

SUPPORTING STATEMENT

2014 Census of Publicly Funded Forensic Crime Laboratories

Overview

The Bureau of Justice Statistics (BJS) requests clearance to conduct the 2014 Census of Publicly Funded Forensic Crime Laboratories (CPFFCL-14). The forensic services provided by crime labs extend to police departments, prosecutor offices, courts, and correctional facilities across state, local, and federal jurisdictions during criminal investigations and the administration of justice. The typical crime lab consists of separate analytical units or sections—each one relying on scientific methods and equipment to detect, collect, and process different sources of physical evidence (e.g., body fluids, gun residue, or fingerprints).

The CPFFCL collects administrative data from the state, local, and federal crime labs operating in the United States and provides national statistics on personnel, budgets, workloads, and backlogs in requests for forensic services. It also provides information on quality assurance measures within publicly operated labs, including lab accreditations, proficiency testing programs, examiner certifications, and resources devoted to research.

BJS has conducted surveys of crime labs since 1998. The 1998 and 2001 National Studies of DNA Laboratories focused solely on those agencies that performed DNA testing. The National Institute of Justice (NIJ) funded the 1998 study as part of its DNA Laboratory Improvement Program. As the need for statistics on other forensic services became apparent, BJS expanded the data collection to include all types of publicly operated crime labs. The first Census of Publicly Funded Forensic Crime Laboratories (CPFFCL) was conducted in 2003 to capture data on the workload and operations of publicly funded crime labs in 2002. A second CPFFCL was administered three years later to address additional forensic science issues. In 2010, BJS conducted a third CPFFCL on publicly funded crime labs operating in 2009 to examine changes since the previous censuses.

A fourth CPFFCL is scheduled for 2015. A questionnaire will be directed to government agencies that analyze physical evidence collected in criminal matters and provide court testimony on such evidence. It will provide a comprehensive snapshot of the current state of the nation's forensic science services and document trends in the field since 2002, while expanding the depth of information available on an emerging discipline known as digital and multimedia evidence.

A. Justification

1. Necessity of Information Collection

Under Title 42, United States Code, Section 3732, BJS is directed to collect and analyze statistical information concerning the operation of the criminal justice system at the federal, state, and local levels (Attachment A). It disseminates high quality information and statistics to inform policy makers, researchers, criminal justice practitioners, and the general public. BJS's Criminal Justice Statistics Program encompasses a wide range of criminal justice topics, including victimization, law enforcement, prosecution, courts and sentencing, and corrections.

Since its inception, the CPFCL (conducted in 2002, 2005, and 2009) has been administered to all publicly funded forensic crime labs, defined as—

- (1) a laboratory either solely funded by government or whose parent organization is a government agency, and
- (2) one that employs one or more full-time scientists who possess a minimum of a bachelor's degree in the natural science disciplines of chemistry, physics or biology; analyze physical evidence in criminal matters; and provide reports and testimony to courts of law on such evidence.

The CPFCL is administered to each public laboratory facility, including those within a multi-lab system. Entities outside of the scope of the CPFCL include privately operated labs and police identification units. The latter may perform forensic services including crime scene investigations and latent print examinations but do so outside of the crime laboratory setting.

Publicly funded forensic crime labs play a critical role in the criminal justice system. Each year, the forensic scientists in these facilities analyze millions of pieces of evidence. The CPFCL provides the only national-level assessment of publicly funded forensic operations within state, local, and federal jurisdictions. As the use of physical evidence in criminal investigations and legal proceedings grows, questions continue to arise from the public about the role of forensic scientists in the justice system and the validity and reliability of their findings and expert opinions.

The National Research Council of the National Academy of Sciences (NAS) report *Strengthening Forensic Science in the United States: A Path Forward* helped to bring long-standing issues related to the scientific foundation of forensic analyses to the forefront. Findings from the CPFCL were cited in this report five times.¹ In 2009, a White House Subcommittee on Forensic Science of the National Science and Technology Council's Committee on Science was initiated to promote the implementation of the recommendations of the NAS report. During 2010, BJS met with each of the interagency working groups within the White House Subcommittee to provide an overview of the CPFCL and to discuss how the data can inform the Subcommittee members as they work to address the NAS report. At the conclusion of its charter in 2014, the White House Subcommittee issued a report summarizing its findings and conclusions on issues related to lab accreditations, examiner certifications, proficiency tests, and ethics. Statistics from the CPFCL on these topics were referenced throughout the Subcommittee's report.²

The National Commission on Forensic Science (NCFS) was recently formed to continue the work of the Subcommittee. The NCFS was tasked with providing recommendations to the Attorney General on methods to strengthen the reliability of the forensic sciences, assess the needs of the field, and enhance the quality assurances within crime labs. During the NCFS's first

¹ National Research Council of the National Academy of Sciences (2009). *Strengthening Forensic Science in the United States: A Path Forward*. Washington, DC.

