laboratory's request for FY 2012 DNA Backlog Reduction grant funds is to continue to decrease the Biology Unit's turnaround time on all non-rush DNA analyses; ideally to less than 100 business days. The continued analyses by the grant funded Criminalist and Forensic Technician will continue to increase the Unit's capacity to complete case requests in a timely fashion. This decrease in turnaround time and the increase in the number of DNA samples analyzed will enable the Lab to increase the number of cases completed annually by approximately fifteen percent. The DNA profiles obtained from probative evidence will be entered into CODIS. Based upon past experience with DNA profiles obtained from cases without suspects, we anticipate a 45% 'Hit-Rate'.

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**FY12 Recipient Name:** City of San Diego (CA)

**Award Number:** 2012-DN-BX-0023

**Award Amount:** \$356,590

**Abstract:** The demand for DNA typing services in the City of San Diego continues to increase steadily. Homicide and sex crime submissions remain steady; however, there continues to be an increase in submission of lesser felonies and property crimes. It is our goal to utilize these grant funds to increase the efficiency of casework output in our DNA laboratory, and to provide the funding to allow additional cases to be worked on overtime. The combination of these two things should result in a decrease in backlogged cases. We seek \$356,590 in grant funds in an attempt to achieve some important specific results.

1. Reduce the average turnaround time on DNA cases from 74 days to 70 days.
  2. Increase the average number of samples analyzed per analyst per month from 32 samples (currently) to 38 samples per month.
  3. Reduce the backlog (cases over 30 days) by approximately 10% from 385 to 350, in part by completing 40 cases in-house using grant funded overtime.
  4. Provide mandated training to all analysts in the DNA laboratory.
  5. Purchase equipment that will increase casework efficiency.
  6. Provide a safe and well-lit vehicle examination garage for the collection of biological evidence.
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**FY12 Recipient Name:** Contra Costa County (CA)

**Award Number:** 2012-DN-BX-0036

**Award Amount:** \$244,010

**Abstract:** The Contra Costa County Office of the Sheriff Forensic Services Division is the agency responsible for analyzing evidential material associated with criminal investigations for twenty five routine law enforcement clients and other governmental agencies in Contra Costa County, CA. The population served by the Forensics Services Division exceeds one million. The Forensic Service Division includes the Forensic Biology Unit which is a full service DNA unit within the laboratory. The DNA staffing has increased due partially to the support from previous Federal awards, however, overall unit efficiency is poor due to lack of automated equipment, bottlenecks at targeted tasks, a discontinuous workflow and no comprehensive integrated sample management system.

The Federal funding from this award will be used for the following goals:

1. Increase the casework capacity of the laboratory by purchasing a state of the art AB 3500 Genetic Analyzer Instrument and GeneMapper ID-X Software for forensic data analysis/
2. Increase the casework capacity of the laboratory by purchasing a Real Time PCR quantitative DNA instrument.

The Forensic Biology Unit can expect a sample throughput increase of 20% resulting in faster turnaround times and a DNA backlog reduction of at least 300 cases by the end of the award period.

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**FY12 Recipient Name:** Alameda County (CA)

**Award Number:** 2012-DN-BX-0029

**Award Amount:** \$264,301

**Abstract:** The Alameda County Sheriff's Office (ACSO) Crime Laboratory is responsible for processing all evidence submitted to the laboratory associated with criminal investigations from local law enforcement agencies throughout Alameda County excluding the City of Oakland.

In order to continue meeting the needs of our user agencies in providing DNA analysis in a timely manner, grant funds from this award will be used to continue funding two positions (Criminalist and DNA Technical Lead) in the DNA Unit and pay for annual maintenance contracts for DNA instrumentation. Although these grant funds will not completely finance the two positions, local funds will be used to continue funding in order to complete this program.

The funding from this award will be used for the following goals:

1. Maintain case throughput
2. Reduce case backlog
3. Reduce case turn around time to 45 days or less
4. Maintain DNA instrumentation

The DNA Unit expects to maintain monthly case productivity as well as reduce the case backlog. The DNA Unit expects to reduce turn around time to 45 days or less. The funded Criminalist will be responsible for conducting DNA casework and performing technical reviews of casework. The DNA Technical Lead will be responsible for the technical aspects of the DNA Unit as well as oversight of day-to-day quality assurance and accreditation compliance activities. The DNA Technical Lead will perform technical and administrative reviews of casework, conduct and review validations as necessary, and provide training to staff.

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**FY12 Recipient Name:** County of Kern (CA)

**Award Number:** 2012-DN-BX-0051

**Award Amount:** \$294,122

**Abstract:** The purpose of this backlog reduction project is to completely automate the Kern Regional Crime Laboratory (KRCL) DNA Analysis Unit (DAU), and to integrate unit instrumentation with the laboratory's new Laboratory Information Management System (LIMS). Currently, DAU personnel process cases in a way that is largely manual. Each case is assigned to an individual analyst who processes the case, sample-by-sample, from start to finish. This manual process is only aided by the use of a six-sample robotic liquid handler for DNA extraction. Over past funding cycles, the KRCL used backlog reduction monies to shore up the numbers of analysts working DNA cases and to assist these analysts with the interpretation of complex mixtures through software algorithms. These projects, though successful, have not produced a significant decrease in turn-around-time or increase in the numbers of samples processed. This is largely due to the fact that we have never truly addressed the underlying methods by which samples are processed. Currently, samples are processed individually by hand. This methodology is outmoded, and must be replaced with automated systems that can handle multiple samples on a 96-well platform. Grant funds awarded from this solicitation will be used to replace the current robotic extraction platform with a 96-well sample liquid handling unit that can process evidentiary samples from DNA extraction through DNA quantitation. A separate

liquid handling platform will be purchased for the further processing of samples through DNA typing. In this way, the entire process will be upgraded to increase sample throughput. The KRCL still has limited number of analysts processing cases. Therefore, grant funds will also be used to purchase professional services for the validation of the new robots using the most up-to-date amplification kits and to train analysts on these automated sample processing techniques.

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**FY12 Recipient Name:** County of San Bernardino (CA)

**Award Number:** 2012-DN-BX-0078

**Award Amount:** \$80,000

**Abstract:** The San Bernardino County Sheriff's Department - Scientific Investigations Division (Crime Laboratory) is part of a unit of local government. We are responsible for analyzing evidential material associated with criminal investigations for local law enforcement agencies within the counties of San Bernardino and Riverside. The overall goals of the San Bernardino County Sheriff's Department Crime Laboratory are to increase the throughput of our DNA laboratory, reduce DNA casework backlog and case turnaround time. Our objectives will be to fund overtime and purchase supplies to complete backlogged DNA cases and fund training to fulfill continuation education requirements of at least 2 DNA analysts. Our Crime Laboratory has experienced an increase in staff without adding additional floor space in our DNA lab areas. We have brought robotics online with the assistance of previous grant funding. In our continued effort to reduce our case backlog, we are working towards streamlining our DNA process by efficiently analyzing more DNA casework while utilizing our robotics/instrumentation within our crowded work area and with the assistance of these grant funds for supplies and overtime. The projected plans will incorporate the most prudent and efficient use of supplies, allowance for overtime and training which will allow us to reach our goals.

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**FY12 Recipient Name:** County of San Mateo (CA)

**Award Number:** 2012-DN-BX-0082

**Award Amount:** \$196,512

**Abstract:** The County of San Mateo is located in Northern California. It is positioned just south, and adjacent to, the City of San Francisco. It has a population of approximately 718,451 and is comprised of 455 square miles of land, 25% of which is urban space. Forensic Services for the County are provided by the San Mateo County Sheriff's Office. The San Mateo County Sheriff's Office Forensic Laboratory services approximately 30 law enforcement and law enforcement related agencies in the County of San Mateo. These agencies include San Mateo County departments: Sheriff's Office, District Attorney, Probation, Coroner, Parks and Recreation, and Animal Control, as well as the California Highway Patrol, local police departments, California Fish and Game, and local transportation authorities. The San Mateo County Sheriff's Office Forensic Laboratory also provides forensic services, by contractual agreement, to the City of Vallejo (Solano County) and the City of Concord (Contra Costa County).

On May 11, 2005, the San Mateo County Sheriff's Office Forensic Laboratory began performing STR DNA analysis.

On September 11, 2010, the San Mateo County Sheriff's Office Forensic Laboratory was accredited by the American Society of Crime Laboratory Directors/Laboratory Accreditation Board International (ASCLD/LAB). The San Mateo County Sheriff's Office Forensic Laboratory undergoes external audits, not less than once every 2 years, to demonstrate compliance with the DNA Quality Assurance Standards established by the Director of the Federal Bureau of Investigation.

The Federal funding from this award will be used for the following goals:

1. Reducing the forensic DNA case turnaround times through the continued employment of three (3) extra-help criminalists and purchasing of supplies.
2. Increasing the capacity of the laboratory by purchasing equipment (QI Agility System HEPA/UV and digital cameras) and software (Armed Xpert) and by continuing to employ three (3) extra-help criminalists.
3. Providing the required continuing education for four criminalists.

The San Mateo County Sheriff's Office does anticipate a reduction in the DNA case backlog; however, this reduction will not occur until two (2) of the remaining three (3) criminalists in training have completed their training in December 2012 (although in the laboratory's FY 11 Backlog DNA Grant application it was originally anticipated a February 2012 completion date). The laboratory does expect to complete at least 108 cases by the end of the award period. The turnaround time is expected to be reduced to 200 days or less, and the criminalist throughput for samples analyzed per month per analyst is expected to increase to 20 samples. Currently, three (3) fully qualified, independent, examiners are responsible for working on DNA cases and three (3) examiners are working DNA cases as part of their supervised casework. As stated above, the laboratory anticipates the completion of training (not including differentials) for two (2) additional criminalists by the end of December 2012 and one (1) criminalist by the end of June 2013. The addition of these three (3) trained examiners will assist in the decrease in the turnaround time of all casework submitted to the Forensic Biology Section.

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**FY12 Recipient Name:** County of Santa Clara (CA)

**Award Number:** 2012-DN-BX-0061

**Award Amount:** \$301,397

**Abstract:** The Crime Laboratory, under the Office of the Santa Clara County District Attorney, is the regional laboratory responsible for the analysis of physical evidence collected within Santa Clara County; it serves over 30 criminal justice agencies, including the sheriff, medical examiner, and all municipalities within the County. Crimes reported for the county in calendar year 2009 included 5,013 violent crimes, 23,790 property crimes, 28,303 instances of larceny-theft, and 403 cases of arson. This information was obtained from the website of the Office of the Attorney General for the State of California Department of Justice, and has been provided as an attachment. We are a full-service DNA laboratory providing biological screening of evidence, autosomal STR analysis, and YSTR analysis.

The SCCCL is currently facing budgetary constraints in California, which makes assistance through Federal funding essential to decrease the laboratory's backlog. We are hoping to use the Federal award to achieve the following goals:

1. Reducing the overall DNA backlog through funding two full-time analyst positions and purchasing supplies.
2. Sending two analysts to a DNA-related conference to obtain DNA-related continuing education

The SCCCL can expect to complete approximately 390 cases during the grant period. The turnaround time is expected to reduce to 75 days or less as we continue to work through our backlog.

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**FY12 Recipient Name:** County of Ventura (CA)

**Award Number:** 2012-DN-BX-0024

**Award Amount:** \$121,509

**Abstract:** In this grant application the Forensic Sciences Laboratory (FSL) is requesting funds to continue funding a fixed term DNA position to help reduce the backlog. The DNA position was established four years ago through this grant.

Senior examiners have been required to perform screening tests, which could equally well be performed by a junior person. The FSL would like to continue employment of a Forensic Scientist I/II in the DNA section, thereby allowing the senior staff to concentrate on the more complex DNA cases. This individual will help screen evidence and conduct DNA analysis.

The overall objective of this grant is to improve DNA analysis capacity and to reduce the number of backlogged DNA cases. The laboratory's goals are 1) to reduce the turnaround time by ten percent (from 123 days to 111 days) between submissions of a DNA sample to the laboratory to having a report written for the submitting agency. 2) To reduce the number of pending cases by sixty in a one year period of time. This will result in an additional 21 to 30 DNA profiles being entered into CODIS with an anticipated result of seven to ten CODIS hits.

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**FY12 Recipient Name:** Fresno County Sheriff Department (CA)

**Award Number:** 2012-DN-BX-0041

**Award Amount:** \$282,218

**Abstract:** The geographic location of Fresno County is approximately an equal distance between the major metropolitan areas of San Francisco and Los Angeles in the Central San Joaquin Valley. From east to west, the County's boundaries extend 135 miles, encompassing a geographical area of 6,007 square miles with the Coast Mountain Range to the west and the Sierra Nevada Mountain Range to the east. Fresno County has a population of 899,348 that is expected to grow 3.4% annually in the future.

The Fresno County Sheriff's Department Forensic Laboratory provides services for the Fresno County Sheriff's Office. The forensic laboratory has two Criminalists that are trained and qualified to perform STR analysis and currently two in our DNA training program. Due to staffing needs and the growing demand for DNA analysis, the Fresno County Sheriff's Department Forensic Laboratory needs to find a way to reduce backlogged DNA casework and increase our capacity. The Sheriff's Department has over 20 unsolved homicide/rape cases that



need to be examined for potential DNA evidence. DNA cases can take six to nine month from request to final report, due to the size of our staff and ageing non-efficient equipment. The forensic laboratory is seeking \$282,218 in federal funds to decrease the backlog of cases from the DNA unit and purchase updated equipment to increase the capacity of the DNA unit. This will be accomplished by using grant funds to purchase one Life Technologies 3500 genetic analyzer, two Nikon Digital Cameras, one plate centrifuge, two Nikon Macro lens, two dry block heaters, one LCD TV/computer monitor and peripherals for training and video conferences, one Polilight PL500sc + IR alternate light source, installing a new LIMS system, and sending backlogged DNA cases out to be analyzed by accredited fee-for-service vendors for analysis. The result will be a reduction in the number of days from request to issuing final DNA results to our clients and a reduction of in the numbers of backlogged DNA cases.

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**FY12 Recipient Name:** Los Angeles County Sheriff's Department (CA)

**Award Number:** 2012-DN-BX-0060

**Award Amount:** \$910,000

**Abstract:** The Los Angeles County Sheriff's Department, Scientific Services Bureau (LASD-SSB) Crime Lab exists under the County of Los Angeles and is responsible for analyzing evidence from criminal investigations for the entire County, excluding the City of Los Angeles and the area it serves.

The LASD-SSB remains under severe budget constraints and overtime is nearly eliminated department wide. The Federal funding from this award will be used for the following goals:

1. Reduce and prevent casework backlog through analyst overtime and supply purchases.
2. Increase capacity of the biology section by purchasing equipment (Qiagility robots, 7500 Real Time PCR Instruments, pipettes, table top microfuges, microscopes, alternate light source, and color printers).
3. Provide the required continuing education for 18 analysts.

The LASD-SSB can expect to reduce the DNA case backlog by at least 601 cases by the end of the award period. The turnaround time is expected to be reduced to 100 days or less, and the analyst throughput for casework is expected to increase by 15%.

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**FY12 Recipient Name:** Orange County Sheriff Coroner Department (CA)

**Award Number:** 2012-DN-BX-0056

**Award Amount:** \$446,654

**Abstract:** The goals and objectives for this project are to use the 2012 DNA Backlog Reduction and Capacity Enhancement Program Grant funds as follows:

1. Fund two Forensic Technician positions.
2. Reduce the backlog of unanalyzed forensic biology/DNA cases in the crime laboratory by analyzing 20 cold case homicides, 30 backlogged major crime cases, and 750 backlogged property crimes using grant funded overtime and purchased supplies.
3. Increase the capacity and shorten the turnaround times for sexual assault cases from 50 to 40 days. Increase the capacity of the laboratory to analyze and enter profiles in SDIS from legally obtained reference standards collected as part of plea bargains in the county by

implementing semi-automated E-Core samplers to excise FTA and filter paper reference standards.

4. Improve current laboratory capabilities by purchasing one Qualtrax Document and Training Management system and a DNA data storage system to increase the section's DNA data storage capacity to achieve our goal of posting DNA reports on the laboratory's secure website
5. Provide required continuing education to DNA casework analysts.

By using the 2012 program grant funds for the above goals and objects, the Orange County Crime Laboratory will be able to increase its capacity by utilizing support personnel thereby allowing DNA analysts and supervisors to focus on analytical processes and reports, decrease turnaround times for sexual assault evidence by implementing and validating a QIAcube, increase our capacity to process legally obtained reference standards thereby increasing the number of samples in CODIS, and reduce our backlog by using overtime and grant purchased reagents to analyze backlogged major and property crimes.

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**FY12 Recipient Name:** Sacramento County (CA)

**Award Number:** 2012-DN-BX-0022

**Award Amount:** \$540,386

**Abstract:** The Sacramento County District Attorney Laboratory of Forensic Services (hereafter referred to as the crime laboratory) is to continue partnering with local police agencies and the District Attorney to target and solve those criminal cases that will have the most significant impact on the prosecution of violent crimes. The emphasis of the crime laboratory's 2012 backlog reduction operations will be on the timely analysis of DNA-related evidence from violent crime cases and the remediation/prevention of a backlog of DNA cases across the spectrum of reported crimes identified by law enforcement agencies as critical homicide or rape-homicide cases. There is no crime scene collection component to this grant.

The objectives of the crime laboratory to be completed during the eighteen month duration of the FY 2012 Forensic DNA Backlog Reduction Program includes directing the grant-funded DNA screening analyst to conduct the screening and preparation of biological evidence for DNA profiling from at least 45 DNA cases. Eligible DNA profiles from these cases will be uploaded to CODIS.

The primary objectives also include the purchasing and validation of an Applied Biosystems (now Life Technologies) AB-3500xl Genetic Analyzer and user licenses of Genemapper ID-X for use in forensic casework. The laboratory is currently using Applied Biosystem's 3100 series of electrophoresis instruments and Genemapper ID v3.2 software. The 3500xl instrument, coupled with the "expert assistance" functions of Genemapper ID-X, is intended to improve casework productivity.

The FY 2012 Forensic DNA Backlog Reduction Program grant will support an analyst to conduct screening of DNA cases. The FY 2011 program funding, which the FY 2012 program supplements, is being used to fund two DNA analysts and two consultants who will be involved concurrently in backlog reduction and DNA case turnaround time projects.

In order to achieve the goal and objectives outlined for this grant period the crime laboratory will employ one (1) criminalist who will each be responsible for screening evidence associated with designated criminal cases for probative evidence; two concurrently funded (FY 2011 program award 2011-DN-BX-K436) DNA analysts will upload profiles to CODIS developed from those cases that screened positive for biological fluids.

As with previous DNA grants, the FY 2012 Forensic DNA Backlog Reduction Program will provide funds for training and continuing education of the DNA analysts per the FBI's quality assurance standards for forensic testing laboratories. Providing continuing education and advanced training to the laboratory's experienced DNA analysts will ensure that the crime laboratory delivers the best possible, most efficient, and timely forensic DNA analytical services to Sacramento County.

The crime laboratory has prepared an implementation plan that funds a DNA screening analyst, continuing education and training opportunities for DNA analysts in the Crime Laboratory's Biology Unit, and equipment to improve the Biology Unit's overall productivity. The Project Director will closely monitor the grant to ensure progress is being made in all aspects of the grant.

Remaining funds will be used to add equipment that is used by all DNA analysts in an effort to improve casework production.

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**FY12 Recipient Name:** San Diego County (CA)

**Award Number:** 2012-DN-BX-0073

**Award Amount:** \$201,576

**Abstract:** The Lab is a full-service, ASCLD-LAB accredited forensic science facility. The Lab's forensic biology section provides casework DNA analysis services to law enforcement agencies in the County of San Diego, California (exclusive of the City of San Diego).

The Lab faces a steadily increasing workload of DNA analysis requests, occasioned by our recent focus on property crime cases and the expectations of our clients. This increase will further strain our already stretched financial and personnel resources. We hope to minimize the resulting impact on our operation by pursuing the following goals:

1. Reducing our backlog of work requests by providing overtime and supplies for additional casework.
  2. Improving our analysis capacity by replacing obsolete pipetting equipment and power supplies, obtaining additional alternate light sources for evidence screening, providing service contracts for critical DNA analysis equipment, and continuing a lease on a copier.
  3. Providing required continuing education for some of the Lab's DNA analysts.
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**FY12 Recipient Name:** City and County of Denver (CO)

**Award Number:** 2012-DN-BX-0113

**Award Amount:** \$231,867

**Abstract:** The Denver Police Department (DPD) Crime Laboratory serves the City and County of Denver and aims to use forensic technology to solve crime, thereby increasing public safety. The DPD Crime Laboratory DNA and Forensic Biology (DNA/FBIO) units seek federal support in order to reduce the number of cases backlogged throughout the 2012 year, as well as to increase the efficiency and effectiveness of the analysts working in the laboratory, by way of the following goals:

- 1) To outsource up to 225 backlogged property crimes to a contract DNA laboratory for STR DNA analysis.
- 2) To provide forensic scientist overtime to support this outsourcing project in two ways:
  - a) Evidence examination and forensic biology testing of up to 225 property crimes cases.
  - b) Technical review of the STR DNA data and upload of eligible DNA profiles to CODIS on up to 225 cases.
- 3) To fund a new full-time laboratory technician for 6 months to examine evidence and prepare samples from up to 225 backlogged property crimes that will be outsourced (this goal is shared between the lab technician and the forensic scientist overtime). This technician will be responsible for sending/receiving the evidence to and from a contract DNA laboratory.
- 4) To retain and fund a part-time laboratory technician for 12 months to cut DNA samples from sexual assault kits and known reference samples, and to support the laboratory through non-casework duties such as instrument maintenance, reagent preparation, temperature monitoring and laboratory decontamination.
- 5) To fulfill the continuing education requirements specified in the DNA Quality Assurance Standards for five DNA/FBIO analysts.

By implementing these measures, the DPD Crime Laboratory will target a significant backlog of property crimes, provide quality assurance support through a part time laboratory technician, and comply with national quality assurance standards regarding continuing education.

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**FY12 Recipient Name:** City of Colorado Springs (CO)

**Award Number:** 2012-DN-BX-0009

**Award Amount:** \$136,784

**Abstract:** The Colorado Springs Metro Crime Laboratory (MCL) is responsible for analyzing all evidentiary material associated with criminal investigations for the Colorado Springs Police Department (CSPD) (City of Colorado Springs, CO) and the El Paso County Sheriff's Office (EPSO) (El Paso County, Colorado). When fully staffed, the MCL has 14 civilian employees from both the Colorado Springs Police Department (CSPD) and the El Paso County Sheriff's Office (EPSO). Over the last six years, the MCL has undergone a number of positive changes that have increased the range, quality, and efficiency of forensic analyses performed. These changes include: the creation of both Firearms Examination and Forensic DNA units, hiring of a

civilian Crime Laboratory Manager; and the successful attainment of accreditation to ISO Standard 17025 through Forensic Quality Services-International (FQS-I), which includes Biological Screening and DNA Analysis disciplines. As is true of many agencies and cities around the United States, the Colorado Springs Metro Crime Laboratory and the City of Colorado Springs are facing budgetary constraints. With new DNA technology and instrumentation fast approaching, the MCL plans to use the funds from this award for the following goals:

- Reduce the backlog of forensic biology and DNA cases.
  - Increase the capacity of the MCL.
  - Maintain current laboratory capabilities by upgrading current aged DNA equipment and instrumentation.
  - Provide a case management tool for DNA analysts.
  - Provide required continuing education to both DNA analysts.
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**FY12 Recipient Name:** Colorado Department of Public Safety (CO)

**Award Number:** 2012-DN-BX-0012

**Award Amount:** \$604,525

**Abstract:** The Colorado Bureau of Investigation – Forensic Services (CBI-FS) is the state agency responsible for analyzing evidential material associated with criminal investigations for all state and local criminal justice agencies. CBI-FS maintains five regional laboratories located in Denver, Durango, Grand Junction, Greeley and Pueblo. The facilities located in Denver, Grand Junction and Pueblo have DNA analysis capabilities.

The downturn in the nation's economy has not spared the State of Colorado, and the CBI-FS has seen its budgets reduced for the last two budget cycles. Current expectations for the 2012-2013 budget cycle, which starts July 1, 2012, are for an additional 5 to 12% reduction in operating budgets. However, even with this downturn in our economy, the CBI-FS has not seen a reduction in the number of cases that we are processing. In fact, the CBI-FS continues to have tremendous success with our property crimes and cold case analysis. These successes have meant that our user agencies are requesting more DNA analysis on these types of cases.

As a CODIS participating laboratory receiving federal funds, the CBI-FS is required to maintain compliance with the Quality Assurance Standards for both Casework and DNA database laboratories. These documents have both continuing education and external audit requirements.

Finally, with the implementation of SB09-241, the CBI-FSD DNA databasing laboratory has seen a threefold increase in the number of databasing samples submitted to the laboratory for DNA analysis. Between the increase in the number of databasing samples as well as the increase in the cold case DNA analysis conducted by the CBI-FSD, the DNA database is needing to perform confirmation testing on more and more DNA databasing samples. However, with this increase in samples there has been only one additional DNA analyst added to the staff. Therefore, it is imperative for the CBI-FSD to look for automated methods in which to increase the capacity of the DNA databasing laboratory.

Therefore, the four goals of the FY 2011 DNA Backlog Reduction Program are to:

Goal 1: Increase the capacity of the CBI-FSD DNA Casework Unit

Goal 2: Reduce the backlog of DNA forensic samples

Goals 3: Provide required continuing education

Goal 4: Provide external audits for all CBI-FS laboratories as required by the QAS documents

Goal 5: Increase the capacity of the CBI-FSD DNA Databasing Unit

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**FY12 Recipient Name:** Department of Emergency Services and Public Protection (CT)

**Award Number:** 2012-DN-BX-0042

**Award Amount:** \$601,552

**Abstract:** The Department of Emergency Services and Public Protection (DESPP) is a unit of State government. DESPP's Division of Scientific Services comprises three Laboratories: Forensic Science Laboratory, Controlled Substances and Toxicology Laboratory, and Computer Crimes and Electronic Evidence Laboratory. The combination of these laboratories, each unique in its service offerings, is responsible for all evidence examinations for the State of Connecticut. DESPP has an existing forensic DNA laboratory. The Forensic Science Laboratory, part of the Department of Emergency Services and Public Protection - Division of Scientific Services, is responsible for all forensic examinations for the State of Connecticut. DESPP's Forensic Science Laboratory is the designated crime laboratory that conducts analysis of DNA database samples for Connecticut, serving over 101 local, State, and Federal stakeholders. The Connecticut Forensic Science Laboratory derives its statutory authority from Connecticut General Statutes §29-7b and §54-102h.

The State of Connecticut has faced budgetary challenges over the last several years and the Forensic Science Laboratory continues to experience backlogs. Faced with these challenges, DESPP is requesting Federal grant funds to support the Forensic Science Laboratory.

The number of backlogged DNA cases to be solved by DNA testing is about 65 cases. At the end of this DNA grant program (October 1, 2012 through March 31, 2014), it is expected the following goals will be accomplished:

1. To reduce the backlog of DNA cases by about 65 and, as appropriate, entry into state and national DNA databases
2. To increase the testing capacity of the DNA Section
3. To maintain the testing capacity of the Database Section
4. To reduce the backlog of offender samples by 2,400 and entry into state and national DNA databases

Project plans and methods of achieving goals - The standard Connecticut Forensic Science Laboratory QA/QC policies and procedures shall be followed regarding evidence examination, confirmation of biological materials, decisions concerning which samples to forward for DNA testing, and all interpretations of DNA profiles, using current Forensic Science Laboratory personnel and durational DNA analysts.

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**FY12 Recipient Name:** Metropolitan Police Department (DC)

**Award Number:** 2012-DN-BX-0066

**Award Amount:** \$430,520

**Abstract:** The Metropolitan Police Department Crime Laboratory (MPDCL) is responsible for providing forensic analyses of physical evidence as it pertains to violent crimes committed in the District of Columbia.

The crime laboratory anticipates occupancy of the newly constructed Consolidated Forensic Laboratory in Fall 2012. The Federal funding from this award will be used to support the laboratory expansion and maintain current laboratory operations. The Federal funding from this award will be used for the following goals:

1. Reduce the backlog of forensic biology cases
  2. Improve laboratory efficiency by increasing laboratory capacity and reducing bottlenecks
  3. Maintain current laboratory operations by procuring the required services needed to support laboratory enhancements (i.e. service contracts, equipment upgrades, software for equipment upgrade)
  4. Provide continuing education to all analysts participating in the Backlog Reduction Project
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**FY12 Recipient Name:** Delaware Health and Social Services (DE)

**Award Number:** 2012-DN-BX-0084

**Award Amount:** \$349,869

**Abstract:** The Office of the Chief Medical Examiner - Forensic Sciences Laboratory is the agency that is responsible for analyzing evidential material associated with criminal investigations for all state and local law enforcement agencies and medical examiners within the state of Delaware. Delaware Code (Title 29, Chapter 47) designates the DE OCME as the agency responsible for conducting DNA analysis on DNA samples collected by the Delaware Department of Correction from all convicted felons; the DE OCME is responsible for storing and maintaining the resultant DNA profiles in the Delaware State DNA Index System.

1. Reducing the forensic DNA case backlog through the purchasing new equipment and supplies.
2. Reducing the DNA database sample backlog through the purchasing new equipment and supplies.
3. Increasing the capacity of the laboratory by purchasing equipment (Applied Biosystems 3500 Genetic Analyzer and Applied Biosystems 7500 RT-PCR System).
4. Increasing the reportable data for mixtures as well as eliminating complicated statistical calculations by purchasing mixture interpretation software (ArmedExpert - NicheVision).
5. Providing the required continuing education for each analyst.

The DE OCME - DNA Unit can expect to reduce the DNA case backlog by at least 55 cases by the end of the award period. The agency also expects to work at least 1,300 DNA database samples using Federal funding. The turnaround time is expected to be reduced to 90 days or less, and the analyst throughput in the casework sections is expected to increase 20%.

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**FY12 Recipient Name:** Broward Sheriff's Office (FL)

**Award Number:** 2012-DN-BX-0065

**Award Amount:** \$462,911

**Abstract:** At the current time, the Broward Sheriff's Office has a backlog of approximately 225 cases. We are requesting funding so that the unit can perform in-house analysis on these cases. This funding will assist in keeping the backlog from growing and will be utilized to work cases that are being requested or those that have court dates in the foreseeable future. In addition, cases which lack suspects will also be worked. Funding is being requested for kits, consumables, and personal protective equipment. As part of the DAB requirements, every DNA analyst must attend training on a yearly basis. This has always presented a challenge due to budget restraints; this has not changed. The department's budget has been cut and training was one of the areas that funding was reduced. As a result, funding for training is being requested so that we can circumvent this continuing critical issue. As part of this grant we would like to request continued funding to two individuals who have been hired using previous grant funds. In addition, we would like to bring in NFSTC to assist us in the training of these two individuals. They have only recently been hired but once training is complete, one will be brought on line to be a DNA caseworker and the other will be the section's technician and assist with the daily duties of the section. Lastly we would like to have someone come in and perform an efficiency/process mapping study for us. This will help to determine where the bottlenecks of our workflow are and suggest ways to improve them. We also would like to start preserving our genomic DNA in a more efficient manner thus cutting down of the need for more freezer space.

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**FY12 Recipient Name:** Florida Department of Law Enforcement

**Award Number:** 2012-DN-BX-0107

**Award Amount:** \$3,787,845

**Abstract:** Florida Department of Law Enforcement (FDLE), as mandated by Chapter 943 Florida Statutes, operates a statewide forensic crime laboratory system to provide timely, expert and professional examination of evidentiary materials to aid in the investigation, prosecution and exclusion of criminal offenses in the state of Florida. The Biology/DNA needs of Florida's criminal justice community are serviced by a network of FDLE laboratories and five local laboratories that comprise the Florida crime laboratory system. FDLE has six internationally accredited DNA laboratories that provide Biology/ DNA analysis services.

The heavy demand for Biology services continued in 2011, with over 21,350 incoming service requests. The large volume of requests has been attributed to a number of factors including Florida's 18 million population and continued high volume of reported crime (770,518 index crimes as of last available report in 2010). Increased law enforcement awareness of the crime-solving value of Florida's DNA database also contributes to requests for Biology/DNA service that would not have been submitted a few years ago. Requests related to cold cases, and requests for touch DNA are on the rise. During 2011, Florida began collecting DNA from persons arrested for violent felony offenses. Moving from the current conviction-based criteria to include arrestees increased submissions to the database and increased case work demand as well. The second phase of arrest-based DNA collection begins January 1, 2013, for property crimes; burglary, theft and robbery. FDLE anticipates this expansion phase will again increase the volume of submissions to the DNA database by an estimated 21,184 additional samples in 2013.



Based on these factors, FDLE anticipates that incoming service requests for Biology will continue to be significant over the next several years.

The Federal funding from this award will be used for the following goals:

1. Reduce the forensic DNA case backlog.
  2. Increase DNA analysis throughput.
  3. Increase the capacity of the laboratory.
  4. Provide the required continuing education for each analyst.
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**FY12 Recipient Name:** Miami Dade County (FL)

**Award Number:** 2012-DN-BX-0045

**Award Amount:** \$996,026

**Abstract:** The National Institute of Justice has allocated \$5,484,725 to the State of Florida as part of the FY 2012 Forensic DNA Backlog Reduction Program. The Miami-Dade Police Department (MDPD) Forensic Services Bureau (FSB) Crime Laboratory has, through data obtained from the 2010 Florida Uniform Crime Report (UCR), been offered \$996,026 as its portion of the formula grant. The FSB Crime Laboratory proposes to use these funds to continue to increase the laboratory's capacity to analyze DNA samples, reduce the DNA sample turnaround time, and reduce the number of backlogged DNA cases awaiting analysis.

Funds will be utilized by the FSB Crime Laboratory to purchase a state-of-the-art wireless temperature monitoring system. This system will provide 24/7 monitoring of all temperature sensitive DNA evidence and reagent storage locations as well as DNA analysis labs while providing immediate notification of any out of range recordings. Digital cameras will be purchased for each Criminalist in the FSB Forensic Biology Section. These cameras will be used for casework documentation. The digital photographs will be permanently stored with the electronic case file in the FSB's Electronic Document Management System (EDMS). Portable air conditioning units will be purchased for use in temperature sensitive storage and DNA analysis locations when the building's HVAC system has failed or is offline. Additionally, evidence storage freezers and high-speed document scanners will also be purchased. Albeit in an indirect manner, these improvements to the FSB Crime Laboratory infrastructure will continue to increase its efficiency as well as the capacity for in-house DNA analysis. The validation and implementation of the AmpFISTR Identifiler Plus DNA test kit will further streamline the entire DNA workflow and enable the FSB to process a greater number of DNA evidence items.

The laboratory's capacity to analyze DNA samples has benefited directly from the current grant-funded personnel and these three positions will be funded via this award as well. The Criminalist is now a fully trained DNA analyst with the ability to process DNA casework from start to finish. The Forensic Photographer will continue to enhance case documentation by photographing each evidence package upon submission to the laboratory. Also, the Police Property and Evidence Specialist (PPES) will continue to handle evidence storage and retrieval within the Forensic Biology Section. This has relieved these time consuming duties from Criminalists who have been able to focus more time on analyzing DNA evidence items.

Funds are being requested to reduce the backlog of DNA cases by outsourcing casework to a commercial DNA laboratory. These cases will include cold homicide and sexual battery cases

and current property crime cases. To maximize the number of cases that can be outsourced for DNA analysis, funds are requested to pay overtime to FSB Crime Laboratory Criminalists to conduct the initial examination and screening of the evidence for potential biological material, prepare the DNA samples to be shipped and conduct the DNA technical review required to determine whether the criteria are met for DNA database entry. The commercial laboratory will conduct the DNA analysis, issue a court-ready report and provide testimony in any future judicial proceedings. Travel and registration funds are requested to enable FSB Criminalists to meet continuing education requirements by attending national conferences and participating in workshops.

The FSB Crime Laboratory has identified these goals for this project and has formulated a detailed plan to accomplish these goals. Ultimately, through funding from this award, the FSB Crime Laboratory will be able to increase its capacity to analyze DNA cases and reduce its backlog. This will generate more DNA profiles for database entry and more investigations will be assisted, thus contributing to the safety of Miami-Dade County's residents.

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**FY12 Recipient Name:** Palm Beach, County of (FL)

**Award Number:** 2012-DN-BX-0035

**Award Amount:** \$376,252

**Abstract:** The Forensic Biology Unit (FBU) in the Crime Laboratory of the Palm Beach County Sheriff's Office (PBSO) services over 28 municipalities, the school systems and assists state and local federal agencies as needed. The function of the FBU is to conduct DNA analysis on informative crime scene evidence regardless of the felony charge. Reducing the existing DNA forensic casework backlogs must be accomplished concurrently with the goal of reducing the overall turnaround time for the handling, screening, and analysis of forensic DNA samples which is currently at 102 days. The citizens of Palm Beach County have been and will continue to be provided with the full potential of the latest technologies in order to prevent future DNA backlogs and to help the criminal justice system. The validated processes will aid in the decision making process of how to proceed with a case in which DNA analysis was conducted.

The major objectives for the 2012 Backlog Reduction grant include 1) enhanced capacity through the purchase of high throughput instrumentation 2) increasing the use of automation tools to reduce the DNA backlog 3) increasing storage capacity and improving DNA work product quality through the purchase of refrigerators and freezers 4) upgrading the taxing administrative issues such as continuing the existing project to scan and archive all DNA-related documents to improve retrieval and storage efficiency, to discontinue storage fees and add document control procedures and 5) comply with FBI Quality Assurance Standards to provide continuing education training to competent analysts.

The 2012 DNA Backlog Reduction funds will increase the capacity of the FBU laboratory by allowing the unit to increase the number and quality of DNA samples analyzed on a 24 capillary instrument compared to the current 16 capillary instrument as well as analyze backlogged forensic DNA casework samples through the expansion of robotic capabilities, which will increase the efficiency, accuracy and quality of DNA data interpretation and moving towards all electronic storage of data.

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**FY12 Recipient Name:** Pinellas County (FL)

**Award Number:** 2012-DN-BX-0069

**Award Amount:** \$324,127

**Abstract:** The Pinellas County Forensic Laboratory provides laboratory analyses for analyzing evidentiary material associated with criminal investigation and decedent identification for the law enforcement community of Pinellas County and for the District Six Medical Examiner's Office, which represents both Pinellas and Pasco Counties in Florida. PCFL maintains a full service casework DNA section within its operations.

PCFL is facing significant budgetary constraints, which is coupled with an continually increasing DNA case submission rate. The Federal funding from this award will be used for the following goals:

1. Reduce the backlog of forensic biology/DNA cases by increasing casework capacity.
2. Increase the casework capacity by decreasing key bottlenecks in the case management process.
3. Maintain or increase current laboratory capabilities by purchasing equipment, software, and services.

PCFL expects to analyze at least 219 additional DNA cases (based upon casework supply funds (69) and casework performed by grant funded analysts (150)) over the award period. The agency also expects to reduce the turnaround time to less than 40 days, and increase the productivity of each analyst to at least 55 samples per month.

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**FY12 Recipient Name:** St. Lucie County Sheriff's Office (FL)

**Award Number:** 2012-DN-BX-0072

**Award Amount:** \$119,019

**Abstract:** The Indian River Crime Laboratory provides scientific and technical services to all state, county, federal and municipal law enforcement agencies within the 19th Judicial Circuit of Florida, and occasionally assists agencies outside the Circuit. The Laboratory is located in the city of Fort Pierce and covers a four county service area of 2,420 square miles which includes St. Lucie, Indian River, Okeechobee and Martin counties. The Laboratory's budget is comprised of funds input by 12 law enforcement agencies located within the circuit. As with all public sector agencies, the nation's economic problems have caused significant cuts to be made over the past three years. Projections for the near future suggest additional budget cuts will continue over the next few years. With this in mind, IRCL is continually looking for ways to make the best use of its existing funding as well as further streamline processes to increase throughput, reduce the time of delivery to our service area and continue efforts to reduce/eliminate its backlog.

In an effort to thwart DNA processing slowdowns due to increasing operational costs, as well as seek new ways to further streamline current processes, the IRCL is requesting funds to accomplish the following goals:

1. Maintain timeliness and prevent an increase of the backlog through maintenance of critical instrumentation used in forensic DNA analysis.
2. Reduce the current backlog through adequate access to DNA analysis supplies.

3. Maintain the number of caseworking analysts in the Forensic Biology Unit by continuing funding for an experienced analyst to fill a recent vacancy.
4. Provide required annual continuing education for existing DNA analysts to meet the FBI DNA Quality Assurance Standards.

With this funding the IRCL expects to analyze at least 77 forensic biology cases (62 with supply funds, and 15 by the grant-funded analyst) during the proposed projects as well as maintain a steady flow of DNA processing in an effort to slow or even reduce its future backlog.

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**FY12 Recipient Name:** Georgia Bureau of Investigation

**Award Number:** 2012-DN-BX-0046

**Award Amount:** \$2,268,462

**Abstract:** The Georgia Bureau of Investigation- Division of Forensic Sciences (GBI-DOFS) currently has a relatively small backlog of forensic biology cases. The major problems faced by the laboratory are insufficient state funding to maintain an adequate staffing level to address new casework analysis requests, providing ongoing training and continuing education, and procuring adequate levels of supplies necessary to maintain uninterrupted testing of offender samples.

The goals of this project are to achieve adequate staffing in forensic biology, provide training opportunities, update instrumental capacities, and provide supplies for database sample analysis. The project will be implemented through maintaining employment of current DNA award funded employees, attendance at national meetings/conferences, procurement of instruments thermal cyclers, robotics) to sustain capacity, and purchase of supplies for offender DNA analysis.

The expected outcome of this project is that at least 1,411 cases and 18,000 database samples will be analyzed in-house as a result of award funding. Report timeliness will be improved so that by the end of the project, the average number of days to issue a DNA report will be 60 days or less as measured from the date of initial request for analysis. Database samples will continue to be analyzed and DNA profiles uploaded to CODIS within 30 days of sample submission to the laboratory.

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**FY12 Recipient Name:** City and County of Honolulu (HI)

**Award Number:** 2012-DN-BX-0080

**Award Amount:** \$242,239

**Abstract:** The Honolulu Police Department's Scientific Investigation Section (HPD-SIS) maintains the only forensic DNA testing laboratory in the State of Hawaii. The section serves a county population of more than 900,000 and is staffed with five criminalists and two grant-funded criminalists. In addition to providing casework services, the unit is also responsible for the state's convicted offender DNA database. Although we are a county agency, we are often asked to assist other jurisdictions including federal agencies, branches of the military, and law enforcement agencies located in the Pacific Basin.

The HPD-SIS will face continued budgetary constraints in the next fiscal year. Budget cuts in the last fiscal year adversely affected the laboratory's ability to provide timely results due to

employee furloughs as well as purchasing restrictions on supplies. The Federal funding from this award will be used toward the following goals:

1. Reduce the backlog of forensic biology/DNA work requests
2. Increase the capacity of the HPD-SIS's forensic biology laboratory
3. Maintain current laboratory capacity by replacing aging equipment

The HPD-SIS expects to analyze at least 23 forensic biology/DNA work requests using overtime and supplies from this award. The agency also expects to reduce the turnaround time to less than 60 days.

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**FY12 Recipient Name:** Iowa Department of Public Safety

**Award Number:** 2012-DN-BX-0014

**Award Amount:** \$499,464

**Abstract:** The Iowa Department of Public Safety, Division of Criminal Investigation Crime Laboratory is the agency that is responsible for analyzing evidential material that is associated with criminal investigations for all state and local law enforcement agencies within the state of Iowa. The Code of the State of Iowa designates the IDPS-DCI crime lab as the agency responsible for conducting DNA analysis on DNA samples collected from crime scenes as well as DNA samples collected from all individuals convicted of a felony and individuals convicted of sexual offenses within the State of Iowa. The IDPS-DCI crime lab is a single laboratory system.

The IDPS-DCI crime lab is facing budgetary constraints due to the inability to replace staffing lost over the last four years. The IDPS-DCI crime lab is also anticipating a database expansion legislation that will significantly increase the number of DNA database samples that will need to be analyzed.

The Federal funding from this award will be used for the following goals:

1. Reduce the backlog of forensic biology/DNA cases.
  2. Enhancing case work capabilities by reducing hands on extraction time through the purchase of new extraction instrumentation.
  3. Replace aging equipment and purchase new higher throughput equipment for necessary upgrades.
  4. Increase accessioning and data entry capabilities of the databasing unit.
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**FY12 Recipient Name:** Idaho State Police

**Award Number:** 2012-DN-BX-0012

**Award Amount:** \$236,376

**Abstract:** The scope of this project is to increase the analysis capacity and efficiency of the DNA lab, reduce inefficiencies due to redundant DNA database sample submissions, improve the storage conditions for biological evidence, and diversify the training opportunities provided to the DNA staff. The objectives are:

1. Improve the DNA analysis capacity and decrease turnaround time by utilizing automated differential extraction, increasing evidence documentation efficiency, and decreasing processing bottlenecks.
2. Utilize training funds to train newly hired DNA Database Analysts and provide continuing education to trained DNA examiners.
3. Reduce the financial and administrative costs of duplicate DNA database submissions.
4. Collaborate with accredited crime laboratories to defray external DNA audit costs.
5. Increase the capacity and automate the monitoring of biological evidence cold storage

Idaho State Police Forensic Services (ISPFS) will use the 2012 DNA funds to refine the DNA and DNA database programs. Laboratory management used previous grants to build capacity by purchasing instruments, implementing software, and validating new technologies. The strategic plan of the DNA section this year is to focus all efforts on trainees finishing training and all staff spending maximal time in the laboratory. The objectives written in this grant will adhere to that strategic plan by improving the capacity and quality of the DNA unit, while not requiring extensive validation work or research. ISPFS focused grant purchases on necessary and helpful process improvements, while allowing the scientists to focus more time on the bench. ISPFS will accomplish the five outlined objectives as described below.

To meet objective #1, the laboratory will purchase a Qiagen QiaCube automated differential extraction robot. This robot will improve the DNA analysis capacity and decrease turnaround time by allowing the scientists more time to do other examinations. While the robot processes samples, the analysts will prepare references or work on other cases. The lab will also invest less time obtaining and get better quality photo documentation of sperm searches with the purchase of a new digital imaging system. The laboratory will also purchase equipment needed to set up a second DNA database workstation. The establishment of a second station will allow for two analysts to process samples at the same time which results in an increased capacity and decreased turnaround time. The second workstation will also decrease processing bottlenecks.

Objective #2 is to provide training funds for DNA examiners. State funding has been cut for DNA analysts. The grant funding allows analysts to attend critical DNA conferences and training out of state. The DNA Technical Leader orchestrates the staff strategically attending all of the important DNA conferences and regional meetings. The DNA technical leader adjusted the schedule this year based on feedback from previous years. The technical leader evaluates the feedback so that ISPFS has representation at the most informative of the DNA meetings. The staff will attend meetings on this grant such as AAFS, Bode, Green Mountain, CAC, AFDA, MAFS, Promega, and others. The attending staff member will report back to the other staff members on the training using a "train the trainer" format. They are required to present the information they learned upon their return. New analysts in the DNA database unit will be sent to introductory DNA courses that accelerate their introductory training.