² National Science and Technology Council's Subcommittee on Forensic Science (May 2014). *Strengthening the Forensic Sciences*. Washington, DC.

meeting on February 4, 2014, Deputy Attorney General James Cole stated:

“In 2009, the National Academy of Sciences issued a groundbreaking report titled Strengthening Forensic Science in the United States, which articulated the challenges and opportunities facing this field.”...“We have also asked the Bureau of Justice Statistics to put these recommendations in perspective by sharing their Census of Publicly Funded Crime Laboratories.”³

Crime labs vary in size and provide a wide range of functions, such as the identification of drugs recovered during searches and seizures and the analysis of DNA to convict the guilty and exonerate the innocent. The ability to process this evidence depends on numerous factors including the complexity of the procedures, use of innovative solutions, and the availability of examiners. The most recent CPFFCL found publicly funded crime labs performed an average of five different forensic functions in 2009 and received more than 4 million requests for forensic services that year. The nation’s crime labs had an estimated backlog of 1.2 million requests for forensic services at the end of 2009, a number relatively unchanged from a year earlier. Backlogs for their services can impact the apprehension of suspects and the prosecution of offenders. Maintaining this data collection is vital to tracking the practices of crime labs across all forensic science disciplines and understanding the current state of nation’s crime lab system as a whole.

In addition to documenting and describing the demands for forensic services, the CPFFCL data show increases in the resources devoted to completing the work as well as the quality assurances implemented within the facilities. The annual operating budget for all publicly funded crime labs increased from about \$1 billion in 2002 to \$1.6 billion in 2009. The number of full-time employees in publicly funded crime labs also rose from an estimated 11,000 in 2002 to 13,100 in 2009. During 2009, 83% of publicly funded crime labs were accredited by a professional forensic science organization compared to 71% in 2002.

The primary goals of the CPFFCL-14 are to produce a national roster of agencies operating in 2014 that meet the project definition of a publicly funded forensic crime lab and generate accurate and reliable statistics about their services and resources. The data collected from the CPFFCL-14 can address a wide range of important questions about the processing of the forensic evidence at publicly funded crime labs including:

- What types of services do crime labs provide? Do these functions vary by government affiliation (federal, state, or local) and financial and human resources (e.g., budgets and employees)?
- What types of forensic evidence account for the largest portion of the overall backlog?
- What types of factors affect the ability of labs to process forensic requests in a timely manner?
- How do crime labs utilize outsourcing and technology to manage their workloads?
- Have the quality assurance systems within crime labs increased over time?

The CPFFCL-14 will be expanded to include all federal, state, and local crime labs that perform a rapidly growing forensic science discipline known as digital and multimedia analysis in

³ <http://www.justice.gov/iso/opa/dag/speeches/2014/dag-speech-140204.html>

support of criminal investigations or prosecutions, regardless of whether they employed a natural scientist. Digital evidence is obtained in various formats, including audio, video, and graphical images, from computers, cell phones, cameras, and other electronic devices. The traditional CPEFCL definition of a crime lab limited the information collected about digital evidence because some crime labs only handle this type of evidence and employ forensic experts with training in computer science or information technology as opposed to natural sciences. About 1 in 5 labs that met the eligibility criteria for the CPEFCL-09 reported analyzing digital or multimedia evidence that year. These labs were eligible because they were part of a multi-disciplinary laboratory that also included natural science disciplines, such as forensic biology or chemistry. BJS also plans to expand the scope of the data collection to include additional questions relating to the analysis of digital evidence to better describe the work performed by modern crime labs.

Standalone digital evidence facilities have been excluded from previous CPEFCL iterations because they functioned more as investigative units than scientific laboratories. However, in the last decade, there has been a shift within this discipline from an investigative aid to a scientific process. The American Society of Crime Laboratory Directors (ASCLD) began accrediting digital evidence facilities in 2003. In 2008, the American Academy of Forensic Sciences (AAFS) formed a section devoted to digital evidence. The digital evidence field is affected by the same case law as the other forensic science disciplines and is held to the same standards during accreditation and method validation.

2. Needs and Uses

As the only comprehensive source of national statistics on the characteristics and operations of crime labs, it is necessary to conduct a fourth iteration of the CPEFCL to continue to grow the longitudinal data and report on trends in backlogs, employment, and other important topics. BJS has published several reports using the CPEFCL data: *50 Largest Crime Labs, 2002*; *Census of Publicly Funded Forensic Crime Laboratories, 2002*; *Census of Publicly Funded Forensic Crime Laboratories, 2005*; and *Census of Publicly Funded Forensic Crime Laboratories, 2009*. These reports are frequently used by policymakers, practitioners, media outlets, and the general public to gain insight into issues affecting forensic science and the criminal justice system.

Federal, state, and local government agencies use the data to support legislation and policy decisions as well as budget and staffing requirements. Findings from the CPEFCL were cited in a 2006 U.S. Senate appropriations report to justify directing funds to reduce backlogs in all forensic disciplines as opposed to DNA analysis only.⁴ NIJ has also cited CPEFCL data to underscore the need for grant funding to enhance the capacity of labs that perform forensic functions other than DNA analysis.⁵ Their Office of Investigative and Forensic Sciences (OIFS) aims to improve the quality of forensic science through innovative solutions that support

⁴ FY 2006 Commerce, Justice, Science Senate Appropriations Committee Report (report 109-88, June 2005).

⁵ National Institute of Justice (April 2014). *Fiscal Year 2012 Funding for DNA Analysis, Crime Laboratory Capacity Enhancement and Other Forensic Activities*.

research, technology, and training.

Since the CPFFCL data are applicable to all areas of forensic science, findings from the CPFFCL are critical to the operations of crime lab directors and managers. Lab directors use the aggregate data to compare the workloads and capabilities (e.g., equipment to process evidence) among different types of labs and to set funding and management priorities.

The CPFFCL-14 has the full support of ASCLD as well as NIJ, as evidenced by the attached letters from Gerry LaPorte, Acting Director of NIJ's Office of Investigative and Forensic Services, and Jay Henry, current ASCLD President (Attachment B and C). ASCLD and NIJ have supported this project by reviewing the data collection instrument and providing technical information regarding forensic science. NIJ indicated their need to compare the forensic procedures among crime labs and assess their resources and technical needs. The CPFFCL also provides detailed information on backlogs for sexual assault evidence and offender DNA samples that is used by NIJ to help inform its grant funding programs.

As a member of NIJ's Cross-Agency Forensics Workgroup, BJS periodically meets with representatives from the Office of Justice Programs (OJP) components, including the Office of Victims of Crime (OVC) and the Bureau of Justice Assistance (BJA), to provide status reports on the CPFFCL and to understand how the data collection can serve the needs of the Department of Justice. OVC's website provides the CPFFCL reports as a resource to educate practitioners and the general public about the forensic investigations stemming from criminal victimizations. OVC also provides these publications to groups interesting in developing a Sexual Assault Response Team (SART). In addition, BJS has presented the results from the CPFFCL data collections to stakeholders at national conferences hosted by key forensic science organizations such as ASCLD and the American Academy of Forensic Sciences (AAFS).

Along with the detailed descriptive information about the size, functions, and characteristics of crime labs, the CPFFCL supports other collections and studies. For instance, the CPFFCL roster of crime labs has been used to support a NIJ study on the National Integrated Ballistic Information Network (grant # 2010-DN-BX-0001). A BJA-sponsored study conducted by the National Forensic Science Technology Center (NFSTC) relied on CPFFCL data to describe the number of crime labs that handle trace evidence.⁶ In addition, the California Crime Laboratory Review Task Force used the CPFFCL data to support its recommendations on how to improve the delivery of services by its state and local crime labs.⁷ CPFFCL statistics were used to support legislation that would allow crime labs in Illinois defray costs by collecting an analysis fee from defendants convicted of certain crimes. The CPFFCL data were also used in a U.S. Supreme Court case on the defendant's right to question the lab analyst who developed a match between the reported perpetrator's DNA profile and the defendant's known profile.⁸ Tracking the uses of

⁶ National Forensic Science Technology Center. *A Simplified Guide To Trace Evidence*.

⁷ California Crime Laboratory Review Task Force (November 2009). *An Examination of Forensic Science in California*.

⁸ <http://www.justice.gov/osg/briefs/2011/3mer/1ami/2010-8505.mer.ami.pdf>

CPFFCL data helps BJS determine the data elements for future iterations.