For objective #3 the laboratory will allocate funds for extra time (overtime at straight time). Corrections officers collect the majority of Idaho DNA database samples. Currently there is no mechanism for the corrections officers or law enforcement officers to know if DNA has been collected and processed into NDIS for a convicted felon without calling the laboratory. Collecting officers usually do not verify with the laboratory, and duplicate submissions to the

DNA database laboratory result from not having a system to prevent redundancy. ISPFS determined that putting a “flag” in the criminal history database entry for the felon would eliminate many of the costly duplicate collections. The Idaho Bureau of Criminal Identification (BCI) maintains the Idaho criminal history database and requires ISPFS verification of the felon thumbprint before they will update the criminal history database entry for the convicted felon. Each DNA database collection card contains a thumbprint to verify the identity of the offender. Because the DNA database examiners are not currently qualified in latent print analysis, ISPFS agreed to use our certified latent print examiners to technically verify and technically review each thumbprint against the ten-print card and state identification number for the offender. Overtime funds will provide verification of 9,072 DNA database samples. This is also a quality control measure for the laboratory to verify the identity of each Idaho entry into the Convicted Offender Index at NDIS. The grant will also provide funding to design the software bridge required to transfer information from the ISPFS DNA database to update the state criminal history database.

Objective #4 relies on our collaborative partnerships with other accredited crime labs. We have agreements to perform reciprocal DNA audits with other state labs and grant funds will provide travel funds to accomplish the laboratory external DNA audit. ISPFS will no longer be contracting with NFSTC for their auditing services. The laboratory will be performing an external DNA audit with this collaborative group every year. The laboratories participating in this cooperative group will provide their analyst’s salary during the audit. There will be no salary or other analyst compensation used from the grant.

Objective #5 is to increase the capacity and automate the monitoring of biological evidence cold storage. The laboratory does not have the ability to store large biological fluid related items frozen or refrigerated. ISPFS currently stores larger biological evidence at room temperature. ISPFS is dedicated to storing evidence at the best possible storage conditions. The best storage for most biological items is frozen. Freezing the evidence halts or slows microbial growth and arrests enzymatic activity. Adding a walk-in freezer and refrigerator to the laboratory evidence vault will allow all biological evidence to be stored in “best evidence” conditions. In addition, grant funds will purchase a temperature monitoring system for all biological refrigerators and freezers. This system will provide the objective proof of temperature range compliance and will monitor temperature conditions constantly so that evidence and reagents are not damaged or ruined. The system will report problems to laboratory staff that can deal with the problem in a timely manner. The system will also save the time of an analyst assigned to monitor these conditions on a daily basis.

The objectives outlined will allow ISPFS to accomplish the goals of capacity enhancement, efficient operations, and quality standards. ISPFS is firmly committed to backlog elimination and capacity enhancement and this grant will provide the required funds for that to happen in Idaho.

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**FY12 Recipient Name:** DuPage County Sheriff's Office (IL)

**Award Number:** 2012-DN-BX-0116

**Award Amount:** \$300,326

**Abstract:** The DuPage County Forensic Science Center (DCFSC) analyzes DNA using STRs, Y-STRs and Minifiler amplification systems. All validations and much of the equipment needed for the validations of this technology has been supported through NIJ grants. DCFSC is under increasing regulatory scrutiny while demand for various DNA services also expands. The grant will reduce some of the pressure for case analysis by adding additional staff. The DCFSC is poised to implement the most advanced technologies and processes in order to reduce the need for further outlays for years to come, while simultaneously continuing to provide exceptional service.

Funding from this grant will be used for the following goals:

1. Reducing the forensic DNA case backlog through a grant funded hire, analyst overtime, and purchasing supplies.
2. Increasing the capacity of the laboratory by purchasing equipment (robotic devices and a water system to generate deionized water).
3. Purchasing supplies - Identifiler Plus, Multi-capillary arrays and yFiler to assist in case-work.
4. Improve the laboratory's processes by validating yFiler on an AB3500.
5. Providing the required continuing education for each analyst, and supporting the development of an analyst pursuing a Master's Degree.
6. Provide installation and training on True Allele software that will reduce the time spent interpreting data and improving the quality and objectivity of DNA profiling interpretation.
7. To train a forensic biology analyst in DNA analysis so that they can conduct casework in both forensic biology and DNA. By conducting this training off-site there will be a minimal effect on the section resources.

At least 114 cases will be analyzed with funds from this grant over 18 months that otherwise cannot be analyzed. The 114 cases represent both backlog reduction and capacity enhancement.

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**FY12 Recipient Name:** Illinois State Police

**Award Number:** 2012-DN-BX-0087

**Award Amount:** \$2,705,768

**Abstract:** The ISP, DFS, FSC is responsible for analyzing evidential material associated with criminal investigations for approximately 1,200 criminal justice agencies located throughout the state of Illinois. The ISP forensic science laboratory system is comprised of seven caseworking laboratories, a Research and Development Laboratory, and a statewide training program. Each one has a DNA unit and they all function under the ISP, DFS, FSC. The state's DNA indexing laboratory is a part of the Springfield Forensic Science Laboratory.

The ISP is facing budgetary constraints. The federal funding from this award will be used for the following goals:



1. Reducing the FB and DNA case backlog through analyst overtime, purchasing supplies, and outsourcing cases.
2. Reducing the turnaround time of FB and DNA case backlog through analyst overtime, purchasing supplies, and outsourcing cases.
3. Increase the capacity of the laboratory system by purchasing equipment (ABI Real Time 7500's) for two of the casework laboratories.
4. Maintain the quality of the DNA Section by using funds from this grant to cover part of the costs associated with a DNA audit in 2013.

The ISP expects to work at least 2,664 cases more than what could be worked without this funding.

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**FY12 Recipient Name:** Northeastern Illinois Regional Crime Laboratory

**Award Number:** 2012-DN-BX-0002

**Award Amount:** \$300,326

**Abstract:** The Northeastern Illinois Regional Crime Laboratory is an intergovernmental laboratory that analyzes evidential material, including Biology/DNA analysis. NIRCL is experiencing budgetary constraints. This is in spite of the great increase in the number of DNA submissions as well as an increased expectation of applying DNA analysis to a myriad of case types.

Funding will be used to address the following goals:

1. Maintain an average 40 turnaround time for DNA cases.
2. Reduce the number of days the first DNA report is completed. Currently, 8.7% of the first DNA reports generated is over 60 days. The goal is to reduce that to 4% of cases.
3. Maintain current lab capabilities by purchasing service agreements for crucial equipment.
4. Purchase supplies needed for analysis above and beyond current lab fiscal abilities.
5. Provide required education for DNA analysts.

The NIRCL expects to analyze at least 200 cases with overtime and supplies. However, overtime will be used predominantly for case review. It is estimated that 100 cases will be reviewed with overtime funds. These 100 cases are not included as cases analyzed, but contribute to lowering the time needed for case turn-around.

The part time grant funded analyst (capacity) will analyze an additional estimated 250 cases over the grant period. The GFA will not use grant supplied kits (Real-Time & Identifiler Plus). The kits used by the GFA will be supported by local funds.

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**FY12 Recipient Name:** Indiana State Police

**Award Number:** 2012-DN-BX-0004

**Award Amount:** \$785,405

**Abstract:** The Indiana State Police (ISP) is the agency that is responsible for analyzing evidentiary material associated with criminal investigations for all state and local law enforcement agencies within the state of Indiana with the exception of Indianapolis/Marion

County. ISP maintains four regional laboratories - the Evansville, Fort Wayne, Indianapolis and Lowell laboratories. Indiana Code designates the ISP as the agency responsible for conducting DNA analysis on DNA samples collected from all convicted felons in the state of Indiana; the ISP is responsible for storing and maintaining the resultant profiles in the Indiana DNA Database. The Indianapolis Regional Laboratory maintains the DNA Database Unit.

The Federal funding from this award will be used for the following goals:

1. Reducing the forensic DNA case backlog through analyst overtime.
2. Increasing the capacity of the laboratory by purchasing additional and replacement equipment (3500 genetic analyzers and a DNA robot), and equipment service contracts.
3. Providing the required continuing education for each analyst, including a subscription to a forensic journal package.

The ISP can expect to reduce the DNA case backlog by at least 610 cases by the end of the award period. The turnaround time is expected to be reduced to 40 days or less, and the analyst throughput in the casework sections is expected to increase 20%.

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**FY12 Recipient Name:** Indianapolis-Marion County Forensic Services Agency (IN)

**Award Number:** 2012-DN-BX-0094

**Award Amount:** \$438,674

**Abstract:** The Indianapolis-Marion County Forensic Services Agency, (I-MCFSA) is a local government agency, which provides the criminal justice system with forensic laboratory services. We provide prompt, accurate and quality forensic analysis to all requests. The I-MCFSA performs scientific examinations of physical evidence pertaining to crimes occurring in Indianapolis and Marion County.

This laboratory is the first full service forensic laboratory in Indiana accredited in the ASCLD/LAB-International program, and the 35th laboratory accredited in the ASCLD/LAB-International program, worldwide. This accreditation consisted of a very comprehensive assessment in which every aspect of the laboratory's operation, to include the Crime Scene Unit process, and was carefully reviewed to include its management practices, evidence handling procedures, and laboratory security procedures.

As part of a continuing joint effort within the various criminal justice and public safety agencies of Marion County and the City of Indianapolis, the Indianapolis-Marion County Forensic Services Agency is an integral participant in eliminating increases in crime. Crime reduction continues to be an issue that several Marion County and City of Indianapolis government entities have attempted to address over the past few years. The Criminal Justice Planning Council, created by the Indianapolis-Marion County Council, is aggressively seeking solutions to solve crime problems and eliminate the jail overcrowding issue. The Indianapolis-Marion County Forensic Services Agency plays a vital role in the Council's plan. As part of a solution, the laboratory continues to pursue the goal of reducing the amount of time between submissions for requests of analysis to the point of case completion to a maximum of six weeks in all forensic disciplines.

The submissions for analysis in the Forensic Biology Unit of the Indianapolis-Marion County Forensic Services Agency (IMCFSA) remain steady at approximately 100 requests per month, even though the turnaround time has decreased. Several reasons exist for the number of submissions to include: the greater demand for DNA analysis from prosecutors; more items per case submitted; a broader application of DNA analysis to multiple sample types; and, the overall success of the Biology Unit in aiding investigations.

At the end of 2011, the number of items of evidence analyzed stood at 6,443. As of 3/31/12, the items of evidence analyzed total 1,644. Based on this total, by the end of 2012, the Biology Unit will have analyzed over 6,600 items of evidence, with a staff of eleven (11) forensic scientists. The items of evidence analyzed have steadily increased over the last 5 years with the 2011 total at a 15% increase since 2008, with the section operating with the same number of forensic scientists. The number of cases completed in 2010 totaled 1178 with a slight increase to 1190 in 2011. This also represents a significant increase of 36% over the same time period for 2008. For year 2010, the Uniform Crime Report, Part One, Violent Crime reported over 9,647 violent crimes committed in the City of Indianapolis and Marion County, which represents approximately 46% of the 21,404 violent crimes committed in the entire State of Indiana. Of this total, the City of Indianapolis and smaller communities within Marion County listed 93 murders and 461 forcible rapes for the City of Indianapolis and smaller communities within Marion County. This represents approximately 30% of the murders and 31% of the forcible rapes that occurred in the State of Indiana, in 2010.

The homicides for the City of Indianapolis, for the first three months of 2012, stood at 26. The monthly average of approximately 6 murders was reported in 2011 while the current year-to-date monthly average is at 9. Based on this information and, if the trend continues, there would be an increase, in 2012, of approximately 30%. These totals are significant when determining the factors concerning DNA backlog cases. With approximately 46% of all UCR Part 1 crimes listed for the State of Indiana occurring in Marion County and the City of Indianapolis, the local Public Safety Agencies, to include the I-MCFSA, are experiencing that increase first hand.

While recent grant programs have resulted in an impact, backlogs continue to be an ongoing problem. Cases completed during this time increased but, cases submitted and the number of evidence items analyzed nearly outstripped our increased output. As of March 31, 2012, the Biology Unit backlog is 379 when combining both the Serology and DNA backlog. Current case turnaround times are at an average of 126 days which exceeds our goal of six weeks. The average number of DNA samples worked per analyst was approximately 150, for the period of January 1, through March, 2012. Delays in case analysis cause backups and problems for the criminal justice system. Based on trend analysis, the number of backlogged forensic cases, listed as UCR, Part One Violent Crime DNA cases, is anticipated to reach approximately 450, as of September 30, 2012.

Currently, the number of UCR, Part One Violent Crime cases awaiting DNA analysis is 379. Over the last 3 years, the laboratory's Biology Unit has experienced an approximate 70% increase in case submissions from 2008 (905 submissions) to 2011 (1539 submissions) which results in a drastic increase in the case backlog, even though more cases were completed in 2011 (1190 completed) than in 2008 (898 completed).

With the acquisition of grant funding, the following goals will be met:

1. Reducing the forensic DNA case backlog through the addition of personnel, analyst overtime, and purchasing supplies.
2. Increasing the capacity through the continued maintenance of existing equipment, such as, the 9700/7500 Genetic Analyzers, Maxwell 16s, and the Robotic System; the renewal of licensing fees, such as JusticeTrax and Qualtrax, and the purchase of two (2) centrifuge units and high speed scanners for the Biology Unit.
3. Providing required training for the Biology Unit analysts and costs associated with continuing education.

If approved, the Indianapolis-Marion County Forensic Services Agency expects to reduce the DNA case backlog by a minimum of 373 cases during the grant period. Of those, 240 will be completed by two (2) full-time Forensic Scientists with an additional 133 completed during overtime. The continued goal of the laboratory is to reduce the turnaround time to six weeks.

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**FY12 Recipient Name:** Johnson County Kansas

**Award Number:** 2012-DN-BX-0007

**Award Amount:** \$247,374

**Abstract:** The Johnson County Sheriff's Office Criminalistics Laboratory (JCCL) is the agency responsible for analyzing evidentiary material associated with criminal investigations for all local law enforcement agencies and medical examiners within the county of Johnson in Kansas. The Biology section of the laboratory performs STR and Y-STR DNA analysis methods on forensic casework samples. All CODIS eligible DNA profiles generated by JCCL are uploaded into NDIS.

The Biology section of the Johnson County Sheriff's Office Criminalistics Laboratory (JCCL) consists of seven fully trained Forensic Scientists capable of performing biological screening and DNA analyses. The DNA Technical Leader spends the majority of time performing duties other than casework. In 2009, the request for services in the Biology section reached a peak. There was a significant upward trend in requests for biology screening and DNA analysis services in prior years. However, the incoming requests were greater than our output capacity. This resulted in increases in case backlogs and turnaround times. The biology and DNA submissions were increasing by approximately one thousand requests per year due to several factors: advances in DNA technology, increased sensitivity of detection, prevalence of "touch" DNA, and the "CSI effect". In 2010, the JCCL implemented new DNA submission guidelines for the following reasons: better management of the supply line of evidence coming from our customers and enforcement of the standards for evidence acceptance. This alone had a significant impact on reducing the backlog and turnaround time because the number of submissions declined rapidly by the end of 2011.

The number of biology items examined steadily increased from 2006 through 2008. In 2009, the number of biology items examined decreased due to the resignation of one fully trained (grant funded) scientist and the training of two new Forensic Scientists. In 2010, productivity bounced back upward due to the grant funding for additional staff (up to three FTE's), automation, and

instrument upgrades. At this point in time, the Biology section's output capacity is approximately 1800 items/year for biology screening and approximately 2100 DNA samples/year. The level of productivity now closely mirrors the number of annual evidence submissions for the Biology section.

The Federal funding from this award will be used for the following goal and objectives:

Goal:

1. Retain three fully trained Forensic Scientists in the Biology section with this grant funding. This funding will be used to pay the salary and benefits only for these three positions.

Objectives:

1. Maintain or increase current productivity levels in biology screening and DNA analysis.
2. Maintain or reduce the biology screening and DNA item backlogs and turnaround times.
3. Focus on reducing part I UCR violent crime DNA backlogs.

The JCCL can expect to reduce the DNA backlog by at least 180 cases and the biology processing backlog by 174 cases with funding of these three positions for 52 weeks. Performance measurement data will be collected and reported primarily with data obtained from the JCCL LIMS.

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**FY12 Recipient Name:** Kansas Bureau of Investigation

**Award Number:** 2012-DN-BX-0115

**Award Amount:** \$319,064

**Abstract:** The Kansas Bureau of Investigation (KBI) Forensic Laboratory is the agency that is responsible for the analysis of evidentiary samples from possible crimes for all state and local law enforcement agencies and medical examiners offices within the state of Kansas. The KBI has four laboratories within the system three of which conduct DNA testing. The three laboratories conducting DNA testing are Great Bend (West Region Laboratory); Topeka (headquarters), and Kansas City. The KBI laboratory in Topeka also houses the Databank Laboratory.

The KBI Biology sections of the Forensic Laboratory have experienced turn-over of qualified DNA scientists resulting in only 2 qualified DNA scientists at the Topeka Laboratory, one of whom is a supervisor. All three casework laboratories are facing significant backlogs of screening and DNA cases. Seven new scientists have been added to the staff in the Topeka Laboratory. Federal funding from this award will be used for the following goals.

1. Laboratory technicians will take over support tasks for the casework section allowing the Forensic Scientists to spend more time on casework.
2. Increase the capacity of the Topeka Laboratory through the purchase of three (3) small extraction robots and a rtPCR system and alleviate "bottlenecks" on instrumentation from the addition of staff.
3. Provide training and the required continuing education for some of the analysts.
4. Replace aging microscopes in all three casework laboratories through the purchase of six (6) microscopes.

The KBI Laboratory can expect to reduce the DNA case backlog and the turn-around time of the DNA case backlog with the addition of personnel and equipment. The goal is to have a turn-around time of 60-90 days.

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**FY12 Recipient Name:** Commonwealth of Kentucky

**Award Number:** 2012-DN-BX-0043

**Award Amount:** \$616,282

**Abstract:** The Kentucky State Police Forensic Laboratories (KSPFL) has continued to provide DNA analysis to the Commonwealth of Kentucky since 1989. During this period of 20 years many technological advances have occurred in DNA analysis. Along with these technological advances, procedural changes have been implemented within the KSPFL to accommodate the ever advancing science of DNA analysis. First, current evaluations have identified that the database section is in need of another high throughput capillary electrophoresis instrument. Second, is a lack of additional analytical time dedicated to processing cases in the casework section. Submissions that request DNA analysis are increasing and are being requested in a wider variety of case types. This trend leads to larger backlogs and longer turn around times (TAT). Third, is a continued need to purchase reagents utilized in DNA analysis in both the casework and database sections. Fourth, is analysts need to attend workshops and training to stay abreast of new advances and techniques in the forensic biology field as the topics relate to both casework and database.

By providing high throughput procedures, overtime (OT) hours, supplies, and training opportunities the Kentucky State Police Forensic Laboratory Casework and Database section anticipates that the TAT will decrease along with the number of backlogged cases.

The KSPFL can expect to reduce the DNA case backlog by at least 159 cases (all in-house) by the end of the award period. The agency also expects to work at least 14,000 DNA database samples using Federal funding. The turnaround time is expected to be reduced to 115 days or less for casework samples.

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**FY12 Recipient Name:** Louisiana State Police

**Award Number:** 2012-DN-BX-0049

**Award Amount:** \$1,422,382

**Abstract:** Louisiana has six active ASCLD/LAB accredited crime laboratories at this submission that are currently performing DNA analysis: the Acadiana Criminalistics Laboratory, Jefferson Parish Sheriff's Office Regional DNA Laboratory, the Louisiana State Police Crime Laboratory, the North Louisiana Criminalistics Laboratory System, St. Tammany Parish Coroner's Office, and Southwest Louisiana Criminalistics Laboratory. All six labs are fully accredited and maintain their individual accreditation. Each lab undergoes a stringent external audit every two years to maintain their accreditation. All six labs are equipped and perform forensic DNA case work; however, the LSPCL is the only lab that uploads all eligible DNA profiles into NDIS. All DNA analyses performed under this program are maintained in each respective lab as mandated by the federal privacy regulations. All other labs participating in this grant solicitation send their eligible profiles to LSPCL CODIS-State Administrator for upload into the NDIS system.

The entire state of Louisiana and all of the Crime labs within it, are facing stricter budgets. This could potentially reduce appropriations for staff, supplies, equipment, needed support contracts and/or valuable training dollars. Although crime rates have begun to decrease compared to prior years, there are still backlogs of cases that were submitted when crime rates were increasing. In addition, Louisiana 2010 UCR Violent Crime Rates were higher than the national rates in every pertinent category, with the exception of robbery. To provide the maximum assistance to the crime fighting agencies, Louisiana crime laboratories must maintain and exceed their current level of funding support. The goals of the projects funded by this grant are:

1. Reduce forensic and database DNA case/sample turnaround time,
2. Increase the throughput of current public DNA laboratories, and
3. Reduce forensic and database DNA backlogged cases.

By outsourcing cases to external laboratories, the analysis time is decreased, allowing laboratories time to review the cases produced more quickly than they could analyze the cases and then still review the cases. WAE technicians allow for the less technical duties to be completed by staff who can be readily trained to screen evidence and complete quality control duties. This frees DNA analysts to focus on the steps of DNA analysis and interpretation, which requires a more experienced analyst. Outsourcing of training allows the current staff analysts to continue casework, while certain aspects of training are conducted by an external trainer. By applying the analysts' time to casework, a higher productivity is obtained and hence the forensic case turn-around-time is reduced, as well as the backlog is attacked. A DNA module is a tool that will be used to increase the efficiency of analysis through the electronic leverage of the current LIMS systems. Continuing education is critical to maintaining a high level of quality of DNA analysis. Training is essential in fully equipping the DNA analyst to perform at the highest level possible.

By allowing these agencies to increase the capacity of their perspective labs we give them the tools to conquer the backlog and become poised to complete the number of requests that are submitted. As a State we expect there to be a decrease in the laboratory backlogs throughout the state, a decrease in sample turnaround times, and a higher laboratory throughput, which provides more timely investigative support of the law enforcement agencies that fight crime.

In the 2012 solicitation allocation table, the state of Louisiana is estimated to receive an aggregate amount of \$1,422,382.00. It is our intent to share these funds corporately among the six accredited public laboratories performing DNA analysis. Our anticipated breakdown is as follows:

- Louisiana State Police Crime Laboratory - \$690,223
  - Jefferson Parish Sherriff's Office Regional DNA Lab - \$198,013
  - North Louisiana Crime Laboratory - \$185,637
  - Acadiana Criminalistics Laboratory - \$148,509
  - Southwest Louisiana Criminalistics Laboratory - \$100,000
  - St. Tammany Parish Coroner's Office - \$100,000
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**FY12 Recipient Name:** City of Boston (MA)

**Award Number:** 2012-DN-BX-0092

**Award Amount:** \$312,244

**Abstract:** As part of the Boston Police Departments (BPD) Crime Laboratory's overall plan to meet its goals and objectives outlined in this application, it is critical for the lab to continue utilizing the funds provided by the National Institute of Justice, for the purpose of supporting the work being done by the Criminalist and Forensic Technician positions thus allowing us to meet the caseload demands in 2012 and work to further reduce the backlog of cases. In 2012, the BPD Crime Lab also seeks to add the support of the cold case homicide dedicated criminalist position to this grant to further enhance the Lab's ability to analyze cases and reduce the backlog. Without the ability to support this position under the FY12 DNA grant, the position is in jeopardy of being eliminated due to the ending of the NIJ Cold Case Grant that currently supports this position.

The ability of the department to maintain these positions will aid the BPD in achieving the goals of this program; Reducing the backlog of forensic biology cases, maintaining high quality forensic services, and increasing the capacity of the lab. It will also have the added benefit of addressing the need of analyzing cold homicide cases.

The BPD continues to utilize funds from prior DNA Backlog Reduction programs to move forward with the implementation of a Laboratory Information Management system (LIMS) including a specific DNA module as a significant step towards the improvement of intra- and inter-agency communication as well as the enhancement of overall productivity in case works and processing of backlog cases. While the LIMS Coordinator, supported with prior DNA funding, continues to work towards the implementation of the system in hopes of having the system completed in the summer of 2012, the BPD would like to utilize funds from this FY12 application to support a one year maintenance contract that would cover the costs associated with the service and upgrades needed for the LIMS.

Lastly, the BPD plans to utilize the funds made available through this application to further support the growing demands of the continuing education needs of the DNA support staff by providing reimbursement for costs associated with registration and travel to specifically identified trainings.