Examples of other uses of the CPFFCL data over the last several years include:

- National Institute of Justice. *DNA Evidence Backlogs: Forensic Casework*. See: <http://www.nij.gov/topics/forensics/lab-operations/evidence-backlogs/Pages/forensic-evidence-backlog.aspx>
- RTI International. *Crime Laboratory Backlogs: The Impact on Justice*. See: <http://www.rti.org/page.cfm?obj=84224F95-5056-B100-0CB398C7CE7E5829>
- Crawford, N (2013). *Williams v. Illinois: Confronting Experts, Science and the Constitution*. 64 Mercer L. Review.
- Lothridge, K., Fox, J., Fynan, E (February 2013). *Blended learning: efficient, timely and cost effective*. Australian Journal of Forensic Sciences.
- Congressional Research Service (December 2012). *DNA Testing in Criminal Justice: Background, Current Law, Grants, and Issues*.
- Strom, K.J., & Hickman, M.J (2013). *Unanalyzed evidence in law-enforcement agencies: A national examination of forensic processing in police departments*. Criminology & Public Policy, Volume 9, Issue 3.
- National Conference of State Legislatures (November 2009). *Building Forensic Technology Capacity*.
- National Institute of Justice (2008). *Increasing Efficiency in Crime Laboratories*.
- National Institute of Justice (March 2006). *Status and Needs of Forensic Science Service Providers: A Report to Congress*.
- American Society Crime Laboratory Directors (May 2004). *180-Day Study Report: Status and Needs United States Crime Laboratories*.

In addition, BJS has responded to numerous requests for CPFFCL data from a variety of entities, including:

Federal government

- The Office of the Inspector General requested CPFFCL data for an audit on the NIJ Convicted Offender Backlog Reduction Program.
- NIJ requested CPFFCL data on national-level backlogs in the areas of DNA casework and convicted offender samples for a 2011 report entitled *Making Sense of DNA Backlogs, 2010—Myths vs. Reality*.
- The National Institute of Standards and Technology (NIST) requested a listing of the publicly funded crime labs to include as a resource on its forensic science website.
- The OJP Office of Communications requested CPFFCL data for an interview with the Canadian Broadcasting Corporation on forensic backlogs.
- NIJ requested CPFFCL data for a briefing to Congress on the processing of sexual assault evidence in crime labs.
- A Congress member requested CPFFCL data on DNA backlogs.
- The OJP Office of the Assistant Attorney General requested CPFFCL data for use on the Forensics and Technology webpage at CrimeSolutions.gov.

State and local government

- The District of Columbia's Department of Forensic Sciences requested CFFFCL data on the volume of controlled substance identification conducted by crime labs to compare trends in drug-related activities in their city to similar jurisdictions.
- The Pennsylvania General Assembly requested CFFFCL data on the number of publicly funded crime labs in their state.
- The Idaho State Police requested CFFFCL data on the number of state labs that charge fees for services for a study on alternative sources of funding for crime labs.
- The New Orleans Police Department Crime Lab requested CFFFCL data on lab accreditation for a presentation at an American Academy of Forensic Science meeting.
- The Pennsylvania Crime Laboratory's Criminal Investigation Assessment Unit requested a listing of the nation's publicly funded forensic crime labs.
- The Institute of Forensic Sciences of Puerto Rico requested CFFFCL data to examine the operations of publicly funded crime labs in the United States.

Private companies

- The Justice Project (an advocacy group) requested CFFFCL data on lab accreditation for a report on forensic science.
- The Institute of Law and Justice requested CFFFCL data for use as a sampling frame as part of a study on crime scene investigations.
- The Urban Institute requested CFFFCL data to create a sampling frame for a survey of DNA labs and cited CFFFCL findings in a forthcoming report titled *Expanding the Use of DNA Evidence to Investigate Crime and Identify Unknown Offenders* to add context to the survey results.
- The RAND Corporation requested CFFFCL data for a study on DNA profiling and databases.
- NMS Labs (an independent forensic facility) requested CFFFCL data as part of its market research on labs that perform toxicology tests and DNA analysis.
- Chemimage Corporation requested CFFFCL data on labs that examined DNA, questioned documents, and latent prints for use in developing products and services for the forensic market.
- The Waters Corporation requested a listing of the agencies in the CFFFCL for a research project on forensic science products and instrumentation.