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**FY12 Recipient Name:** Massachusetts State Police

**Award Number:** 2012-DN-BX-0097

**Award Amount:** \$1,398,801

**Abstract:** The Massachusetts State Police Forensic Services Group (FSG) is the agency responsible for analyzing evidentiary material associated with criminal investigations for all state and local law enforcement agencies within the state of Massachusetts, with the exception of the city of Boston. The city of Boston has a forensic laboratory to address the needs of the city.

The FSG has several satellite laboratories but all DNA analysis is conducted at the main laboratory in Maynard, MA. The FSG is the agency responsible for performing DNA analysis



on all convicted offender samples for the state. The FSG is responsible for storing and maintaining the DNA profiles in SDIS.

The FSG continues to face budgetary constraints and the federal funding from this award will be used for the following goals:

1. Reduce the backlog of forensic biology/DNA cases
2. Update critical equipment in the DNA Unit
3. Purchase supplies for in-house validation by MSPFSG personnel
4. Maintain and improve current laboratory systems
5. Provide required continuing education to all DNA analysts

The FSG can expect to reduce the DNA case working backlog by 133 cases through outsourced testing by the end of the grant period.

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**FY12 Recipient Name:** Anne Arundel County, Maryland

**Award Number:** 2012-DN-BX-0031

**Award Amount:** \$109,845

**Abstract:** A grant award under the FY12 DNA Backlog Reduction Program would support ongoing capacity increases in the Forensic Biology/DNA Unit of the Anne Arundel County Police Department Crime Laboratory. Enhanced productivity (case output) and efficiency is expected to reduce the existing case backlog thereby decreasing the overall turnaround times for newly submitted Forensic Biology cases through the following objectives:

- i) 18 months full time W2 temporary grant funded Biology/DNA laboratory technician via salary funding. This lab tech will assist the Biology Unit with various lab duties (Quality Assurance/Quality Control duties, general housekeeping, reagent preparation, administrative duties, etc.) which will allow analysts to devote more time to case working duties resulting in an increase in case output.
- ii) Purchase of another EZ1 Advanced XL extraction robot for increasing DNA specimen extraction capacity; and,
- iii) Purchase of general laboratory supplies (gloves, pipette tips, scalpel blades, etc.) for laboratory technician listed above.

First, this award would provide funding for a Biology/DNA lab tech (W-2 FTE under temporary County contract) to assist the Biology Unit with various lab duties. The support function provided by this position is anticipated to aid in reducing the backlog. The essential tasks performed by the lab technician, such as QA/QC duties, general housekeeping, reagent preparation and administrative tasks, are duties that cannot be accomplished by the analysts on an on-going basis without negatively impacting case turnaround times and throughput. Backlogs continue to exist based on the numbers of hours available to current analysts for case working duties. County Code prohibits DNA analysts from working overtime. As such, this position would allow analysts to devote more time to case working duties and backlog reduction.

Secondly, another EZ1 Advanced XL extraction robot will significantly increase DNA specimen throughput and handling efficiency by automating the sample for both known and questioned forensic specimens. The laboratory already has one of these instruments in use and would like to

purchase another one to ease the bottlenecks seen in the extraction stage. The EZ1 extraction robot can process fourteen samples simultaneously and operates in full walk away automation which allows lab personnel to set up the instrument and work on other tasks and return at a later time. The one EZ1 extraction robot is currently shared among all analysts at this time. Another instrument, along with the current robot, would double the number of samples extracted at once and would help alleviate the bottleneck situation now resulting from insufficient sample throughput on the existing EZ1 to accommodate the volume of sample input generated by all analysts working simultaneously and independently. As such, turnaround times can be expected to improve over the next two years as the results of this efficiency improvement are realized.

Lastly, some minimal general laboratory supplies are needed by the laboratory technician in the performance of their duties. These items may include general administrative supplies such as pens, paper etc. and gloves for reagent prep and QA/QC duties.

These requests are critical to addressing the current case submission levels for the Unit to meet or exceed adequate turnaround times for trial date deadlines and to manage the backlog. In the absence of this lab tech position coupled with significant changes to case flow to improve sample handling capabilities, the backlog will continue to exist and will likely increase which could ultimately result in missed court dates.

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**FY12 Recipient Name:** Baltimore County (MD)

**Award Number:** 2012-DN-BX-0020

**Award Amount:** \$243,057

**Abstract:** The Baltimore County Police Department – Forensic Services Section’s (BCoPD-FSS) Biology Unit is a unit of the local government of Baltimore County Maryland that is responsible for analyzing evidentiary material associated with criminal investigations conducted by the Baltimore County Police Department. The BCoPD maintains a Memorandum of Understanding with the Maryland State Police for CODIS entry.

Budgetary constraints preclude the BCoPD from increasing the capacity and efficiency of the DNA laboratory. Federal funding under this award will be used: (1) to increase capacity and efficiency of the laboratory through the purchase of additional equipment and software; (2) to maintain current laboratory capabilities through upgrades and maintenance to current systems; (3) to provide continuing education to lab analysts that will enhance capabilities and improve efficiency, and; (4) to maintain current lab accreditation and quality assurance compliance to meet the Federal Bureau of Investigation’s Quality Assurance Standards for Forensic DNA Testing Laboratories.

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**FY12 Recipient Name:** City of Baltimore (MD)

**Award Number:** 2012-DN-BX-0067

**Award Amount:** \$511,749

**Abstract:** The Baltimore Police Department, Crime Laboratory (BPD-CL) is the agency section responsible for analyzing material evidence associated with criminal investigations for all local law enforcement agencies within the City of Baltimore, performing, among other disciplines,

serology screening with autosomal and Y STR DNA casework analysis. The City of Baltimore is facing budgetary constraints and is facing new State licensing requirements through the Department of Health and Mental Hygiene that will be going into effect by October 1, 2012. This will increase the documentation and regulation required for all sample analysis. The Federal funding from this award will be used for the following goals:

1. Reducing the forensic DNA case backlog through analyst overtime, maintaining grant funded Criminalists, and outsourcing Serology and DNA casework.
2. Sustaining laboratory capacity (storage, record and throughput wise) by purchasing equipment (Desiccator, freezer, refrigerator, computers and scanner) and by retaining two evidence technicians.
3. Providing the FBI QAS recommended outside continuing education for a subset of analysts.

The BPD-CL can expect to reduce the DNA case backlog by at least 255 cases (187 in-house overtime and 31 outsourced) by the end of the award period. The turnaround time for new cases is expected to be reduced as the backlog is further reduced

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**FY12 Recipient Name:** Maryland State Police

**Award Number:** 2012-DN-BX-0040

**Award Amount:** \$455,908

**Abstract:** The Maryland State Police Forensic Sciences Division (MSP-FSD) requests funds under the 2012 DNA Backlog Reduction Program with the goal of analyzing DNA casework and DNA database samples in an effort to eliminate existing backlogs and prevent future backlogs while at the same time improve turnaround time.

MSP-FSD has been very successful in the implementation of a long term project to eliminate the DNA casework backlog. This project is based on an approach that combines the use of in-house and agency direct outsourcing of casework as well as a tier approach and other streamlining techniques to improve the in-house operations. Since February 2008 the casework backlog has decreased 81% from a high of 568 to a low of 108 in March of 2012. In addition, since the origination of direct outsourcing in December of 2009 the backlog has decreased at a faster rate. MSP-FSD's goal is to keep utilizing these techniques and therefore the requested funds are geared towards continuing this proven to be successful method of addressing the casework backlog.

Starting in 2011 and concluding in January 2012 MSP-FSD has been able to bring the analysis of all database samples in house. This was accomplished by utilizing previously allocated federal funds. While an existing backlog of 23,000 DNA Database samples was eliminated in 2007, the need for monitoring every step of the database operations so that a significant new backlog does not emerge is very prominent. Therefore, funds are requested to support the in-house analysis of DNA Database samples and to prevent an accumulation of a significant backlog.

The federal funding from this award will be used for the following specific goals:

- Goal 1: Reduce the backlog of forensic biology/DNA cases
- Goal 2: Support in-house analysis of DNA database samples and prevent accumulation of a backlog.
- Goal 3: Maintain Current laboratory Capabilities and improve operation with purchase of new hardware.
- Goal 4: Provide Required Continuing education

MSP-FSD expects to analyze casework and DNA Database samples by outsourcing 120 DNA cases, performing in-house analysis of approximately 370 DNA cases, and performing in-house analysis of 6,000 DNA Database samples.

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**FY12 Recipient Name:** Montgomery County (MD)

**Award Number:** 2012-DN-BX-0038

**Award Amount:** \$109,500

**Abstract:** The Montgomery County Police Crime Laboratory, Forensic Biology Unit (MCPCL FBU) is responsible for analyzing evidential material associated with criminal investigations handled by the Montgomery County Police Department. As a courtesy, the MCPCL FBU performs the same analyses on evidential material for the following other agencies in Montgomery County: Takoma Park Police Department, Gaithersburg City Police Department, Rockville City Police Department, and Montgomery County Park Police Department.

The MCPCL FBU consists of 5 full-time, fully trained analysts, a Technical Leader and one recently vacant technician position. The space limitations of our laboratory certainly cause a bottleneck in certain casework analysis steps. For example, it is not possible for 2 analysts to perform DNA extractions simultaneously. The MCPCL FBU will be re-locating this summer to a much larger laboratory space which will finally have the capabilities of allowing multiple analysts to perform the same procedures simultaneously for casework analysis. In addition to this bottleneck, the FBU no longer outsources current casework and will soon be adding cold cases to our backlog at some point this year. Cold cases have been outsourced to a private laboratory for analysis so their addition will be new to the FBU. Also a significant amount of time is spent by each analyst performing manual mixture interpretation calculations so there is much needed improvement to speed up this step of the analysis process. Funding is being requested to tackle the limited processing capabilities of the FBU and also cut down on the interpretation time on mixtures for casework.

The Federal funding from this award will be used for the following goals:

1. Reducing the forensic DNA case backlog by increasing the equipment available to analysts which will allow the same procedures to be simultaneously performed for casework.
  2. Providing the required continuing education for four analysts.
  3. Reduce the time each analyst currently takes to perform mixture interpretation on casework samples.
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**FY12 Recipient Name:** Prince George's County (MD)

**Award Number:** 2012-DN-BX-0052

**Award Amount:** \$342,522

**Abstract:** The Prince George's County Serology/DNA Laboratory is an ASCLD/LAB accredited laboratory (cert # 353) that serves the 900,000 county populations. The laboratory is responsible for receiving, analyzing, reporting and storing evidence received from any submitted forensic casework in the county. Although the laboratory has seen an increase of the DNA staff over the last two and a half years, the laboratory has also seen a 46 percent increase in case submissions to the laboratory from 2010 to 2011. This has resulted in an increase in the number of requests for the laboratory to analyze these cases. Since the laboratory resumed operations in 2008 there has been an increase in the number of casework analysis as well as an increase in the need to store DNA cuttings that are retained after serology screening.

The county now has a new administration at both the county and Police Department levels that appreciates and understands the importance and need for additional staff to complete the laboratory unit's goal and the goals of the county as a whole. The federal funding from this award will be used for the following goals:

- 1-Reduce the backlog of cases
- 2-Reduce in-house analysis turnaround time
- 3-Replace worn out equipment
- 4-Purchase storage cabinets

Once implemented, the Prince George's County can expect to see a reduction of its backlog to just below 150 cases by the end of the award period. The turnaround time is likely to be reduced to under 50 days and analysts output is likely to be doubled.

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**FY12 Recipient Name:** Maine State Police

**Award Number:** 2012-DN-BX-0015

**Award Amount:** \$200,000

**Abstract:** The Maine State Police Crime Laboratory is the agency that is responsible for analyzing evidential material associated with criminal investigations for all state and local law enforcement agencies within the State of Maine. We are the only full-service laboratory in Maine. Maine State law requires our state laboratory to be responsible for conducting DNA analysis on DNA database samples collected from all convicted felony and some misdemeanor offenders in the State of Maine; the Maine State Police Crime Laboratory is responsible for storing and maintaining the resultant profiles in the Maine DNA Data Bank.

The Maine State Police Crime Laboratory is facing budgetary constraints which limits our ability to hire additional state-funded staff. However, in the past year we were able to significantly reduce casework backlogs with grant-funded analysts. We desire to continue with this success that would not be possible without the grant funds.

Additionally, we desire to enhance the capacity of our database unit. We will have enough prior backlog reduction program funds to outsource our entire current database backlog. We will have enough state-funded staff to keep up with the current rate of new database sample submissions,

conduct all technical reviews of outsourced samples, conduct 10% quality control of outsourced samples and perform hit confirmations. We do, however, desire to increase capacity enhancement of our database unit for a few reasons. We desire to use state-funded database staff for casework analysis as much as possible and we see strong potential for the trend to continue of increased database sample submissions. The quicker the analysts can process database samples, the more we can use them for casework. We have separated much of our database space from casework, however, the units still share a rotogene and thermocycler. This creates potential bottlenecks when both units need the equipment at the same time. It introduces arguments of potential for contamination, and it makes inefficiencies as the two units are located on separate floors of the building. Some renovations of the database unit would be necessary to accommodate instruments and create a completely separate unit that otherwise would not fit in current under-allocated space. We also need to update our CODIS server and software to accommodate the recent update of our CODIS 7.0 software.

With a rotogene, a thermocycler, a refrigerator/freezer, renovations to the database unit, an updated CODIS server and past grant funds to outsource the database backlog, we will have stabilized our CODIS unit. At that time we wish to use the remainder of the allocated database funds to support a backup system of power for the DNA casework equipment. We would purchase Uninterrupted Power Sources (UPS) for the genetic analyzers and thermocyclers in the DNA casework unit.

Therefore, the Federal funding from the FY12 award would be used for the following goals:

1. Continued casework capacity enhancement of the laboratory by continuing to employ one full-time DNA analyst and one part-time DNA analyst at 28 hours per week.
2. Capacity enhancement of the database unit with the purchase of a rotogene, and thermocycler. Renovations of space to enhance the layout of the relatively newly formed database unit and accommodate additional equipment for additional capacity enhancement.
3. Support capacity enhancement and ensure the integrity of all of the casework we are trying to accomplish above with the purchase of a CODIS server, refrigerator/freezer, and Uninterrupted Power Supplies (UPS) for the sensitive equipment and limited samples that can be damaged/consumed in a power outage.

The Maine State Police Crime Laboratory can expect to reduce the DNA case backlog by at least 255 cases by the end of the award period. The agency also expects to increase capacity enhancement of the database unit and casework units as measured by decreased turnaround time by eliminating equipment sharing and reducing inefficiencies in the current layout.

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**FY12 Recipient Name:** State of Michigan

**Award Number:** 2012-DN-BX-0090

**Award Amount:** \$2,830,324

**Abstract:** The Michigan State Police requests FY 2012 Forensic DNA Backlog Reduction Program funding to assist the Forensic Science Division (FSD) in reducing the statewide backlog of DNA casework awaiting analysis and to increase the capacity of its DNA and Database laboratories. The requested funding will be used to: (1) continue payroll support for laboratory

personnel; (2) provide continuing education to laboratory personnel; (3) purchase DNA database collection kits; and (4) outsourcing of case work.

DNA analysis conducted under this program will be maintained pursuant to all applicable federal privacy requirements. All eligible profiles obtained with funding from this program will be entered into the Combined DNA Index System (CODIS) and uploaded to the National DNA Index System (NDIS), when applicable. Participating laboratories will follow the NDIS DNA Data Acceptance Standards for all profiles uploaded to NDIS.

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**FY12 Recipient Name:** Hennepin County, Minnesota

**Award Number:** 2012-DN-BX-0017

**Award Amount:** \$100,000

**Abstract:** The Hennepin County Sheriff's Office Crime Lab Unit (HCSO-CLU) provides 24/7 crime scene processing and forensic science services to over 35 local, state, and federal law enforcement agencies in Hennepin County, Minnesota (population ~1.1 million).

In 2009 the HCSO lab was awarded an ARRA Byrne grant establishing the Hennepin Sheriff's DNA Property Crime Initiative. This award allowed the DNA lab to hire three DNA scientists, two biology screeners and two support staff. The funding for these individuals will be exhausted in June of 2012 and the Sheriff's Office does not have the resources to absorb the cost of all of these employees. The lab intends to use funding from the FY 2012 DNA Backlog Program to fund one forensic DNA scientist and continue this program.

Funds will be used to provide mandatory continuing education by attending national DNA conferences.

The lab expects case turnaround time reduction from ~80 days to ~65 days, a backlog reduction of approximately 50 cases and a productivity improvement of ~40 samples/analyst/month to ~45 samples/analyst/month.

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**FY12 Recipient Name:** Minnesota Department of Public Safety

**Award Number:** 2012-DN-BX-0085

**Award Amount:** \$654,004

**Abstract:** The Biology section of BCA FSS continues to experience increased demand for services. The number of cases in which DNA analysis is requested increased 16% in 2011 from the previous year. Meanwhile, pressures from law enforcement and the judicial system in the form of speedy trial demands, increased number of discovery requests, and rush cases where public safety is a concern have ramped up the need to reduce the turn-around time in these cases. All of this comes at a time when the state budget shortfalls of the previous years have resulted in a decrease in the BCA FSS base budget over the last two fiscal years.

The BCA FSS 2012 DNA Backlog Reduction program seeks to build on some of the successes we have seen in the projects in previous grant cycles. Specifically, we are seeking to increase the number of hours that our trained DNA scientists are available to work on backlogged cases

by providing funding for overtime and to fund a support position whose job duties include performing all quality control checks and participation in validation studies. We intend to use grant funding to either increase our capacity in areas identified as bottlenecks by purchasing instrumentation that allows for automation in these areas, or maintain our current capacity by utilizing grant funds to purchase DNA analysis supplies and service contracts to ensure instrumentation is maintained and serviced in a prompt manner for both casework and database samples.

To help insure quality results, grant funding is also being sought to fund continuing education for a select number of scientists

Finally, the program also seeks to help prepare the BCA FSS for the anticipated increase in the number of CODIS core loci by providing funding for an upgrade of our current genetic analyzers which would allow them to analyze samples amplified with a six dye kit.

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**FY12 Recipient Name:** Missouri Board of Police Commissioners

**Award Number:** 2012-DN-BX-0013

**Award Amount:** \$394,912

**Abstract:** The Kansas City Police Crime Laboratory (KCPCL) has experienced tremendous success with prior NIJ DNA backlog reduction grants, and will no doubt continue this success with the FY2012 Forensic DNA Backlog Reduction Program grant. The primary goal for the use of funding provided by this grant is to reduce the turnaround time (TAT) from biological screening request to the completion of DNA testing for violent crimes cases. This goal will be met by continuing to increase the efficiency of the Trace/DNA sections with the objectives of retaining grant funded employees and contract technicians previously hired and trained. An additional goal tied into the reduction of turnaround time for violent crimes is to continue to decrease the backlog of all cases awaiting Trace/DNA analysis. The DNA section will continue to prioritize violent crimes for analysis.

These goals will be met by continuing the trend started in 2011 which attempted to efficiently use each analyst's time in the most effective manner. A rotational system was implemented and Trace analysts were cross trained to perform every step of the analytical process in the DNA section. The result of this was a turnaround time for the calendar year of 2011 of 187 days (~6 months). The backlog for cases awaiting DNA analysis (not including Trace) was reduced by 32%.

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**FY12 Recipient Name:** Missouri State Highway Patrol

**Award Number:** 2012-DN-BX-0096

**Award Amount:** \$628,345

**Abstract:** The Missouri State Highway Patrol (MSHP) Crime laboratory provides PCR-STR DNA analysis on samples from crime scene evidence without cost to all law enforcement agencies within Missouri. The need for DNA analysis continues to increase at a rate greater than present funding and resources support. Our goal is to improve turnaround time, decrease backlogs and increase throughput.



The MSHP Laboratory's portion of Missouri available funds for 2012 for Part A. was calculated to be \$530,543. This amount is based on the Highway Patrol's portion (9,519 = 36.2%) of the State's 26,300 UCR, Part 1 violent crimes reported to the FBI in 2010.

As recommended by the grant solicitation, the funding was adjusted to allow St. Charles County Sheriff's Department to apply for the minimum \$100,000. In an agreement with the Missouri Association of Crime Laboratory Directors, The Missouri State Highway Patrol Crime Laboratory consented to absorb the monies that each of the participating labs would have to give to adjust their base amount in order to satisfy the 100,000 minimum to go to St Charles Co. Accordingly, The Missouri State Highway Patrol Crime Laboratory portion of the \$1,465,835 was adjusted to \$467,278.00.

The Laboratory will use the awarded funds to purchase DNA reagents, supplies and amplification kits, cover our annual maintenance agreements for 14 instruments, and fund overtime (to include benefits) for sixteen (16) criminalists.

It is expected that once implemented, these improvements will increase throughput (samples per analyst per month) by 30%, decrease backlogs by 20% and reduce average turnaround time to below 200 days.

The MSHP will also be applying for the supplemental amount of \$161,067.00 as outlined in Part B of the solicitation as we operate a State Designated DNA database laboratory. These monies will be used to purchase DNA reagents, supplies and amplification kits for our DNA Databasing laboratory.

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**FY12 Recipient Name:** Saint Charles County (MO)

**Award Number:** 2012-DN-BX-0006

**Award Amount:** \$85,000

**Abstract:** The St. Charles County Sheriff's Department Criminalistics Laboratory (SCCSDCL) provides forensic DNA analysis services to the law enforcement community of St. Charles County Missouri. The SCCSDCL has seen an explosion of DNA cases submitted as DNA evidence continues to be more prevalent and valuable to criminal investigators. As a result, the SCCSDCL is committed to using the most efficient and accurate equipment and technologies available to analyze the varied forensic DNA samples submitted. Funding analyst overtime is a proven way for the SCCSDCL to reduce its DNA backlog and improve the forensic DNA testing it provides.

The SCCSDCL will use its portion (\$85,000) of the FY12 Forensic DNA Backlog Reduction Program to enhance its DNA testing capacity and reduce its DNA backlog by providing overtime for analysts and purchasing DNA testing supplies. The SCCSDCL anticipates working over 350 additional DNA cases during the program period as a result of program funding. The two major goals of this program are:

- 1) Reduce the DNA backlog by 20% through analyst overtime and the purchase of supplies.
- 2) Reduce the turnaround time to less than 150 days by funding analyst overtime.

Achievement of these goals will increase the overall productivity and efficiency of the SCCSDCL - positively impacting the investigations and prosecutions of all laboratory cases, especially those with DNA evidence. This program will also strengthen the SCCSDCL's commitment to the law enforcement agencies it serves.

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**FY12 Recipient Name:** St. Louis County (MO)

**Award Number:** 2012-DN-BX-0005

**Award Amount:** \$167,708

**Abstract:** An important objective of the St. Louis County Police Crime Laboratory is to provide more efficient processing to reduce or at least maintain turn-around-time and increase the number of forensic DNA samples processed. The Laboratory serves more than one million citizens and provides services to the St. Louis County Police Department, as well as 90 municipalities, 56 of which have their own police departments.

The Biology/DNA Unit within the Crime Laboratory has seen a significant increase in the number of samples submitted for biological screening and DNA analysis each year due to the success of obtaining profiles from samples which would previously have not been submitted to the laboratory.

Grant funding provided by the 2012 DNA Backlog Reduction Program will be used to maintain two full-time biologist positions and a DNA technician position. By maintaining the two biologists and DNA technician with grant funding, the DNA analysts will be able to work full-time performing DNA analysis. The 2011 DNA Backlog Reduction Grant also funded a part-time biologist in addition to the three positions requested with 2012 funding. This position will be incorporated into the St. Louis County Police Department budget.

The St. Louis County Crime Laboratory expects to complete approximately 361 additional cases over the award period of 18 months than would be possible without grant funding. The St. Louis County Police Crime Laboratory expects to increase the number of samples analyzed per analyst per month to at least 35 samples.

Even with maintaining the grant funded analysts, the backlog and turn-around-time seem to increase. Despite increased efficiencies from year to year, the rate of new incoming samples continue to outpace the rate of sample completion. This increase would be much greater if we were unable to maintain these analysts through NIJ funding.