In addition to demands from government agencies and private organizations the CFFFCL has been requested by persons within the academic and media communities for various uses, including:

- A professor at Indiana University requested CFFFCL data for a research study.
- A student at Capella University requested CFFFCL data for a dissertation on the implications of forensic technology on local municipalities.
- A journalist for Nature magazine requested CFFFCL data on crime lab positions for an article on forensic science careers.

- A news radio station in Utah requested CPEFCL data on the operations and workloads of state crime labs for a report on the Utah Bureau of Forensic Services.

The CPEFCL-14 questionnaire will include 6 sections (Attachment D):

- 1) Organization (Type of laboratory and capabilities): A1-A10
- 2) Budget (Amount and funding sources): B1-B2
- 3) Staff (Number of employees and salaries): C1-C4
- 4) Workload (Requests for services): D1-D17
- 5) Outsourcing (Use of other labs): E1-E3
- 6) Quality Assurances (Accreditation, proficiency testing, and research): F1-F6

Topic: Organization (A1-A10)

This section asks respondents to indicate the level of government that operates their facility, the number of labs within their system, and the types of agencies that submitted forensic requests to them during 2014. It provides the general information needed to classify the various types of crime labs and to determine the composition of the combined budgets, personnel, and workloads reported by those serving federal, state, and local jurisdictions. Knowing the types of agencies that submit requests to each lab will allow BJS to document their cross-jurisdictional and interagency operations. For instance, the FBI Laboratory services federal, state, and local agencies, while most local labs only receive from requests from agencies within their jurisdiction.

In addition, BJS will ask labs to report the forensic functions they performed in 2014, including:

- 1) Controlled substance—the identification of drugs and other substances whose possession or use, in either legal or illicit dosages, is restricted by the government.
- 2) Toxicology—the analysis of biological samples for the presence of drugs and other potentially toxic materials. Sub-categories include antemortem, postmortem, and blood alcohol content (BAC).
- 3) Trace evidence—any analytical procedure using microscopy or chemical and instrumental techniques. Sub-categories include the examination of gunshot residue, explosives, hair, fibers, and fire debris.
- 4) Impressions—the identification, documentation, collection, and interpretation of two- and three-dimensional impressions and imprints found at crime scenes. Sub-categories include footwear and tire tread.
- 5) Firearms/toolmarks—the examination and comparison of evidence resulting from the discharge or use of firearms, and the comparison of marks made by various tools.
- 6) Digital/multimedia evidence—the investigation of various types of analog or multimedia evidence, such as the recovery, extraction, and analysis of computer files, film, tape, and magnetic and optical media.
- 7) Latent prints—the development or comparison of finger or palm print impressions.

- 8) Questioned documents—the examination of printed, typed, or written material for the purpose of identifying the source or determining alterations, or other means of gaining information about the item or the circumstances surrounding its production.
- 9) Forensic biology—includes the discipline areas of biology screening and DNA analysis. Biology screening is the examination of evidence for the presence of stains from blood, saliva and other physiological fluids. DNA analysis is the process used to develop a DNA profile from (a) arrestees or convicted offenders as required by federal and state laws or (b) casework samples collected from crime scenes, victims, or suspects.
- 10) Crime scene—the identification, documentation, collection, and interpretation of physical evidence at a location external to a laboratory facility and where a suspected crime has occurred.

This data collection will produce national-level statistics about the range of functions currently performed by crime labs and to examine multi-year trends. The sub-categories included within the major forensic science disciplines will provide a more complete overview of the various services labs provide to criminal justice system. Respondents are also offered the flexibility to report specialized disciplines not listed above. Without the CPFCL data, BJS will be unable to provide the field with information on the number of federal, state, and local crime labs that are capable of providing each type of forensic service.

The CPFCL-14 will ask labs whether they possess a laboratory information management systems (LIMS) to manage tasks and track pieces of forensic evidence received from criminal investigations. About 8 in 10 labs had a LIMS in 2009. About 1 in 3 labs with a LIMS had one capable of tracking the progress of criminal cases through the justice system, which allowed the lab to prioritize its workload based on the needs of its customers.

The CPFCL-14 will ask respondents about the types of operational databases they utilized during the year, including:

- The FBI's Combined DNA Index System (CODIS): a software system that allows crime labs to electronically compare biological evidence collected from criminal investigations to DNA profiles stored in a database for the purpose of linking serial crimes together and identifying suspects.
- The FBI's Integrated Automated Fingerprint Identification System (IAFIS): a national database that provides automated fingerprint search capabilities.
- The Bureau of Alcohol, Tobacco, Firearms and Explosives' National Integrated Ballistic Information Network (NIBIN): a database that allows examiners to upload images from casings and bullets recovered during an investigation and compare them to evidence from other crimes.