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**FY12 Recipient Name:** St. Louis Metropolitan Police Department (MO)

**Award Number:** 2012-DN-BX-0011

**Award Amount:** \$350,937

**Abstract:** The St. Louis Metropolitan Police Department Crime Laboratory has a backlog of cases at the DNA analysis level that could be partially alleviated by the hiring of part and full time DNA analysts and overtime funds for department and grant funded DNA analysts. The SLMPD is requesting \$350,937 from the DNA Backlog Reduction Grant FY2012, the money allocated to them from the total allocated to the state of Missouri. The overall goals and

objectives of this program will be to reduce the number of untested forensic casework samples, to enter eligible profiles into CODIS and obtain hits, and to prosecute the suspects. This will be accomplished by continuing to hire 1 part-time and 3 full-time grant funded employees and overtime for the department and grant funded DNA employees. By increasing throughput and creating a more efficient laboratory it is expected that 350 cases will undergo biological screening, DNA analysis where appropriate, upload of eligible profiles into CODIS when obtained, and prosecution of suspects.

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**FY12 Recipient Name:** Mississippi Department of Public Safety

**Award Number:** 2012-DN-BX-0057

**Award Amount:** \$483,001

**Abstract:** The Mississippi Crime Laboratory (MCL) faces the challenge of providing essential forensic services to the criminal justice system of the state in a time of reduced budgets and increasing crime. At the present time, all DNA analysis, are performed in the Jackson Laboratory. The regional laboratories receive evidence from agencies in their region and provide weekly courier service to the main lab for evidence requiring examinations not available at the branch lab. Conventional Serological Examinations have been added to the services provided by the three regional laboratories, the Meridian, Batesville and Gulf Coast laboratories. A new Gulf Coast Laboratory was completed in 2011 with space for basic Serology examination and DNA analysis, however, certain modifications of the space is necessary before DNA requirements can be met. When complete, the Gulf Coast Bioscience laboratory unit will receive Bioscience cases from the agencies served by the Gulf Coast laboratory; provide proper evidence documentation, perform serological examinations, and provide DNA analysis as appropriate. When DNA analyses can be carried out in the Gulf Laboratory, it will no longer be necessary to forward evidence to Jackson for these examinations. This will eliminate a bottleneck in the system and increase the efficiency and timeliness of the MCL response to these requests. Providing these services locally means that communication will be enhanced and more effective case management and coordination can be achieved.

## OBJECTIVES

The objectives of this project are to improve the efficiency and timeliness of the MCL response to requests for Bioscience examinations and to insure continued development of the CODIS data base by reducing the number of DNA database samples awaiting analysis.

## ACHIEVING THE OBJECTIVES

The Mississippi Crime Laboratory intends to achieve the objectives by accomplishing the following goals:

1. Maintaining the effectiveness of the DNA Unit by funding continued employment of four individuals whose jobs would be lost at the close of existing grants
2. Providing the required continuing education for existing DNA staff
3. Maintaining the improved turnaround-time for DNA cases that has been achieved
4. Increasing DNA analysis throughput
5. Insuring continued development of the CODIS data base by supplying Buccal swab kits to the Mississippi Department of Correction (MDOC) for the collection of samples

6. Reducing the number of DNA database samples awaiting analysis by outsourcing offender samples to an accredited fee-for-service laboratory and paying overtime for existing qualified laboratory employees to review the DNA database profiles produced by the vendor laboratory.
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**FY12 Recipient Name:** Montana Department of Justice

**Award Number:** 2012-DN-BX-0018

**Award Amount:** \$200,000

**Abstract:** The Montana Department of Justice Forensic Services Division (MT DOJ FSD) is the agency responsible for analyzing evidential material associated with criminal investigations for all state and local law enforcement agencies and medical examiners within the state of Montana. Montana Code Annotated 44-6-102 designates the MT DOJ FSD Laboratory to conduct analysis of DNA database samples collected from all convicted felons.

Federal funding from this award will be used for the following goals:

1. Increase the capacity of the laboratory by purchasing equipment and supplies (Automated Liquid Handler Instruments, Vacuum centrifuge concentrators for DNA analysis, Swab Dryers and Photographic equipment for Serological analysis).
  2. Reduce the forensic DNA case and convicted offender sample backlogs and turn-around-times and to increase sample throughput by improving the efficiency (throughput) of serological and DNA analysis through the use of the new equipment purchases as listed above.
  3. To provide continuing education for each analyst.
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**FY12 Recipient Name:** City of Charlotte (NC)

**Award Number:** 2012-DN-BX-0008

**Award Amount:** \$268,405

**Abstract:** The Charlotte-Mecklenburg Police Department Crime Laboratory (CMPD) is responsible for analyzing evidential material associated with criminal investigations for the Charlotte-Mecklenburg area in North Carolina.

The CMPD faces budgetary constraints in personnel. The number of cases coming into the laboratory exceeds the capacity of the current employees. We are slowly working them into our budget. The Federal funding from this award will be used for the following goals:

1. Reduce the backlog of forensic biology/DNA cases.
2. Increase the capacity of the CMPD Crime Laboratory.
3. Maintain current laboratory capabilities by keeping current personnel.
4. Provide funds for an outside agency to perform the mandatory external DNA audit.

The CMPD expects to analyze at least 90 DNA cases and screen 60 cases over the award period. The agency also expects to reduce the turnaround time to less than 90 days, and increase the productivity of each analyst to at least 40 samples per month.

In addition, the CMPD would like to scan all grant documents so that electronic copies can be maintained for the future.

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**FY12 Recipient Name:** North Carolina Department of Justice

**Award Number:** 2012-DN-BX-0112

**Award Amount:** \$1,741,320

**Abstract:** The State Crime Laboratory - Raleigh is an ASCLD-LAB accredited laboratory that provides DNA testing for a population of about 9,656,401 (2011 census estimate) people. The North Carolina State Bureau of Investigation (SBI) has been performing forensic DNA analyses for law enforcement agencies across the state since 1990. However, as the reliability and the reputation of the use of DNA analysis for forensic means increased, so did the demand for its use. In order to reduce the in-laboratory backlog and focus the laboratory's resources on those cases most needing attention, the SBI implemented a case acceptance policy on three different occasions. This policy limited the cases worked by the crime laboratory to only those cases which contained known blood standards from all individuals associated with the crime.

In 2004, the section began accepting no-suspect rape kits and as additional staff was hired, expanded its no-suspect policy to include all cases except for misdemeanor property crimes. In 2005, the section switched from a gel based platform to a capillary platform. This new platform was determined to be much more sensitive. As a result of this new sensitivity, the section began to work "touch evidence." As a result of the broader acceptance policy and ability to perform analysis on touch cases, the number of case submissions increased as well as the number of DNA profiles into CODIS.

In addition to performing DNA analysis on casework, the section created a DNA database as a result of the DNA Identification Act of 1994. State Legislation required that blood samples from individuals that were convicted of serious crimes (e.g., homicide, rape, sexual assault) were to be submitted to the laboratory for analysis. These DNA profiles were then uploaded into a database for comparison.

With the advent and maturation of the Combined DNA Indexing System (CODIS), forensic DNA analysis is increasingly being used as an investigative tool. The number of requests for analysis on all types of cases consistently outpaces the laboratory's ability to work these cases. To meet this demand, the SBI has devoted, and continues to devote, additional personnel. Until December of 2002, there were ten analysts in the Forensic Biology Section that were certified in to perform either Body Fluid Identification or DNA analysis and five analysts certified as database analysts. In December of that year, the Attorney General began to push for additional analysts whose primary goal was to identify and work the thousands of untested rape kits that sat on the shelves of law enforcement agencies across North Carolina. His plan was to ask the North Carolina General Assembly for six additional DNA analysts each year for the next four years. The section was immediately granted six new positions that year. In 2003, the section was allotted two sets of increases, 1) six additional DNA analysts to work on forensic casework and 2) two additional DNA analysts and two database analysts whose job responsibility would be to assist with the increase in workload as a result of North Carolina becoming an all-felons state with regards to CODIS. Although the Forensic Biology section was given these increases in

staff, the legislature did not provide funding for additional space. In 2004, the General Assembly approved an expansion for the Crime Laboratory, but due to overcrowding in the section, no additional personnel were allocated. In 2005, the Section broke ground for a \$5.1 million, five-story laboratory expansion and was allocated an additional six DNA analysts. In 2007, using funds from the 2005 DNA Capacity Enhancement Grant, this existing facility was renovated and finished with hoods, telephones, casework, etc. In 2010, the North Carolina legislature approved DNA samples to be collected upon arrest for certain violent felonies. As a result of this legislation, the section was given four DNA analyst positions and three processing assistants. In total, the Forensic Biology Section has 28 analysts involved in forensic casework and 16 individuals assigned as database analysts or support personnel.

As part of National Institute of Justice (NIJ) DNA Backlog Program grants, the Section worked numerous backlogged cases and obtained CODIS hits thereby solving cases which would not have been solved had it not been for the funds provided by these grants. In 2011, with the assistance of grant money from NIJ, the Section completed 2431 jobs to reduce the on-hand backlog, entered 746 suspect DNA profiles into CODIS, entered 533 forensic unknown samples into CODIS and obtained 420 CODIS hits.

A negative consequence, however, is that the DNA program has become a victim of its own success. As more cases get solved solely as a result of DNA analysis, word spreads from officer to officer and agency to agency and case submissions have increased dramatically. This is particularly true with unsolved property crimes and those cases involving “touch DNA evidence”. Therefore, in spite of grant money provided by NIJ, case backlogs have not decreased much but have increased over time. In the calendar year 2008, there were 2557 jobs submitted to the Forensic Biology Section. That number increased to 3289 in 2009. In 2010 there were 3191 submissions. By comparison, section job completions rose from 1703 in 2008 to 2530 in 2009. In 2010 the section completed 2431 jobs. In 2011 the section received 3509 jobs and completed 1953.

In late 2010 and through 2011, the entire laboratory began the process of converting its documentation into an ISO format in preparation of its next accreditation which will be based on ISO 17025 standards. In February 2011, the database began its collection of arrestee samples based on certain offenses. Based on the procedures for the expungement of these samples, it became necessary for additional staff to become involved in assisting in this area. In June 2011, legislation was passed that required all analysts to become certified in their respective disciplines within 18 months of becoming eligible. The first round of testing for certification was performed in December 2011. These three projects required thousands of man hours and with case input/output as seen above, coupled with the loss of 8 analysts, pushed the section’s backlog from 1213 cases in the beginning of January 2011 to 2599 by the end of December 2011.

#### Project goals and objectives

- 1) To provide funding for the outsourced analysis of convicted offender and/or arrestee samples which will be reviewed by this laboratory and uploaded into CODIS. Analysis costs range from \$19.49 for convicted offender samples with a 30 day turnaround to \$26.99 for arrestee samples with a 10 day turnaround time. Funding will cover the analysis of 12480 convicted offender samples and 6000 arrestee samples.

- 2) To provide funding for the outsourced analysis of forensic casework. The analysis cost is estimated at \$1000 per case. As a result, this funding will cover the cost of approximately 733 cases.
  - 3) To work an additional 338 cases in-house and enter those DNA profiles into CODIS which meet NDIS DNA Data Acceptance Standards.
  - 4) To analyze an additional 581 database samples and enter those profiles into CODIS.
  - 5) To provide funding for the mandated training for analysts, supplies and overtime pay.
  - 6) To provide funding for the purchase of 30,000 arrestee DNA sample collection kits.
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**FY12 Recipient Name:** North Dakota

**Award Number:** 2012-DN-BX-0101

**Award Amount:** \$200,000

**Abstract:** The Office of Attorney General, Crime Laboratory Division is the agency that is responsible for analyzing evidential material associated with criminal investigations for all state and local law enforcement agencies and medical examiner and coroners within the state of North Dakota. The North Dakota Century Code 31-13 designates the Office of Attorney General, Crime Laboratory Division as the agency responsible for conducting DNA analysis on DNA samples collected from all convicted felony and registered offenders, as well as all felony arrestees in the state of North Dakota; the Office of Attorney General, Crime Laboratory Division is responsible for storing and maintaining the resultant profiles in the North Dakota State Index System (SDIS) and uploading the qualified profiles into the National DNA Index System (NDIS).

The Federal funding from this award will be used for the following goals:

1. Reduce the backlog of forensic biology/DNA cases.
2. Reduce the backlog of DNA database samples.
3. Increase the capacity of the DNA Unit and reduce bottlenecks in workflow.
4. Maintain current laboratory capabilities by replacing aging equipment, purchasing equipment for necessary upgrades, and service agreements for existing instruments.
5. Provide required continuing education to analysts.

The Office of Attorney General, Crime Laboratory Division is striving to attain an average 30 day DNA and database case turn-around time and to increase the productivity of each analyst to at least 30 samples per month. The laboratory is planning to train and qualify three biological screeners as DNA analysts which will increase the capacity of the entire unit.

The agency also expects to work at least 2,500 DNA database samples (which includes 124 QC samples) using Federal funding.

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**FY12 Recipient Name:** Nebraska State Patrol

**Award Number:** 2012-DN-BX-0003

**Award Amount:** \$324,535

**Abstract:** The Nebraska State Patrol Crime Lab (NSPCL) is the agency that is responsible for analyzing evidential material associated with criminal investigations for all state and local law

enforcement agencies in the state of Nebraska. In addition, the NSCPL is mandated by state law to be responsible for DNA analysis on DNA samples collected from all convicted felony and misdemeanor offenders as well as all felony arrestees. The NSPCL is responsible for storing and maintaining the resultant profiles in the Nebraska Data Bank.

The NSPCL is experiencing budgetary shortfalls due to the economy. The Federal funding from this award will be used for the following goals:

1. Reduce the backlog of forensic biology/DNA cases.
2. Reduce the backlog of DNA database samples.
3. Maintain current laboratory capabilities by replacing aging equipment.
4. Prepare for the expansion of the CODIS core loci by upgrading instrumentation that will no longer be supported or compatible with the new chemistries.
5. Provide required continuing education to all analysts.
6. Maintain accreditation and compliance with the QAS standards.

The NSPCL expects to analyze at least 144 cases by the grant funded analyst and 5,000 database samples with the assistance of the database lab technician. The NSPCL expects to reduce the turnaround time of forensic cases to under 4 months. In the event a vacancy should occur, these goals may not be attained.

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**FY12 Recipient Name:** New Hampshire Department of Safety

**Award Number:** 2012-DN-BX-0102

**Award Amount:** \$200,000

**Abstract:** The New Hampshire State Police Forensic Laboratory (NHSPFL) is the sole provider of forensic services in the State of New Hampshire. As such, the laboratory performs all serology and DNA analyses in association with criminal investigations in the state, and also is responsible for the analysis and entry of offender and casework samples into the CODIS database.

Like all other states, the NHSPFL is facing increased budgetary constraints coupled with a recent DNA database expansion which went into effect late last year. The Federal funding from this award will be used for the following goals:

1. Reducing the forensic biology case backlog and maintain or improve the current turnaround times through analyst overtime and purchasing supplies.
2. Reducing the DNA database sample backlog.
3. Maintain current laboratory capabilities by replacing aging equipment and purchasing equipment for necessary upgrades.
4. Providing the required continuing education and proficiency tests for analysts, as well as maintaining licenses necessary for the laboratory's LIMS system and Qualtrax.

It is expected that the NHSPFL will analyze a minimum of 300 DNA cases and 800 database samples utilizing grant funds, and maintain its compliance with the FBI's DNA Quality Assurance Standards.

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**FY12 Recipient Name:** County of Union (NJ)

**Award Number:** 2012-DN-BX-0044

**Award Amount:** \$1,332,960

**Abstract:** The Biology Section of the Union County Prosecutor's Office Forensic Laboratory offers biological screening and DNA analysis to law enforcement agencies within Union County as well as other counties at the request of the Union County Prosecutor's Office. The Laboratory consists of three (3) DNA analysts including the DNA Technical Leader/CODIS Administrator. These analysts share the casework responsibilities for the county.

Adding BEAST DNA Module to the current LIMS will streamline DNA analysis process and improve the Section's ability to manage data and documentation related to analyses. Currently, Union County has BEAST evidence tracking system deployed for all law enforcement entities including the Laboratory. The benefits of the BEAST DNA Module include: more efficient data migration for DNA samples, elimination of hand calculations, and other labor-intensive, manual data management tasks.

CAL-DOJ's CHOP software will greatly improve Union County's ability to track DNA Cold Hit case outcomes. In Union County, concerted case management efforts and Cold Hit tracking are needed to improve our investigative response to these crimes. A developed software system such as CHOP also offers many built-in performance metrics to support agencies in developing Cold Case programs and case strategies (see Gabriel et al. Beyond the Cold Hit: Measuring the Impact of the National DNA Data Bank on Public Safety at the City and County Level. Journal of Law, Medicine & Ethics | June 22, 2010).

Since the Laboratory gained accreditation in 2008, nuclear DNA analysis with the Quantifiler™ Human DNA Quantification Kit and Identifiler® PCR Amplification Kit has been offered to investigators within Union County. The laboratory utilizes the following instruments from Life Technologies: 7500 Real Time PCR System, 9700 Thermal Cyclers and 3130 Capillary Electrophoresis Genetic Analyzer. Genetic analysis data interpretation is currently performed with GeneMapper ID v3.2.1.

Due to budgetary issues, the Laboratory has not made any staffing increases or significant advancements in technologies / instrumentation since DNA analysis was first offered to the county. The Biology Section staff periodically work overtime to meet the casework demands and fulfill their other assigned duties within the Laboratory (e.g., CODIS Administrator, CODIS Alternate, QA Manager, Health and Safety Officer). Given these constraints, the Laboratory has been unable to dedicate time to validation studies for the implementation of new technologies and DNA analysis offerings. Grant funds will enable one contractual DNA analyst hire (validation scientist) to perform necessary validation studies for the 3500 Genetic Analyzers and GeneMapper ID-X software; these systems will eventually replace legacy 3130 Genetic Analyzers and GeneMapper ID software v3.2.1. The 7500 Real Time PCR System will augment the throughput of the Laboratory and allow for a redundant system.

With the remaining temporary DNA analyst hires, the Laboratory anticipates an increase in DNA testing capacity and a corresponding reduction in turnaround time. Analysts will focus on casework testing related to violent and property crimes under this grant funding, with probative

DNA profiles entered into CODIS for searching against felon offenders and other crime scene DNA profiles. The UCPO Forensic Laboratory expects to analyze 70 cases with funding for overtime and supplies as well as an additional 60 cases for those contractual analysts dedicated to DNA analysis; the Laboratory hopes to reduce turnaround time to approximately 60 days with these improvements.

The remaining grant funds in this submission will be used to augment capacity within the Laboratory. CODIS server hard drive and memory increases will support growing LDIS data. Laboratory freezers will enable proper storage of biological specimens. PC workstations and cubicle spaces will allow contractual staff to perform their daily administrative duties. Pipettes, centrifuges and other basic laboratory equipment will enable contractual staff hires to perform technical tasks. Computer hardware and software will assist CHOP software installation. Funds will also be used to allow analysts to travel to and attend yearly ISHI and AAFS meetings to satisfy continuing education requirements.

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**FY12 Recipient Name:** New Mexico Department of Public Safety

**Award Number:** 2012-DN-BX-0058

**Award Amount:** \$702,235

**Abstract:** DPS - Abstract: The goal of this program is to build the capacity of crime lab and to decrease casework backlog by hiring additional personnel, funding overtime for existing forensic scientists, and funding forensic scientist college interns to validate new technologies and/or methodologies. Additionally, some lab instrumentation and equipment will be updated.

APD - Abstract: The goal of this program is to provide the City Of Albuquerque Police Department Criminalistics Laboratory DNA Unit with the resources to reduce the amount of backlogged cases that exist within the City of Albuquerque and the County of Bernalillo. The main objective of this lab is to use this grant to purchase much needed equipment and validation services, outsource DNA samples to an outsourcing vendor, and provide continuing education for existing staff.

NMDIS – Abstract: The goal of this program is to utilize grant funds to purchase the materials required to assemble in-house, 12,400 convicted offender/arrestee DNA collection kits.

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**FY12 Recipient Name:** Las Vegas Metropolitan Police Department (NV)

**Award Number:** 2012-DN-BX-0105

**Award Amount:** \$1,009,635

**Abstract:** The City of Las Vegas and the surrounding area of Clark County, Nevada have a current population in excess of 1.9 million persons and, in 2011, hosted over 3.2 million visitors per month. The Las Vegas Metropolitan Police Department (LVMPD) Forensic Lab operates as a unit of local government providing full service forensic analysis capabilities to the southern Nevada community. In addition, it is the sole provider of forensic DNA analysis services to all of Southern Nevada. The LVMPD Forensic Laboratory also operates and administers the Southern Nevada Combined DNA Index System (CODIS). The database is a CODIS Local installation with both casework and convicted offender responsibilities.

The Biology/DNA Detail of the LVMPD processes violent offenses and biological evidence associated with homicides, sexual assaults, robberies, attempted homicides, and kidnapping cases. Additionally, it processes a full range of property crimes, including burglaries and vehicle thefts in southern Nevada.

The LVMPD Forensic Laboratory, Biology/DNA Detail is faced with budgetary constraints and increased case backlogs. The Federal funding from this award will be used for the following goals:

1. Reduce the backlog of Forensic Biology/DNA and decrease case turnaround time through outsourcing backlogged DNA cases and using overtime to process cases in-house
2. Increase the capacity of the LVMPD Forensic DNA laboratory by purchasing new computers, a new printer, and DNA analysis software
3. Maintain current laboratory capabilities by purchasing Convicted Offender collection kits
4. Provide required continuing education to analysts by sending eight analysts to conferences
5. Create a contract to outsource technical review
6. Create a contract to outsource the validation of Y-STRs

The LVMPD Biology/DNA Detail expects to process at least 115 cases in-house with federal-funded overtime. An additional 568 cases currently contained in DNA's backlog are targeted to be completed through outsourcing casework to a private DNA laboratory. Processing cases in-house on overtime combined with outsourcing backlogged DNA cases to a private laboratory will work towards reducing the overall backlog of DNA cases at the LVMPD. Also, establishing a contract for the outsourcing of technical reviews and validation projects will enable current DNA staff to remain focused on processing casework, thereby decreasing case turnaround time from 182 days to 150 days and increasing the capacity of the Biology/DNA Detail from processing an average of 41 samples per analyst per month to 50 samples per analyst per month.

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**FY12 Recipient Name:** City of New York, Office of Chief Medical Examiner

**Award Number:** 2012-DN-BX-0095

**Award Amount:** \$1,400,000

**Abstract:** The Department of Forensic Biology, of the Office of Chief Medical Examiner, serves as the public forensic laboratory for the City of New York and provides serology and DNA testing on thousands of case submissions every year. In 2011 a total of 28,614 DNA samples were extracted, with STR profiles generated, analyzed, and reviewed. As a result, the Department of Forensic Biology uploaded 2,859 profiles into CODIS. During the same year, 989 offender matches and 427 case-to-case matches were made.

Ongoing budget reductions have lowered the existing DNA criminalist head count, threatening Forensic Biology productivity and the timeliness of DNA testing results. 2012/2013 goals are to maintain the current capacity and reduce turn-around time and case backlog. The FY12 backlog reduction proposal aims to achieve this by focusing on five types of actions to be taken:

- 1.) Increase available staff hours through weekend overtime and new hires.
- 2.) Purchase supplies to avoid processing bottlenecks.
- 3.) Replace several of the discontinued 3130xL model sequencers with the new 3500xL.

- 4.) Upgrade DNA analysis software to increase efficiency.
- 5.) Provide continuing education through conference travel.

It is expected that weekend overtime and supply funding will result in 2,800 additional assignments that can be processed. The goal is to reduce turn around time as much as possible but due to the pending LIMS implementation, it is not possible to quantitate these expectations.

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**FY12 Recipient Name:** County of Erie (NY)

**Award Number:** 2012-DN-BX-0088

**Award Amount:** \$527,416

**Abstract:** The Erie County Central Police Services Forensic Laboratory performs forensic DNA analysis for the local, State and Federal law enforcement agencies of Erie County, New York (population 900,000). Additionally, we provide forensic DNA analysis for all of Niagara County and Orleans County (total population 270,000) and occasional forensic DNA analysis for law enforcement agencies from 3 neighboring counties and State and Federal agencies responsible for investigating cases in Erie County. We currently have 10 full-time DNA analysts (includes 2 section supervisors who also perform some casework analyses) and one part-time DNA analyst. With the success of CODIS, casework requests have been steadily increasing, especially in the area of forcible sexual assault, burglary, weapons possession, robbery and assault. The weapons possession cases require a short turn around time in order to meet court mandated time constraints. These cases are worked during regular operating hours. Additionally, we are experiencing an increase in the number of items submitted for each case and more requests for DNA analysis on evidence associated with homicides, including cold cases. This has resulted in a significant backlog and a need to decrease the turnaround time. In order to further increase the analytical capabilities of this lab, it is necessary to perform a portion of the lab work on backlogged cases using overtime and to continue the funding for the 2 DNA analyst positions that were funded under previous NIJ grant programs.

The Federal funding from this award will be used for the following goals:

1. Reduce the backlog of forensic biology/DNA cases.
2. Increase the capacity of the laboratory and reduce bottlenecks.
3. Improve the overall turnaround time for the completion of DNA cases.
4. Maintain current laboratory equipment in good working order.
5. Replace aging equipment.

It is anticipated that the additional overtime spent on casework will result in a decrease in the turnaround time and a decrease in the number of backlogged cases, since the analysts will be able to process more cases in a shorter period of time. The long term goal is to analyze the current backlog of cases and to then provide a 30 day turn-around time for new cases. The funding from this grant (\$527,416) will result in the completion of 246 additional cases using overtime and 189 cases are expected to be completed by the 2 DNA analysts that were hired using this funding.

A portion of the funding will be used to purchase the supplies necessary to analyze the additional cases and to train the new DNA Analysts. Funding is allocated to replace an aging Temperature

Verification Kit. Funding is also allocated to renew the annual maintenance contracts for the 2 Genetic Analyzers, the RT-PCR instrument and the Rees Temperature Monitoring System.

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**FY12 Recipient Name:** County of Suffolk (NY)

**Award Number:** 2012-DN-BX-0099

**Award Amount:** \$234,676

**Abstract:** The 2012 Forensic DNA Backlog Reduction program is intended for increasing the throughput and timeliness of forensic analysis of evidence submitted to the Suffolk County Crime Laboratory Biological Sciences Section. This task is to be completed in four separate ways. First, increase capacity and efficiency will be increased through the purchase of Qiagility Robotic Workstation. This will allow more rapid preparation of plates to be run in our Applied Biosystems 3500 Genetic Analyzer. This will improve quality of pipetting tasks that occur at this stage of the DNA analysis process. Second, funds will be used for the purchase of supplies, such as capillary arrays and kits, used in DNA analysis. This replaces supplies that we will not be able to purchase due to budget cuts, allowing us to maintain our current level of service. Third, funds will also be used to outsource backlogged DNA samples to an accredited fee-for-service vendor laboratory for DNA Analysis. This will allow us to add DNA profiles to CODIS from no-suspect property crime cases that we are not able to analyze in-house due to a lack of staff. A contract employee will be hired to assist in the screening of backlogged biological evidence. This will ultimately lead to DNA analysis and CODIS entry of samples from backlogged cases that we are not able to analyze due to our manpower constraints. Finally, an external DNA QAS Audit will be conducted so we may continue to perform forensic DNA Analysis and remain as a part of CODIS.

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**FY12 Recipient Name:** County of Westchester (NY)

**Award Number:** 2012-DN-BX-0089

**Award Amount:** \$267,323

**Abstract:** Funding from this grant will go toward satisfying two ends: increasing the capacity to perform DNA analysis, and reducing the backlog created by uncompleted cases in the Forensic Science Laboratory of the Westchester County New York Division of Forensic Sciences. The accomplishment of these goals is tantamount to continuing our pledge to furnish DNA results to investigating agencies within thirty days.

Our laboratory has been online with STR DNA typing since 1999. In thirteen years the demands on, and expectations of, all forensic case-working laboratories has intensified such that analytical turn-around time must be greatly reduced and the typing techniques employed must be increasingly more sophisticated. Currently our laboratory employs nuclear STR typing and Y-STR typing techniques. In addition, the FBI Quality Assurance Standards, which took effect in July 2009, and the SWGDAM (Scientific Working Group on DNA Analysis Methods) Guidelines, which took effect in January 2010, impose new requirements for casework analysis and mixture interpretation.

To maintain pace with evolving trends and national accreditation requirements for DNA analysis and to reduce our current backlog of cases to be analyzed for DNA, our laboratory will require

new laboratory supplies, hardware support via instrument service contracts, access to training opportunities and travel monies, and the capability to hire temporary laboratory technician support staff. This augmented capacity will enable us to process, record, screen, and analyze forensic DNA samples in order to further reduce the amount of time required to complete casework to meet our thirty day turn-around criteria. We anticipate the momentum created by this optimized workflow will preemptively reduce future bottlenecks at the examination and analytical DNA stages of casework by substantially minimizing our current backlog.

The Federal funding from this award will be used for the following goals:

1. Maintaining the trend of providing the most probative case results to the requesting agency within thirty days by hiring DNA technicians to perform necessary routine quality assurance duties to free up analysts' time
  2. Increase our capacity to complete ancillary casework procedures through purchasing laboratory supplies, equipment and instrument service contracts
  3. Reduce our backlog of "UCR Part 1 Violent Crimes" forensic casework including property crimes by expanding our capacity to handle DNA samples by purchasing new equipment and hiring DNA technicians to aid in handling, screening, and analyzing backlogged DNA samples
  4. Providing the required continuing education for analysts through specialized training at regional and national meetings to enhance our procedures and protocols
  5. Providing funding to cover the costs associated with a required external FBI QAS DNA audit of our DNA section
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**FY12 Recipient Name:** Monroe County (NY)

**Award Number:** 2012-DN-BX-0117

**Award Amount:** \$278,224

**Abstract:** The Monroe County Crime Laboratory (MCCL) is a regional crime lab that regularly provides forensic services for over 40 police agencies within an eight county region of New York State. In addition to these Counties, the laboratory often provides services to the New York State Police, ATF, US Attorney's Office and the New York Park Police (approximately 52 agencies). The City of Rochester is the largest city within the eight county region and accounts for the majority of cases completed by the MCCL. The total service area represents a population of approximately 1,204,275 (U.S. Census, 2010). The MCCL is the agency responsible for conducting DNA analysis on the DNA samples collected in the region and uploading samples into to CODIS database.

The MCCL is facing monetary constraints severely impacting the supply, instrument purchase maintenance and travel budget allotted to the Forensic Biology section. The federal funding from this award will be used to achieve the following goals:

1. Increasing capacity of the laboratory by purchasing equipment (genetic analyzers) and upgrading DNA chemistries to meet future CODIS requirements.
2. Providing the required continuing education for each analyst.
3. Maintaining optimal instrument performance by continuing maintenance contracts on analysis instrumentation and supporting system equipment.

4. Maintaining accreditation requirements by participating in regularly scheduled proficiency testing programs.
  5. Maintaining accreditation requirements by supporting calibration and certification of equipment.
  6. Maintaining accreditation requirement for review of relevant scientific literature.
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**FY12 Recipient Name:** Nassau County (NY)

**Award Number:** 2012-DN-BX-0100

**Award Amount:** \$227,418

**Abstract:** The objective of the proposed National Institute of Justice Forensic DNA Backlog Reduction Program for FY2012 is to reduce the overall turnaround time for the handling, screening, and analysis of forensic DNA samples, and to improve laboratory throughput in an effort to prevent future DNA forensic casework backlogs within the County of Nassau. In order to reduce the overall turnaround, three factors contributing to analysis bottlenecks will be addressed through the use of 2012 grant funds. (1) Delays at LIMS workstations caused by the addition of two qualified casework examiners will be reduced by configuring two additional stations. (2) Bottlenecks in profile interpretations and report writing will be addressed through the implementation of the Cybergenetics True Allele Expert System. (3) This coupled with the use of requested overtime funds to support the technical and administrative review of backlogged DNA cases will result in the reduction of the current 136 case turn-around time to an estimated 90 days for the delivery of test results to the laboratory's user agencies.

In order to maintain the current capacity of property crime related DNA analysis the laboratory is requesting the funds for the purchase of reagents and consumables which will prevent the rejection of 100 property crime cases. This is a vital initiative to the laboratory and its users since property crimes accounted for approximately 54% of submissions, 51% of CODIS profiles entered and 69% of CODIS hits returned in 2011.

The methods proposed for this project will be measured by the expected decrease in case turnaround time and increase in the number of CODIS eligible profiles entered into the database. Metrics will be generated by the Laboratory Information Management System report function.

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**FY12 Recipient Name:** New York State Police

**Award Number:** 2012-DN-BX-0086

**Award Amount:** \$1,273,853

**Abstract:** The New York State Police Crime Laboratory System provides state-of-the-art forensic Short Tandem Repeat (STR) DNA analytical capabilities for all NY State Police criminal case investigations. It also provides forensic DNA services for those state criminal justice agencies that do not have access to county/municipal crime laboratories or to medical examiners offices within the state. All forensic DNA casework for the NYSP is performed at the Forensic Investigation Center (FIC) in Albany. The NYSP FIC also maintains the state convicted offender DNA Database Unit.

The federal funding from the National Institute of Justice FY2012 DNA Backlog Reduction Grant will be used for the following goals:

1. Reduction of the current forensic DNA casework backlog by providing analyst overtime and by outsourcing of casework to a commercial forensic genetic identity testing laboratory.
2. Increase in the analytical capacity of the forensic DNA casework laboratory by purchase of equipment (genetic analyzer), acquisition of equipment for enhanced automation (robotic workstations, plate centrifuges computers and peripherals, ), more efficient laboratory space allocation (renovation of DNA extraction lab) and removal of processing bottlenecks (evidence processing equipment). Funds will also be applied for contracts to support our Laboratory Information Management System (LIMS Coordinator) and to design and implement system improvements / upgrades (Information Systems Specialist). Funds are also requested to provide a contract for implementation of a Lean Six Sigma program for improvement of our analytical process.
3. Provision of mandated continuing education for 21 forensic scientists in the Biological Science casework unit.
4. Maintain and decrease in the the turn-around times for processing, analysis and CODIS entry of convicted offender DNA patterns by purchasing additional instrumentation for punching and analyzing samples.
5. Improve the networking capacity in the Database laboratory and provide additional storage space for offender samples.
6. Increase quality control testing for liquid handling robots in the Database laboratory.

By the end of the award period, the New York State Police Forensic Investigation Center expects to reduce the current DNA case backlog by at least 132 cases (97 through in-house testing and 135 through out-sourcing). By increasing analytical capacity, the throughput of forensic scientists performing DNA analysis in the casework unit is expected to increase by 33%. Similarly, the turn-around times for DNA casework is expected to decrease by 30 days or more. The NYSPFIC DNA database unit expects to maintain an average turn-around time of less than 30 days and to further reduce average turn around times to below 20 days.

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**FY12 Recipient Name:** Onondaga, County of (NY)

**Award Number:** 2012-DN-BX-0001

**Award Amount:** \$159,676

**Abstract:** The Onondaga County Health Department, Forensic Laboratories is the bureau responsible for analyzing evidential material associated with criminal investigations for all local law enforcement agencies within the County of Onondaga. The Forensic Laboratories are being challenged with an ever increasing workload and tightening local government budgets. With the general goals of reducing the number of backlogged cases and increasing section capacity, the DNA section will utilize funds from the 2012 DNA Backlog Reduction Grant for the following:

1. Retain a DNA analyst
2. Fund analyst overtime
3. Provide discipline specific continuing education
4. Purchase supplies
5. Renew a maintenance agreement on DNA instrumentation



## 6. Purchase proficiency tests

The Forensic Laboratories intend to analyze 28 backlogged DNA cases on overtime and expect 70 cases to be analyzed by the retained analyst. The increased throughput will effectively reduce turn-around time, further enhancing the services offered to the criminal justice community of New York State.

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**FY12 Recipient Name:** City of Columbus (OH)

**Award Number:** 2012-DN-BX-0074

**Award Amount:** \$248,307

**Abstract:** Columbus Police Crime Laboratory DNA Backlog Reduction Project 2012 seeks to enact improvements that will enable the crime laboratory to process DNA samples efficiently and effectively thereby reducing the backlog of DNA cases awaiting analysis. These improvements are critical to help the criminal justice system realize the full potential of DNA technology.

The Columbus Police Crime Laboratory is facing budgetary constraints. DNA database expansion legislation that went into effect on July 1, 2011 is expected to increase the number of database hits and confirmations performed by this lab.

The Federal funding from this award will be used for the following goals:

1. Reduce the forensic DNA case backlog through analyst overtime and purchasing supplies.
2. Increase the capacity of the laboratory by purchasing equipment (DNA genetic analyzer and microscopes).
3. Provide the required continuing education for each analyst.

The Columbus Police Crime Laboratory can expect to reduce the DNA case backlog by at least 90 cases by the end of the award period. The turnaround time is expected to be reduced to 120 days or less, and the analyst throughput in the casework sections is expected to increase to 60 samples per month per analyst.

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**FY12 Recipient Name:** City of Mansfield (OH)

**Award Number:** 2012-DN-BX-0028

**Award Amount:** \$100,000

**Abstract:** The Mansfield Division of Police Forensic Science Section DNA Laboratory is an agency that is responsible for analyzing evidential material associated with criminal investigations for local law enforcement agencies in Mansfield, Ohio and adjoining communities. The DNA Laboratory is composed of 2 DNA Analysts and a part-time DNA Technician and has been in operation since 2001. This laboratory is also one of eight Ohio NDIS laboratory participants. CODIS operations are performed on the local level with samples being uploaded to the State of Ohio for submission to NDIS.

The Mansfield Division of Police Forensic Science Section DNA Laboratory continues to face budgetary constraints with respect to personnel. The Federal funding from this award will be used for the following goals:

1. Reducing the forensic DNA case backlog through analyst overtime.
2. Maintain a limited backlog and low turn-around times through analyst overtime.
3. Maintain CODIS participation by hiring a DNA analyst.
4. Increasing the capacity of the laboratory by hiring one DNA Analyst.
5. Providing the required continuing education for each analyst.

The Mansfield Division of Police Forensic Science Section DNA Laboratory can expect to reduce the DNA case backlog by at least 310 cases (300 in-house and 10 utilizing) overtime by the end of the award period. The turnaround time is expected to be maintained at current levels and analyst throughput in the casework sections has increased as new instrumentation was purchased with previous award funding.

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**FY12 Recipient Name:** Cuyahoga County Office of Medical Examiner (OH)

**Award Number:** 2012-DN-BX-0081

**Award Amount:** \$100,000

**Abstract:** The Cuyahoga County Regional Forensic Science Laboratory is the primary DNA Analysis Laboratory for Cuyahoga County and the region. The Regional Forensic Science Laboratory continues to build upon previous grant and capacity enhancement initiatives by achieving ASCLD/LAB-International Accreditation as well as expanding the Lab to accept non-fatal/sexual assault cases as of February 2012.

DNA Technicians hired in the 2010 grant cycle were continued in the 2011 cycle. The DNA Techs have completed training and are now assisting the analysts in preparatory work on a full time basis.

The Medical Examiner continues to support operations of the Regional Forensic Science Laboratory and has approved the hiring of five additional positions in the Lab. The additional staffing in the Lab will further assist the Lab in reducing backlog as well increasing throughput and DNA samples analyzed monthly. With changes in accepting non-fatal/sexual assault cases, hiring staff and additional forensic instrumentation coming on line it is unclear how turnaround, samples analyzed per month and backlog will be affected. The lab will be tracking all these metrics as explained elsewhere in this application and anticipates significant positive results.

This year's project will consist of the following:

1. Procurement of consumable laboratory supplies.
2. Professional continuing education.

The Regional Forensic Science laboratory expects to analyze a minimum of 100 forensic biology and DNA cases with funds over the award period and will track both overall laboratory performance as well as cases completed utilizing grant funded supplies. Two staff will meet expected professional continuing education requirements as a result of this funding.

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**FY12 Recipient Name:** Hamilton County (OH)

**Award Number:** 2012-DN-BX-0076

**Award Amount:** \$198,646

**Abstract:** The Federal funding from this award will be used for the following goals:

1. Enhancing the capacity of the DNA section by purchasing an Applied Biosystems model 3500 Genetic Analyzer (8 capillary) to replace an aging model 3130 Genetic Analyzer (4 capillary). This model of Genetic Analyzer is capable of detecting DNA amplified using a 6 dye system which will accommodate the increase in CODIS core loci. The funding will also allow for implementation of amplification kits designed to accommodate additional CODIS core loci. The supplies necessary to install, validate, and train analysts to use the 3500 Genetic Analyzer are included in this funding request.
  2. Reducing the turnaround time for a DNA case by at least 5%. The laboratory is taking steps to improve its efficiency and effectiveness. With the purchase of the 3500 Genetic Analyzer, the DNA section will be able to achieve increased throughput via the 8 capillary 3500 Genetic Analyzer.
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**FY12 Recipient Name:** Lake County (OH)

**Award Number:** 2012-DN-BX-0030

**Award Amount:** \$100,000

**Abstract:** The LCCL is an ASCLD/LAB-International accredited laboratory. DNA has been in place in the laboratory since 1994. STR-CE technology has been in place since 2000, with one full time DNA Technical Manager analyzing most/all of the DNA cases. The second full time DNA Analyst is also the Laboratory Director, Quality Manager, DNA Technical Reviewer, Training Manager and Crime Scene Analyst. The laboratory has been able to maintain this configuration for many years. Now that the laboratory is accredited under the international program, the amount of work required of the Quality Manager and Laboratory Director positions has greatly increased. In order to keep up with the work flow in DNA and the rest of the laboratory duties, the DNA section needs to hire an additional person to fill the position of DNA Analyst. This second full time analyst will enable DNA cases to be screened and analyzed in a more timely manner. The LCCL requests the funding for a portion (approximately 76.853%) of the DNA Analyst's salary and of their benefits, for the 18 month period of the grant. The remaining portion (approximately 23.147%) of the benefits not paid for by the grant will be funded by the LCCL.

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**FY12 Recipient Name:** Montgomery County (OH)

**Award Number:** 2012-DN-BX-0079

**Award Amount:** \$231,754

**Abstract:** The Miami Valley Regional Crime Laboratory is a full-service forensic laboratory serving the law enforcement agencies in southwest Ohio. Approximately thirty-one law enforcement agencies in Montgomery County and forty-six located in seven other counties contract with the laboratory annually for services. Additionally, numerous other agencies will utilize the services as needed throughout the year.

The laboratory will use funds from this grant to:

1. Reduce the DNA case backlog by purchasing supplies for the casework.
2. Purchase maintenance contracts for equipment in the laboratory.

The turn-around-time on DNA cases is expected to decrease by 25%. This would allow us to provide DNA results on most cases within 62 days. The analysts should increase the number of samples processed by 25%. We anticipate the average number of samples that an analyst can process each month to be 36.

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**FY12 Recipient Name:** Ohio Office of the Attorney General

**Award Number:** 2012-DN-BX-0053

**Award Amount:** \$1,171,330

**Abstract:** The Ohio Bureau of Criminal Identification and Investigation (BCI) is responsible for analyzing evidential material associated with criminal investigations for all state and local law enforcement agencies within the state of Ohio. BCI operates three regional forensic science laboratories throughout the state. The London and Richfield regional laboratories have full forensic DNA casework laboratories. Forensic biology is performed at the Bowling Green regional laboratory. In addition, Ohio Revised Code 109.573 designates BCI as the agency responsible for conducting analysis on DNA samples collected from all convicted felony and certain misdemeanor offenders as well as all adult felony arrestees in the state of Ohio. BCI is responsible for storing and maintaining the resultant profiles in the Combined DNA Index System (CODIS). The bureau's London laboratory maintains CODIS.

BCI has undertaken an aggressive and comprehensive initiative to decrease DNA testing turnaround time, reduce sample backlogs, and increase laboratory capacity. The casework biology and DNA units have increased from 31 bench-level staff in January 2011 to 55 in April 2012. Additionally, new state legislation requiring testing of more samples has increased the burden on the laboratory's CODIS section prompting the need for increased capacity. Therefore, the federal funding from this award will be used for the following goals:

DNA Casework Section:

1. Reduce the forensic DNA case backlog and decrease the turnaround time through the purchase of supplies.
2. Increase the capacity of the DNA casework laboratory by purchasing two Life Technologies 3500xL Genetic Analyzer systems.
3. Increase staff efficiency and progress toward a paperless process.

DNA Database Section:

4. Reduce turnaround time for DNA database samples entered into CODIS.
5. Evaluate and validate expanded FBI core loci STR kits.
6. Provide required continuing education to analysts.
7. Electronically archive the demographic information cards received with database samples.

BCI expects to decrease the DNA casework backlog by at least 398 cases through in-house testing using federally-funded supplies and expects to decrease turnaround time to 45 days or

less through the introduction of new equipment. The expected increase in analyst throughput by the end of the award period is 23% with the addition of the new equipment. The CODIS Section expects to work at least 8,000 DNA database samples with the funds requested for overtime.

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**FY12 Recipient Name:** Stark, County of (OH)

**Award Number:** 2012-DN-BX-0027

**Award Amount:** \$100,000

**Abstract:** The Canton-Stark County Crime Laboratory is a full-service forensic laboratory which serves the Stark County area in northeastern Ohio. The laboratory's mission is to provide quality forensic support to the criminal justice system in Stark County, through science and technology. In order to further this mission and to address current staffing challenges and budgetary constraints, the laboratory plans to use federal grant funds to acquire new instrumentation in order to accomplish the following goals:

- 1.) Increase the capacity of examinations in the DNA analysis workflow.
- 2.) Increase the efficiency of examinations in the DNA analysis workflow.

The laboratory expects that by completing the goals and objectives of this project that the backlogged number of cases awaiting biological screening and/or DNA typing as well as the overall turnaround time for such cases will decrease by as much as 10% by the end of the award period. Moreover, the laboratory expects to be able to maintain the increased productivity in future years by the investment of grant funds in instrumentation aimed at increasing the capacity and efficiency of individual staff members.

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**FY12 Recipient Name:** City of Oklahoma City (OK)

**Award Number:** 2012-DN-BX-0026

**Award Amount:** \$187,000

**Abstract:** The Oklahoma City Police Department DNA Laboratory has seen explosive growth in case submissions since January 1, 2009. This growth is due to the now wide-spread application of DNA testing to property crimes occurring in the City of Oklahoma City. Previous use of DNA testing had been limited to case analysis of evidence related to violent crimes. As a result, the DNA Laboratory is currently burdened with a backlog of approximately three hundred fifty (350) cases composed of both violent and property crime cases. Currently, the laboratory processes all cases on single capillary 310 instrumentation, which is outdated and unable to support such high volume backlogs efficiently. To increase the laboratory's efficiency and productivity to process the increasing number of property crime cases, it is proposed federal grant funds be used to pay for upgrading the laboratory's capabilities to take advantage of recent technical advances in the field of DNA testing including:

1. Purchase of a 3500 multi-capillary genetic analyzer. This instrument is next generation and capable of processing considerably more samples in a shorter time than the current 310 instruments.
2. In addition to the purchase listed above, grant funds are requested to pay for the required validation of the new equipment in our laboratory, associated training and maintenance service contracts. Use of validation services currently available on the market will allow

Oklahoma City Police Department DNA laboratory personnel to continue forensic casework while the necessary validation studies are performed.

As a result of these improvements to laboratory capacity it is expected the backlog of DNA cases awaiting analysis will be reduced by at least forty (40) cases by the end of the grant award period cases by the end of the grant award period. This reduction will be achieved through an estimated minimum 10% increase in casework productivity.

This project will serve as an expansion of the previously awarded NIJ grant (2011-91398-OK-DN) and is expected to utilize improvements purchased on those award funds. Although those award purchases are still in the process of implementation, it is project the addition of the 3500 instrument will further enhance the overall ability to reduce the backlog further once all purchases are validated and in use. It is expected that backlog may be significantly reduced in the long term beyond the grant period as a result of these project implementations.

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**FY12 Recipient Name:** City of Tulsa (OK)

**Award Number:** 2012-DN-BX-0019

**Award Amount:** \$231,520

**Abstract:** The Tulsa Police Department Forensic Laboratory (TPDFL) is responsible for analyzing evidential material associated with criminal investigations for the Tulsa Police Department within the City of Tulsa. The TPDFL has a fully operational existing forensic DNA casework section that undergoes external quality assurance audits in accordance with the FBI's Quality Assurance Standards at least once every two years and is accredited under the ASCLD/LAB program.

The federal funding from this award will be used for the following goals:

1. Increasing the capacity of the laboratory by purchasing equipment (liquid handling instrument) and retain two forensic scientists.

The TPDFL expects to analyze at least 144 forensic biology and DNA cases over the award period by the grant-funded positions. The agency also expects to reduce the turnaround time to less than 120 days and increase the productivity of each analyst to at least 50 samples per month.

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**FY12 Recipient Name:** Oklahoma State Bureau of Investigation

**Award Number:** 2012-DN-BX-0033

**Award Amount:** \$624,041

**Abstract:** The OSBI seeks to improve casework productivity while decreasing the overall turnaround time and back log of cases. This improvement to productivity and decrease to overall turnaround time will be accomplished through the implementation of new higher throughput instruments and more advanced analysis software.

The OSBI requests \$490,000.00 for the purchase of five 3500 instruments from Applied Biosystems. These instruments will replace current 310 and 3130 instruments. The 3130 instruments are no longer being produced and will soon no longer be supported by Applied

Biosystems. All instruments in the OSBI are aging, and this upgrade to the new platform will ensure that the OSBI has the throughput and technology to take us into the coming years.

The OSBI requests \$119,680.00 for the purchase of seventeen GeneMapper ID-X client licenses. These licenses will be used to replace current analyst software for the evaluation and interpretation of DNA profiles. With the upgrade to 3500 instrument platforms, the newer ID-X software is required for this purpose. This software also provides additional features which will speed analysis and assist analysts in the overall interpretation of DNA profiles.

The OSBI requests \$14,361.00 to fund our CY2013 external QAS DNA audit. Since these audits are no longer being provided to the DNA community for free, the OSBI will require the funding in order to receive this audit which is required for NDIS participating laboratories. These audits also provide great insight into the operations of the laboratory and provide the OSBI with valuable feedback regarding areas for improvement.

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**FY12 Recipient Name:** Oregon State Police

**Award Number:** 2012-DN-BX-0093

**Award Amount:** \$621,886

**Abstract:**

**PROJECT GOALS AND OBJECTIVES**

The goals of this proposal are to 1) reduce the DNA casework and database sample backlog, 2) increase the efficiency and capacity of DNA casework and database screening, processing and analysis, 3) provide required training and continuing education for Forensic Biologists, and 4) to remain in good standing with NDIS by undergoing an external DNA audit following the FBI's Quality Assurance Standards. The objectives are: A) to fund two Forensic Scientists positions (one for casework and one for database analysis), purchase supplies for processing DNA backlogged cases and database samples, and to provide overtime for the analysis of backlogged DNA cases, B) to eliminate a bottleneck and increase efficiency of DNA casework processing and analysis through equipment purchases, C) to provide training and continuing education opportunities to analysts to assist with obtaining competency or maintaining proficiency and D) to contract with an organization to assess our casework and databasing quality and operations following the FBI's Quality Assurance Standards.

**PROJECT DESIGN AND METHODOLOGY**

For objective A, we will provide support for 12 months to one full time DNA database (CODIS) analyst and one full time DNA casework analyst. One Forensic Scientist, entry level, step 4 will be retained with OSP for 12 months (April 1, 2013 to March 31, 2014) to process, analyze and report the DNA results from backlog DNA cases. The current funding for the DNA casework position is a NIJ FY2011 DNA Backlog Reduction Program grant (2011-DN-BX-K499). Funds from this grant will allow us to retain this position. If retained, this analyst will analyze any backlogged DNA cases. In 2010 we began processing all CODIS samples in-house. We have dedicated space, equipment and 2 full time CODIS analysts. One position is currently funded using the FY2010 CODIS grant which will expire June 30, 2012. This position will then be funded by the FY2011 DNA Backlog Reduction Program grant (2011-DN-BX-K499). To continue processing all CODIS samples in-house and maintain our current capacity of ~650

samples/analyst/month, we will use the FY2012 DNA grant funds to support this position for 12 months. Grant funds will provide overtime for approximately eleven DNA analysts to process and analyze backlogged DNA cases. The majority of the backlogged samples are no suspect(s), property crime cases. Profiles from these cases will be entered into CODIS and subsequent hits will be reported to the police agency to aid in their investigation. The overtime will help to minimize our DNA backlog. Supplies will be purchased for the processing of DNA backlogged and database samples. In addition, we will purchase supplies for the convicted offender collection kits.

**Objective B:** To eliminate a bottleneck and increase efficiency of DNA casework processing and analysis we will purchase a higher throughput Qiagen DNA extraction robot. In addition, a document sequencer or paginator will be purchased for Forensic Biologist to assist in a more efficient method of page numbering. Digital point and shoot cameras will also be purchased for Forensic Biologists to aid in the documentation of evidence processing.

For objective C, analysts will participate in various in-state and out-of-state training opportunities to fulfill training requirements for competency or to maintain proficiency. Training for any new hires may include courses in population genetics and general DNA techniques. This will assist new hires to meet their training requirements to obtain competency. Current DNA analysts will attend various professional conferences (e.g., NWAFFS, AAFS, or the International Symposium on Human Identification) to maintain their proficiency and keep current with new technologies.

**Objective D:** Funds are requested to assist with the payment of the bi-annual external audit of the DNA unit. In 2013 we will contract with an organization to assess our casework and databasing quality and operations following the FBI's Quality Assurance Standards. This will assist us in maintaining our compliance to the FBI QAS.

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**FY12 Recipient Name:** Allegheny County Pennsylvania

**Award Number:** 2012-DN-BX-0055

**Award Amount:** \$290,221

**Abstract:** The Forensic Biology Section of the Allegheny County Office of the Medical Examiner (ACOME) has worked extensively in recent years to develop and implement an automated DNA processing methodology that has effectively increased the DNA sample throughput and improved the turnaround time for casework. Through the acquisition of advanced robotics and information technologies, Forensic Biology has successfully established the framework for this automated DNA processing design. At the same time, ACOME has devoted a great deal of resources and effort to the training of new personnel. After nearly a decade of personnel turnover and new trainees, ACOME now has a full staff of nine forensic biologists. Four staff members are court-qualified DNA analysts, and two more will complete their DNA training by the fall of 2012. With the automated framework in place and a fully trained staff with which to operate, ACOME recognizes the opportunity to significantly reduce the number of Forensic Biology backlogged cases through a combination of capacity enhancements, continuing education, and personnel overtime.



Funding from the proposed program will be used to purchase three additional CODIS workstations, two Genemapper ID-X workstations, and additional supplies and instrumentation for Touch DNA analysis. Funding will also be utilized for training and education of laboratory staff, an external DNA audit, and enough consumables and overtime to perform 155 backlogged cases. ACOME FL projects a budget of \$290,221 and an estimated timetable of 18 months (October 1, 2012 to March 31, 2014) for successful completion of the proposed program.

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**FY12 Recipient Name:** City of Philadelphia (PA)

**Award Number:** 2012-DN-BX-0109

**Award Amount:** \$1,000,761

**Abstract:** The Philadelphia PD Forensic Science Bureau Criminalistics Unit is the agency that is responsible for analyzing evidential material associated with criminal investigations for the City of Philadelphia. The Criminalistics Unit is comprised of the "DNA Laboratory" which only conducts DNA typing and the "Trace Laboratory" which screens evidence for biological material suitable for DNA analysis.

The Philadelphia PD Forensic Science Bureau Criminalistics Unit is facing budgetary constraints. For the years 2008, 2009 and 2010, the City of Philadelphia accounted for 41%, 40% and 40% of the Violent Part 1 Crimes in the State of Pennsylvania. The demand for services to the Philadelphia Forensic Sciences Bureau DNA Laboratory is expanding while the funds available are decreasing. Increases in the sensitivity of DNA Technology and the success of CODIS entries has resulted in increased application of DNA analysis to any evidence that is known to have been touched by the suspect. The Federal funding from this award will be used for the following goals:

1. Reducing the forensic DNA case backlog by funding analysts to work overtime to analyze backlogged forensic biology/DNA cases..
2. Reducing the forensic biology/DNA case backlog through the outsourcing of backlogged cases to be screened for biological material suitable for DNA analysis and the development of any DNA profiles.
3. To send four forensic scientists to the premier meetings for forensic DNA technology. This will keep the laboratory informed about technological advances, analytical modifications, interpretation issues, and provide continuing education.

The Philadelphia PD Forensic Science Bureau's Criminalistics Unit can expect to reduce the backlog of forensic biology DNA cases by at least 780 cases by the end of the award period.

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**FY12 Recipient Name:** Pennsylvania State Police

**Award Number:** 2012-DN-BX-0059

**Award Amount:** \$1,400,794

**Abstract:** This proposal will provide funding for overtime to enable the PSP-BFS to screen backlog serology cases for potential DNA analysis and to provide overtime for the analysis of DNA backlogged cases. Funds are requested for equipment and supplies to continue to streamline techniques to maximize throughput in the analysis of casework samples. The

overtime is for the serology sections in the six (6) regional laboratories to screen evidence for DNA analysis and for the Forensic DNA Division to complete the DNA analysis.

This proposal will provide funding for the PSP-BFS to utilize overtime to process, analyze, review, and upload convicted offender samples analyzed in-house in order to input the genetic profiles into CODIS within 30 days of receipt.

The PSP-BFS is backlogged in each of its six (6) regional crime laboratories and its Forensic DNA Division. Overtime will be used to control and potentially reduce or eliminate these backlogs. The PSP-BFS is no different than many forensic laboratories throughout the country that experience large backlogs due to increasing casework demands, and rapidly expanding laws. The continued level of case submissions, coupled with resignations, time spent on validations, training, and maternity/sick leaves has made it difficult to reduce turnaround time.

The PSP-BFS remains dedicated to reducing its current average turnaround time in both the screening and DNA analysis while increasing the number of cases processed per month per analyst.

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**FY12 Recipient Name:** Instituto de Ciencias Forenses (PR)

**Award Number:** 2012-DN-BX-0104

**Award Amount:** \$614,345

**Abstract:** The proposed goals intend to continue reducing turnaround time, increasing throughput, and reducing Casework and Convicted Offender/Arrestee backlogs. FY2012 DNA Backlog Reduction Program funding will be used to retain some of the currently employed personnel: two (2) forensic serologists and four (4) technicians, as well as for overtime pay for in-house and transitory/contracted analysts and serologists. A minimum of 167 forensic cases will be analyzed based on supplies/overtime funding requested; whereas a minimum of 2,091 CO/Arrestee single-source samples will be outsourced to virtually eliminate this type of backlog at the Institute when outsourcing under this proposal is completed. In lieu of the funding requested for personnel retention, a minimum of 68 additional forensic cases will be analyzed. Funds will also be used for attendance of personnel to the CODIS and PROMEGA Conferences. Now that Web-Based StartLIMS v.10 implementation is on-going throughout all operational areas and expected to conclude within one year or so, funding will also be used to acquire new computers with which to move closer to a paperless environment, through the acquisition of laptops (5) and computer towers (5). Funding is also requested to obtain digital cameras (6) and accessories for enhanced photo-documentation, as well as two (2) Large UV Crosslinker Chambers with which to prevent contamination. As the CODIS application program was upgraded to v. 7, funding is also requested to replace the current CODIS server which is about five years old. CODIS Consulting Services by a bona-fide CODIS consultant who currently works in an ASCLD-LAB/FBI accredited laboratory is requested to provide continuity to this important service and future aggressive efforts to eliminate CO/Arrestee backlog. In addition, funds awarded will be used to provide in-house continuing-education training to analysts during three days, as well as to pay for one (1) External DNA Audit by NFSTC. Lastly, funds will be used for acquisition of supplies with which to carry out the proposed backlog reductions. All CO/Arrestee single-source genetic profiles obtained herein will be revised on a timely fashion

and, if NDIS Acceptance Criteria is met, transferred to CODIS and uploaded to NDIS within 90 days of their receipt from the outsourcing vendor.

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**FY12 Recipient Name:** Rhode Island Department of Public Safety

**Award Number:** 2012-DN-BX-0032

**Award Amount:** \$200,000

**Abstract:** The Rhode Island Department of Health Forensic Sciences Laboratory (RIDOH-FSL) serves the entire state of Rhode Island, with a population of approximately 1 million. Agencies served include state and municipal police, the Office of the State Medical Examiner, Attorney General, and other law enforcement agencies. The laboratory is divided into four sections: Drug Chemistry, Forensic Toxicology, Breath Analysis/Evidence, and Forensic Biology/CODIS. The Laboratory is the sole Forensic DNA laboratory and CODIS site in the state, and casework is submitted by more than 40 stakeholders. Database collections are carried out by RIDOH-FSL staff at the RI Adult Corrections Institution, and a separate probation collection office. The Laboratory is accredited under ISO 17025 standards by Forensic Quality Services, Inc, and undergoes external audits every two years as required by the FBI's DNA Quality Assurance Standards.

The federal funding from this award will help achieve the following goals:

- a) Reduce the forensic DNA case backlog by funding a full time Forensic Scientist Associate to screen DNA casework;
- b) Increase throughput of both casework and database functions by funding a contract Forensic Biology technician to perform CODIS sample collection and processing, and casework functions as they relate to evidence management;
- c) Provide required continuing education for each DNA analyst through training and travel;
- d) Increase the capacity of the laboratory in both casework and CODIS with the purchase of new equipment, including an extraction robot, barcode label printers, and a 96 well plate illuminator.

The RIDOH-FSL expects to reduce the DNA casework backlog by at least 180 cases, and to be able to process incoming cases within an average 90 day time frame, assuming no changes in staff or workload. We believe that making the long term investment in personnel will increase the overall efficiency of our laboratory, thereby reducing the backlog of DNA casework. The contract technician will maintain our CODIS collections in real time.

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**FY12 Recipient Name:** Beaufort County Council (SC)

**Award Number:** 2012-DN-BX-0077

**Award Amount:** \$150,000

**Abstract:** The Beaufort County Sheriff's Office Forensic Services Laboratory (BCSO-FSL) provides forensic DNA testing of evidence from criminal investigations for all law enforcement agencies within Beaufort County, South Carolina with funding provided by the Beaufort County Council. The laboratory was accredited by Forensic Quality Services in 2011 under ISO 17025;

following accreditation, the number of submissions to the laboratory increased significantly as the laboratory began accepting cases with unknown suspects. As a result, the laboratory has encountered bottlenecks at the sample extraction and profile interpretation steps and is requesting funding for additional DNA extraction equipment and for software to assist in DNA mixture interpretation.

The South Carolina 14th Judicial Circuit comprises the counties of Allendale, Beaufort, Colleton, Hampton, and Jasper. One Solicitor's Office is responsible for prosecution of cases in all five counties. All five counties are geographically close to each other but geographically distant to the South Carolina Law Enforcement Division (SLED) Laboratory located in Columbia. Due to geography, consistency for case prosecution, and the current backlog at SLED, the BCSO-FSL is requesting funding to support forensic DNA testing for the law enforcement agencies of Allendale, Colleton, Hampton, and Jasper Counties.

Federal funding will be used for the following goals:

1. Reduce the backlog of forensic DNA/biology cases.
2. Increase the capacity of the BCSO-FSL and reduce bottlenecks.
3. Provide testing services for all agencies within the 14th Judicial Circuit.

The BCSO-FSL expects to reduce the turnaround time to less than 90 days and increase the productivity of each analyst to at least 30 samples per month. The BCSO-FSL expects to analyze a minimum of 15 cases from outside Beaufort County.

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**FY12 Recipient Name:** County of Greenville (SC)

**Award Number:** 2012-DN-BX-0075

**Award Amount:** \$100,000

**Abstract:** The County of Greenville is the agency that is responsible for analyzing evidential material associated with criminal investigations for all local law enforcement agencies and the coroner's office within the County of Greenville, South Carolina. The County of Greenville operates one forensic science laboratory under the Greenville County-Department of Public Safety (GC-DPS). The County of Greenville designates the GC-DPS as the agency responsible for conducting DNA analysis on DNA samples collected from all casework requested by the Greenville County Sheriff's Office and the Greenville City Police Department. The GC-DPS forensic DNA Laboratory began receiving and processing forensic biology/DNA cases from the two agencies listed above after the accreditation date of March 16, 2011.

The County of Greenville's current budgetary constraints prevents the GC-DPS forensic DNA Laboratory from offering free services to neighboring counties and municipalities in the upstate region of South Carolina. Although a fee-for-service is available to these agencies, their budgetary constraints have hindered them from using the GC-DPS forensic DNA Laboratory.

The Federal funding from this award will be used for the following goals:

1. Expand services to regional upstate SC agencies at a no-cost basis.
2. Increase capacity of GC-DPS forensic DNA Laboratory with forensic biology/DNA cases from regional agencies.

3. Reduce the backlog of forensic biology/DNA cases.
4. Provide external audit funding to meet accreditation requirements.

The GC-DPS forensic DNA Laboratory expects to analyze at least 98 forensic biology and DNA cases with Overtime and Supply funds over the award period. The agency also expects to increase the capacity of each analyst to at least 25 samples per month.

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**FY12 Recipient Name:** Richland County Government (SC)

**Award Number:** 2012-DN-BX-0025

**Award Amount:** \$135,000

**Abstract:** The Richland County Sheriff's Department is currently seeking funds to enhance its capacity for DNA analysis through the DNA Backlog Reduction Program Formula Grant FY 2012. With the implementation of this grant, the following goals will be achieved; reduction of backlogged DNA cases and increase laboratory capacity with the objective of an overall reduction in violent and nonviolent crimes in Richland County through a continuation of current analyst throughput (~60 cases/month). Without the grant-funded re-employment of the full time analyst and the full time technician, laboratory case throughput will be reduced by approximately 30 percent. The project plan/method is to utilize the grant-funded full time analyst and full time technician along with the two county-funded full time DNA analysts and existing laboratory infrastructure to coordinate and process DNA backlogged cases during the grant period. Annual training for the DNA Analyst and DNA Technician will allow for continuing education.

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**FY12 Recipient Name:** South Carolina Law Enforcement Division

**Award Number:** 2012-DN-BX-0108

**Award Amount:** \$1,220,628

**Abstract:** This application is for Federal assistance for the FY12 DNA Backlog Reduction Program. SLED proposes to maintain increased DNA staff through grant funds and to process Database samples with the supplemental funding provided by the 2012 award.

Funds are also being sought to handle, screen, and/or analyze backlogged forensic DNA casework samples. Overtime salaries for DNA personnel, the on-going support of grant-funded DNA personnel, and the outsourcing of backlogged cases to qualifying fee-for-service laboratories will be used in accomplishing this task. The SLED DNA Laboratory is an NDIS participant lab in good standing and is eligible to upload appropriate profiles to NDIS. Therefore, the resulting evidence profiles from analysis of these cases will be entered and searched in the Combined DNA Index System (CODIS) to assist state and local agencies to ultimately solve crimes. The funds may also be used to conduct post conviction DNA testing pursuant to a court order. All DNA analyses performed at SLED using funds from this program will be maintained under the applicable federal privacy regulations.

Funds are being sought to provide external training for analysts and technicians who will have recently started accepting cases, as well as providing required continuing education and training for DNA analysts. New technologies presented in these training events enhance the lab's capabilities in implementing new DNA methodologies and to increasing throughput through

exposure to novel automation and techniques. Funds will also be sought to obtain a contract with an approved vendor to perform the required DNA external audit for 2013.

The supplemental funding provided by this award will allocate funds for the SLED DNA Database Laboratory to process 3,200 database samples that will be submitted to NDIS. The funds will be used to purchase the reagents needed for the analysis of these samples. The database will also purchase collection supplies for approximately 9,790 samples using this award.

While many variables determine the number of backlogged cases, through the use overtime and grant funded personnel internally, and outsourcing analysis on property crimes externally; SLED expects to reduce the DNA case backlog by the end of the award period. Funding on this award will allow us to analyze 406 cases using overtime; and once trained, the analysts funded by this award will have access to overtime funds requested on this award and will work cases with federally funded supplies. Additionally, we anticipate outsourcing approximately 308 cases using these funds.

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**FY12 Recipient Name:** South Dakota Office of the Attorney General

**Award Number:** 2012-DN-BX-0103

**Award Amount:** \$200,000

**Abstract:** The South Dakota Forensic Laboratory has enjoyed a 30-90 day turnaround time on DNA cases for several years now. This has largely been accomplished through the utilization of NIJ funding. Renewed funding will allow us to continue purchasing supplies for working cases and maintain that turnaround time.

Funding of this grant will provide funding for four DNA examiners to receive their annually required DNA training.

Additionally, grant funds will continue offender DNA database sample analysis at an accredited fee-for-service (vendor) laboratory. This arrangement is the most cost effective and efficient process for the SDFL and NIJ. All samples were uploaded to CODIS within 10 working days of data receipt. The average number of days from offender sample receipt to CODIS entry was 111 days in 2011; the range was 33 – 191 days.

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**FY12 Recipient Name:** Tennessee Bureau of Investigations

**Award Number:** 2012-DN-BX-0106

**Award Amount:** \$2,190,753

**Abstract:** The Tennessee Bureau of Investigation, Forensic Services Division is the agency that is responsible for analyzing evidentiary material associated with criminal investigations for all state and local law enforcement agencies within the state of Tennessee. The TBI Forensic Services Division is composed of three crime laboratories located at headquarters in Nashville and two regional laboratories in Knoxville and Memphis. The TBI is an approved NDIS participating laboratory, which allows for the upload of acceptable state offender DNA profiles

into the FBI CODIS database. In addition, the TBI also collects samples from all convicted felons, registered sex offenders and individuals arrested for certain violent felony offenses.

The TBI is facing continuing budgetary constraints, which affect not only the ability to analyze casework, but also to analyze all convicted felon, sex offender registry and arrestee samples collected across the state. Funding from this award will be used for the following goals:

1. Maintain or decrease the current backlog of casework samples through analyst overtime and purchasing supplies.
2. Maintain the employment of contracted employees in each of the state laboratories, and hire one additional employee, used for the processing of evidence and also aid in, or conduct, validations of new techniques or tests to allow analysts to concentrate on casework.
3. Provide the required continuing education for each analyst through travel to conferences, workshops and symposiums.
4. Continue to maintain current instrumentation by way of maintenance contracts. Also maintain the existing document control system and video conference system purchased under the no-suspect grant (2003).
5. Reduce the anticipated CODIS backlog by continuing to outsource both convicted offender and arrestee samples to Orchid Cellmark Dallas, a previously selected vendor laboratory, and provide overtime funds for the in-house review of profiles prior to submission to NDIS and for the work to account for each sample outsourced to prepare the fiscal information for repayment of funds to TBI, be it from a state agency (under the recently passed amendment) or NIJ funding.
6. Purchase a new 3500 Genetic Analyzer from Applied Biosystems to increase the throughput of DNA casework.

Currently, the three TBI DNA units have a collective turnaround time of approximately 112 days for all casework (102 days per case for DNA analysis), with a collective 71 samples worked per analyst per month (33 DNA samples worked per analyst per month). The TBI also expects to outsource 16,000 Convicted Offender and 16,000 Arrestee samples for processing, with at least 13,000 reviewed using overtime funds prior to upload to NDIS.

Of the 32,000 database samples to be outsourced, only 3,200 of the 16,000 Convicted Offender samples will require grant funding to cover processing due to an amendment in the state law governing collection of samples from convicted felons. As all felons will be charged for the processing of their database samples under the new amendment, only felons deemed by the legal system to be indigent will need grant funding to pay outsourcing costs. Approximately 20% of felons are expected to be judged indigent, therefore of the 16,000, only 3,200 will fall under this percentage, for a total of 19, 200 outsourced samples requiring grant funding.

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**FY12 Recipient Name:** City of Austin (TX)

**Award Number:** 2012-DN-BX-0071

**Award Amount:** \$204,031

**Abstract:** The City of Austin is a home-rule municipality situated in Travis, Williamson, and Hays Counties of Texas. The City of Austin Police Department Forensic Sciences Division

Crime Laboratory provides forensic and investigative services to over 812,000 persons residing within 307 square miles.

In 2004, the city opened a state-of-the-art forensic facility and in 2005, received ASCLD/LAB Legacy Accreditation in the areas of biology, toxicology, controlled substances, firearms, latent print, and crime scene. In 2010, the APD Crime Lab underwent successful ASCLD/LAB Legacy and FBI DNA external audits. The 2012 external audit will take place in June and the laboratory is preparing for ASCLD/LAB ISO accreditation, which is estimated to be complete in 2013.

With this application, the City of Austin requests \$204,031 in grant funding from the U.S. Department of Justice, Office of Justice Programs, National Institute of Justice FY 2012 Forensic DNA Backlog Reduction Program for a proposed project period of October 1, 2012 – March 31, 2014. The goals of this program are to reduce DNA casework backlogs, to improve the throughput of the DNA Section, and to provide required continuing education for existing city-funded forensic DNA analysts. If funding is awarded, the program anticipates improvements in the APD Crime Lab DNA Section by purposing funds for overtime, personnel, supplies, and training. The City of Austin requests grant funding in the amount of \$82,390 to allow existing laboratory employees to work on an overtime basis; \$46,000 to continue the salary of an existing grant-funded evidence technician; \$70,000 to purchase essential supplies; and, \$5,641 to send three DNA Section laboratory analysts to training.

The impact of funding from the National Institute of Justice would be significant and would include: a reduction in DNA casework backlogs by a minimum 230 cases; a 10% increase in DNA Section throughput; and, the completion of required training for DNA Section analysts.

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**FY12 Recipient Name:** City of Houston (TX)

**Award Number:** 2012-DN-BX-0068

**Award Amount:** \$1,208,170

**Abstract:** The Houston Police Department Crime Lab is responsible for analyzing evidential material associated with criminal investigations for the Houston Police Department. The Houston Police Department is the largest police department in the state of Texas. The Houston PD Crime Lab is primarily responsible for analyzing violent offenses and a much smaller number of non-violent cases such as burglaries using DNA technology.

The HPD Crime Lab, in an effort to be compliant with Texas Senate Bill No. 1636, must address approximately 6,660 sexual assault kits that are currently stored in the HPD property room that were not previously tested, along with all new and incoming cases. The HPD Crime Lab receives approximately 930 new sexual assault kits/year. The Federal funding from this award will be used for the following goals:

1. Reducing the forensic DNA case backlog through outsourcing.
2. Reducing the number of untested sexual assault kits stored at the HPD Property Room and in the HPD Crime Lab.

The HPD Crime Lab can expect to reduce the DNA case backlog by at least 447 cases through outsourcing by the end of the award period. The HPD Crime Lab also expects to work at least



2,080 sexual assault kits with federal funding by hiring contract screeners. The turnaround time is expected to be reduced for incoming sexual assault cases, as permanent employees can address the new, incoming cases, while contractors can address the older, untested cases.

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**FY12 Recipient Name:** Dallas County (TX)

**Award Number:** 2012-DN-BX-0083

**Award Amount:** \$682,135

**Abstract:** The project will address the need for improved DNA testing capabilities in a local forensic DNA laboratory. The goal of the project is to increase testing capacity in both evidence screening and in DNA analysis. As a consequence of increased testing capacity it is expected that the turnaround time for testing will be reduced. As part of the project, four grant-funded analysts will be hired. Two analysts will be trained to perform evidence screening and serological analysis; it is anticipated that these analysts will process approximately 540 cases during the grant period. This will both increase the laboratory's testing capacity in evidence screening and allow several regular staff members to complete training in DNA analysis, thereby increasing the laboratory's DNA testing capacity. Two grant-funded analysts will perform validation of instruments and robotic equipment for DNA sample processing. Additionally, equipment will be purchased to increase the testing capacity of the laboratory in the areas of evidence screening and DNA sample processing: alternate light sources for use in the screening of evidence items for semen and saliva; backup power supplies for DNA analysis instruments to temporarily power the instruments in the event of power outages; centrifuges and water baths for use in the processing of DNA samples; sample racks and dust covers for robotic sample processing workstations. These instruments will alleviate process bottlenecks. By increasing the number of analysts performing DNA testing, and by alleviating process bottlenecks, it is expected that the overall testing capacity of the laboratory will be increased.

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**FY12 Recipient Name:** Harris County (TX)

**Award Number:** 2012-DN-BX-0070

**Award Amount:** \$645,592

**Abstract:** The goal of this proposed project is to reduce our current case turnaround time to 60 days and to improve case documentation. The implementation of this program will enhance the efficiency, capability, and capacity of the HCIFS Genetics laboratory and improve the laboratory's ability to assist in criminal and death investigations.

The Harris County Institute of Forensic Sciences (HCIFS) Forensic Genetics Laboratory had approximately 637 cases in process, approximately two months of incoming casework, as of December 31, 2011. The eradication of our case backlog to only two months of current cases was a direct result of previous NIJ funding which increased our capacity to process cases. With funds requested through this grant, we plan to continue to meet casework demands and to decrease turnaround time and improve efficiency. Additionally, we will continue the implementation of processes begun in the current project year that will improve our efficiency and increase the number of samples that can be completed per analyst. We estimate we will be able to analyze 20% more DNA cases within the upcoming grant period than is possible currently, while reducing our average turn around time from 70 days to 60 days.

To maintain and increase our capacity, we plan to continue to employ contract personnel, purchase DNA testing supplies not provided by our in-house budget, purchase equipment and increase the number of laboratory work spaces and storage. Funds from this award will also be used to provide scientific continuing education to DNA Analysts to meet our accreditation requirement for continued DNA training.

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**FY12 Recipient Name:** State of Texas

**Award Number:** 2012-DN-BX-0047

**Award Amount:** \$3,234,426

**Abstract:** Forensic DNA Backlog Reduction: To reduce the number of forensic DNA cases awaiting analysis, the nine Texas Department of Public Safety Crime Laboratories will work as a team to engage its ninety-two Forensic DNA Scientists to work overtime examining evidence, developing DNA profiles, and then entering those forensic profiles into the CODIS DNA database.

In this grant application, funds are requested to pay overtime to as many as 70 state funded DNA scientists, to continue the employment of twelve additional grant funded scientists, and to acquire supplies and kits to perform forensic DNA testing in house. The goal will be to complete the analysis of evidence on 2,000 backlogged forensic DNA cases during the project period. In conjunction with this work, DNA scientists will engage in some continuing education by attending DNA training workshops, to enhance their skills and improve efficiency.

DNA Database Backlog Reduction: DNA Analysts in the DNA database laboratory in Austin will work overtime and will use grant funds to obtain direct amp kits to analyze 10,000 offender samples and upload the DNA profiles into the CODIS database.

Capacity Enhancement: A second part of this project will be to enhance the capacity of the eight DPS Crime Laboratories, and to complete the equipping of a ninth new DPS DNA lab in Laredo. The focus of the enhancements will be on further employing robots, for both the extraction of DNA from forensic samples, and for the quantification and normalization of the DNA in samples. These equipment enhancements, coupled with the State of Texas' continuing efforts to replace seven of the eight existing DNA crime laboratories (five are now completed) with much larger facilities, should enable much greater achievements in forensic DNA testing over the next decade.

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**FY12 Recipient Name:** University of North Texas Health Science Center at Fort Worth

**Award Number:** 2012-DN-BX-0050

**Award Amount:** \$548,144

**Abstract:** The University of North Texas Center for Human Identification (UNTCHI) is a State of Texas criminal justice agency providing DNA analysis for both forensic cases as well as for the identification of missing persons and human remains. UNTCHI is accredited by Forensic Quality Services-International (FQS-I) under the requirements of ISO 17025 and the FBI's Quality Assurance Standards. UNTCHI provides DNA analysis to law enforcement agencies throughout the State of Texas at no cost utilizing funds from the DNA Backlog Reduction

awards. The DNA analysis is primarily for sexual assaults, homicides, aggravated assaults, and property crime cases. In addition, UNTCHI has served as a local crime laboratory for the City of Fort Worth and the Tarrant County District Attorney's Office, performing DNA testing and providing expert testimony. In addition, more than 50 other counties within the State of Texas have submitted cases for DNA analysis. UNTCHI functions as an adjunct laboratory to the Texas Department of Public Safety State Crime Laboratory (TXDPS). TXDPS and other agencies within the State routinely refer cases requiring: mitochondrial DNA (mtDNA) analysis, sexual assaults involving products of conception, and those that require familial and/or kinship relatedness statistical analysis.

A variety of DNA technologies are utilized, including autosomal STRs, mini- autosomal STRs (MiniFiler™ System), Y chromosome STRs and mitochondrial DNA analysis. Cases involving degraded samples or samples with a low level male contributor, which typically cannot be detected with traditional autosomal STR systems, have benefited from these types of testing. UNTCHI continues to work closely with both law enforcement and prosecuting agencies to select only the most probative samples for DNA testing. This not only provides a form of education to our submitting agencies, but also helps to improve laboratory productivity and cost effectiveness.

The federal funding provided through this award will be used to achieve the following goals and objectives:

Goal 1: Continue to process and analyze UCR Part 1 Crime Cases submitted to UNTCHI.

Objective A: Fund the salaries of 3 analysts, 1 forensic technologist and 50% of an evidence custodian.

Objective B: Complete a minimum of 540 cases

Objective C: Purchase supplies to work forensic backlog cases

Goal 2: Reduce the number of days from the time a sample is received to the time a report is sent to the submitting agency.

Objective A: Complete a minimum of 9 cases per month per analyst.

Objective B: Continue to reduce the average turn-around time for a case which is currently 57 days, from receipt to reporting.

Goal 3: Reduce the number of backlogged DNA cases

Objective A: Reduce our current existing backlog and complete as many new submissions as possible under this FY 2012 award. The number of backlogged forensic cases found on October 1, 2012 will serve as the baseline for this award. At the end of the last reporting period, December 2011, the backlog was 110 cases > 30 days.

In collaboration with the TXDPS, UNTCHI is eligible for \$548,144.00 of the available funding allotted to the State of Texas. UNTCHI does not receive any State funds for conducting DNA Forensic Casework testing. Funding provided through this program will allow UNTCHI to pay the salaries of three forensic analysts, one forensic technologist and 50% of an evidence custodian's salary. Funding will also be utilized for the purchase of reagents and supplies required to analyze forensic cases submitted to UNTCHI.

With continued process improvements, these funds will allow UNTCHI to reduce the current DNA casework backlog as well as complete the DNA analysis on a minimum of 540 cases. By the end of the award period it is anticipated that each analyst will complete a minimum of 9 cases per month or approximately 30 samples per analyst per month with a turn-around time of less than 57 days per case. Turn-around time includes both mitochondrial and STR analysis. Approximately 3-5% of cases submitted to UNTCHI require mtDNA analysis which is more laborious a time consuming as compared with traditional STR testing. All eligible forensic DNA profiles will be entered into CODIS (SDIS) and uploaded into NDIS where applicable.

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**FY12 Recipient Name:** Utah Department of Public Safety

**Award Number:** 2012-DN-BX-0110

**Award Amount:** \$372,125

**Abstract:** The mission of the Utah Department of Public Safety - Bureau of Forensic Services (UBFS) is to provide a safe and secure environment for the citizens of Utah through the application of forensic science. The goal of the forensic biology section is to use DNA technology to help agencies achieve case closure. The laboratory provides accurate and sound science during forensic biology and DNA analysis, while striving to maintain a rapid response to analysis requests.

UBFS maintains three laboratories throughout the State of Utah: Northern, Southern and Central laboratories. The forensic biology section is located in the Central laboratory and is responsible for analyzing and processing all forensic DNA samples as well as storing, processing, and maintaining all forensic DNA database samples. The UBFS continues to see an increase in case submissions for DNA analysis as well as an increase in the number of samples per case and a continual demand for timely results and reports.

The Federal funding from this award will be used for the following goals:

1. Reduce the forensic DNA case backlog and decrease case turnaround times by purchasing equipment to help streamline casework.
2. Increase the capacity of the Utah Bureau of Forensic Services by purchasing supplies, equipment and service agreements that will aide in the processing of samples.
3. Provide required continuing education by funding training opportunities for DNA analysts.
4. Decrease/maintain CODIS backlog through outsourcing of offender samples.

UBFS anticipates reducing our DNA case backlog by 66 cases by the end of the award period. Previous award funds are currently being used to decrease the DNA backlog. The laboratory also expects to process at least 4,000 database samples using Federal funding. The goal of UBFS is to decrease and maintain a turnaround time to less than 45 days, while sample throughput for serology/DNA will increase by 10%.

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**FY12 Recipient Name:** Virginia Department of Forensic Science

**Award Number:** 2012-DN-BX-0021

**Award Amount:** \$1,165,649

**Abstract:** The Virginia Department of Forensic Science (DFS), an Executive Branch agency, is responsible for analyzing evidential material associated with criminal investigations for all state and local law enforcement agencies and medical examiners within the Commonwealth of Virginia. DFS maintains four regional laboratories - the Central Laboratory in Richmond, the Eastern Laboratory in Norfolk, the Western Laboratory in Roanoke, and the Northern Laboratory in Manassas. As required by statute, DFS is also responsible for receiving and analyzing DNA samples collected from Virginia's convicted felons and certain arrestees for inclusion, storage and maintenance in the Virginia DNA data bank. Beginning July 1, 2011, state law also requires DNA sample collection from individuals convicted of certain misdemeanor sex offenses. Most activities related to the DNA data bank are managed by the DNA Database Unit, which is located at the Department's Central Laboratory.

DFS is requesting funding under this program to maintain the current capacity in its four Forensic Biology Sections and to provide continuing education for DFS Forensic Scientists. DFS is not requesting funding at this time for the DNA Database Unit, as there is currently no backlog of data bank samples.

The goals of this grant project are as follows:

1. To maintain the current capacity of the Forensic Biology Section by continuing to fund four fully-qualified forensic scientists and one full-time forensic laboratory specialist, and by purchasing equipment.
  2. To provide the required continuing education for each forensic scientist in the Forensic Biology Section.
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**FY12 Recipient Name:** Vermont Department of Public Safety

**Award Number:** 2012-DN-BX-0114

**Award Amount:** \$200,000

**Abstract:** The Vermont Forensic Laboratory (VFL), part of Criminal Justice Services, Department of Public Safety is the agency that is responsible for analyzing evidential material associated with criminal investigations for all state and local law enforcement agencies within the State of Vermont. The VFL is the only forensic laboratory in the State of Vermont performing DNA analysis and is the legally designated authority for the DNA database. Legally required DNA samples are collected from all convicted felony offenders as well as all felony arraignees in the state of Vermont; the VFL is responsible for storing and maintaining the resultant profiles in the State DNA Data Bank. While the arraignee program came with a budget, the convicted offender program relies heavily on federal funding for supplies and overtime for sample review.

The VFL also provides all of the forensic biology/DNA casework for the state. This program is currently facing budget constraints in terms of hiring personnel and backlogs are growing. The laboratory also recently received new programs that have resulted in the reassignment of some of the DNA staff to different positions, refilling those positions will require time, result in the need

for overtime to maintain the case flow. We will also be training new DNA analysts and have a limited training budget.

The Federal funding from this award will be used for the following goals:

1. Reduce the backlog of forensic biology/DNA cases.
2. Reduce the backlog of DNA database samples.
3. Increase the capacity of the VFL and address current staffing shortfalls.
4. Maintain laboratory capacity.
5. Provide required training to new staff through validation work. This allows us to train new analyst on laboratory procedures and ensure their experience and competency on new methods while they assist in testing new kits. The goal is to bring new analysts on-line with newly validated systems.

The VFL expects to analyze at least 60 DNA cases ( with OT & Supply funds) and screen 80 forensic biology cases by the grant-funded case manager/serologist) over the award period, as well as 1200 database samples with supplies purchased and OT review with this funding. The VFL expects to reduce the casework turnaround time to less than 95 days and the turnaround time for database samples less than 60 days. This will be accomplished by expediting the training of staff that is expected to be hired to fill vacant positions in DNA.

Validation of PowerPlex16HS for evidentiary samples will be undertaken in conjunction with the training of anticipated new DNA staff to be hired to fill current vacancies. This will concurrently provide the in-house training and experience in the forensic setting for newly hired DNA staff if they have no prior forensic experience e and will allow validation of a single amp system for evidentiary material. At the same time Maxwell DNA IQ casework kits will be evaluated and compared to the organic extraction methods in place for casework currently. While validation and training take time from current staff, in the long run it will help get more analysts on-line and will result in adding a single amplification to the casework options. Having a single amp system will save on reagents and time. Time savings will come in the form of reduced review and analysis of the QC in going from two amps to one to obtain the full CODIS 13 loci or more. The Maxwell DNA IQ casework kit will be compared to the standard organic extraction at the same time.

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**FY12 Recipient Name:** Washington State Patrol

**Award Number:** 2012-DN-BX-0016

**Award Amount:** \$1,287,439

**Abstract:** The Washington State Patrol through the Crime Laboratory Division is responsible for analyzing evidential material associated with criminal investigations for all state and local law enforcement agencies and medical examiners within the state. Under state law (RCW 43.43.756) the Washington State Patrol Crime Laboratory Division (WSPCLD) is the established public provider of Forensic DNA services in Washington State. There are 5 casework DNA laboratories located throughout the state: Seattle, Tacoma, Marysville, Vancouver and Spokane. The CODIS database lab is also located in the same Seattle facility as the Crime Lab.

An average increase in throughput of 4% was obtained by the end of 2011 along with an average 7% decrease in submissions over the past year. The backlog of cases has recently decreased to just below 1000 case requests. Due to state budgetary constraints there were 7 vacant DNA analyst positions not filled in 2011. There were 2 more DNA analysts on maternity leave which also reduced staffing levels. The federal funding from this award will be used for the following goals:

- 1) To reduce the time DNA analysts spend on technician duties to enable more time for data interpretation and report writing. This is to be accomplished by hiring lab techs for the Marysville, Cheney/Spokane and Vancouver labs.
- 2) Increasing the capacity of the laboratories for casework by purchasing new equipment (QIACube centrifuges, vortex mixers and a new balance) and by the continued employment of the DNA IT employee to maintain the state-wide laboratory instruments on the WSP network and to add new laptop software to be integrated into the network.
- 3) Improving the efficiency of mixture interpretation by providing new software to casework DNA analysts on their laptops.
- 4) Providing the required continuing education for casework and database analysts through funding attendance to national and regional conferences plus in-house training.
- 5) Improving the efficiency of the electronic case file with the introduction of STaCs to manage workflow and QC data in the Spokane/Cheney lab.
- 6) Maintain operations as an NDIS participating laboratory system.

The WSPCLD expects to keep the backlog of DNA case requests under 1000 at the end of the award period despite anticipated continuance of state DNA analyst staffing cuts. The mean turnaround time is expected to be kept to 116 days or less, and the analyst throughput in the casework sections is expected to increase 5%. The WSPCLD expects to maintain the 40 day mean turnaround time from receipt of CODIS submission.

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**FY12 Recipient Name:** Wisconsin Department of Justice

**Award Number:** 2012-DN-BX-0091

**Award Amount:** \$871,137

**Abstract:** The Wisconsin Department of Justice, Division of Law Enforcement Services, State Crime Laboratories (WI DOJ-DLES-SCL) is the agency that is responsible for analyzing evidential material associated with criminal investigations for all state and local law enforcement agencies within the state of Wisconsin. The WI DOJ-DLES-SCL maintains two regional laboratories - the Madison laboratory and the Milwaukee laboratory. Wisconsin state statute 973.047 designates the WI DOJ-DLES-SCL as the agency responsible for conducting analysis on DNA samples collected from all convicted felony and certain other designated offenders. The WI DOJ-DLES-SCL is responsible for storing and maintaining the resultant profiles in the Wisconsin DNA Data Bank. The Madison laboratory maintains the DNA Database Unit.

The WI DOJ-DLES-SCL is facing budgetary constraints, as well as a DNA database expansion due to DNA at arrest legislation that will be proposed in the 2013 legislative session. That will exponentially increase the number of DNA database samples the agency will have to analyze. The Federal funding from this award will be used for the following goals:

1. Reduce the backlog of forensic biology/DNA cases.
2. Reduce the backlog of DNA database samples.
3. Increase the capacity of the WI DOJ-DLES-SCL laboratories and improve efficiency.
4. Maintain current laboratory capabilities by replacing aging equipment and purchasing equipment for necessary upgrades.
5. Provide required continuing education to all analysts.

The WI DOJ-DLES-SCL will use Overtime funds to enhance the forensic DNA in-house capacity. Additionally, it expects to outsource and analyze at least 5,276 database samples. The agency also expects to reduce the turnaround time to less than 60 days, and increase the productivity of each analyst to at least 60 samples per month.

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**FY12 Recipient Name:** West Virginia State Police

**Award Number:** 2012-DN-BX-0064

**Award Amount:** \$363,585

**Abstract:** The West Virginia State Police Forensic Laboratory (WVSPFL) is the agency that is responsible for analyzing evidential material associated with criminal investigations for all state and local enforcement agencies within the state of West Virginia. The WVSPFL is a centrally located laboratory in South Charleston, WV. The Code of West Virginia designates the WVSPFL as the agency responsible for maintaining DNA profiles from samples collected from all convicted felony and misdemeanor offenders in the state of West Virginia; The WVSPFL is the State designated CODIS Laboratory. The WVSPFL uses Marshall University Forensic Science Center for the analysis of DNA database samples.

The WVSPFL is facing budgetary constraints for the purchase of new equipment, funding overtime for DNA analysts and biologists, funding continued education for its DNA analysts, and funding of renovations to expand its evidence storage space and space used for serology testing. . The Federal funding from this award will be used for the following goals:

- 1- Reduce the backlog of forensic DNA/biology cases.
- 2- Increase the capacity of the WVSP laboratory and reduce bottlenecks.
- 3- Maintain the laboratory capability by acquiring new equipment.
- 4-Providing the required continuing education for eight analysts by attendance to a conference and/or workshops.

The WVSPFL can expect to reduce the DNA case backlog by at least 42 cases by the end of the award period. The turnaround time is expected to be reduced to 320 days or less for casework samples and 130 days or less for database samples. The analyst throughput in the casework sections is expected to increase by 20%

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**FY12 Recipient Name:** Wyoming Office of the Attorney General

**Award Number:** 2012-DN-BX-0098

**Award Amount:** \$200,000

**Abstract:** The Wyoming State Crime laboratory (WSCL) is the agency that is responsible for analyzing evidential material associated with criminal investigations for all state and local law



enforcement agencies and medical examiners within the state of Wyoming. Wyoming State Statute designates the WSCL as the agency responsible for conducting DNA analysis on DNA samples collected from all convicted felony offenders and qualifying sex offenders in the State of Wyoming. The WSCL is responsible for storing and maintaining the resultant profiles in the Wyoming State DNA Database.

The Federal funding from this award will be used for projects with the following goals:

1. Reducing or maintaining the current forensic DNA case backlog through analyst overtime and supply purchases.
2. Reducing the DNA database sample backlog through analyst overtime and supply purchases.
3. Increasing the capacity of the laboratory by purchasing a maintenance contract, funding analyst overtime for casework and database purposes and by hiring two contract technicians to assist analysts in both the casework and database laboratories. We are seeking to fund one part time technician completely with this grant, and also seek partial funding for a full time technician through this grant. The remaining funding for the full time technician will come from other sources.
4. Providing education opportunities to develop a depth of staff necessary to ensure continued laboratory operation in the case of personnel losses or turnover.

The WSCL can expect to reduce or maintain the DNA case backlog by the end of the award period while still allowing completion of the proposed method validation. The agency also expects to work at least 1470 Offender samples and 81 cases with monies from this solicitation.

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