Labs will also be asked about the types of technologies and procedures they used to manage their workloads from a pre-populated list. Among the labs that handled forensic biology requests in 2009, 61% used robotic instruments and 17% used expert system software. These advanced technologies reduce the time to process samples by minimizing human intervention. The analysis of synthetic drugs (e.g., Spice, K2, and bath salts) was added to this section for the CPFCL-14

to provide the field with much-needed information on an emerging issue facing the criminal justice system.

Topic: Budget (B1-B2)

The CPFFCL-14 will include questions regarding the amount of funding labs received for operations in 2014. This information allows legislators and crime lab administrators to determine the national average for budgets received by federal, state, and local crime labs. Labs will also be asked whether they received funding from charging fees for forensic services or from grants. To supplement their operating budget, 31% of publicly funded crime labs received fees for services during 2009. State (41%) and county (35%) labs were more likely than municipal (16%) and federal (3%) labs to collect fees. About 7 in 10 (69%) publicly funded crime labs received funding from grants that year.

Topic: Staff (C1-C4)

The proposed collection will request labs to report the number of full-time and part-time employees in their facility by type of position. Data collected through the CPFFCL indicate that most crime lab employees are analysts (i.e., examiners) who were responsible for preparing and analyzing evidence. In addition, labs will be asked to report the number of analysts who possessed external certification. The employment data are needed to determine the composition of the budgets and workloads in crime labs by agency size (as defined by number of employees). These data will be used to track trends in the number and types of personnel in federal, state, and local crime labs nationwide. The CPFFCL-14 will also ask labs about the salary ranges of their crime lab positions. This information will allow policy makers and crime lab administrators to estimate the costs associated with increasing their work force to reduce forensic backlogs.

Topic: Workload (D1-D17)

Crime labs receive millions of pieces of evidence from criminal cases each year. A single case may result in multiple requests for forensic services. For example, one case may include a request for toxicology and a request for latent print examination. The CPFFCL-14 will ask labs to provide the total number of requests received and completed within their facility for each forensic service they performed during 2014. Counting workload in terms of individual requests—instead of the overall number of criminal cases—provides a more accurate reflection of the demands within crime labs to process and report on the evidence.

BJS will also ask respondents to report the overall number of pending requests and the number of backlogged requests at yearend 2014. The CPFFCL defines a pending request as backlogged if it was in the lab but had not yet been examined and reported to the submitting agency for 30 days or longer. BJS has conferred with lab directors and other subject matter experts to ensure the definitions and rules for counting requests conform to forensic laboratory standards. The data collection instrument will include detailed definitions and instructions for reporting data on forensic requests received, completed, and backlogged.

The discipline-specific request data will allow BJS to examine changes in the number and types of forensic requests received by labs over time. BJS will also examine changes in the capacity of crime labs to turn around their requests within a 30-day period, document the evidence areas that account for the largest portion of the overall backlog, and identify where additional resources are needed to address increases in the volume of work.

In 2009, forensic biology (i.e., the screening or DNA analysis of biological evidence) accounted for about 900,000 of the 1.2 million backlogged requests nationwide. As part of the federal legislation requiring the collection of DNA from persons convicted of a federal crime or arrested under federal authority, a majority of these backlogged requests were reported by the FBI's Laboratory. However, in 2010, the FBI publicly announced that it had significantly reduced its backlog of offender DNA samples. A new CPFFCL data collection is needed to confirm this important trend.

Topic: Outsourcing (E1-E3)

The CPFFCL-14 will collect data on the overall number and types of forensic requests that labs outsourced during 2014. To meet the demands for their services, some publicly funded crime labs rely on private labs or other public facilities (e.g., evidence originally sent to a state lab outsourced to a federal lab for analysis). Between 2005 and 2009, the percentage of public labs that reported outsourcing one or more types of forensic services declined from 51% in 2005 to 28% to 2009. This may be an indication of labs becoming more self-sufficient and less reliant on outside service providers to handle their work as a result of funding to provide additional resources. A new iteration of the CPFFCL is needed to see if this is a continuing trend.

The CPFFCL-14 will ask labs if they received requests from other labs during the year. Some publicly funded crime labs accept requests for forensic services from other labs in addition to those submitted directly from law enforcement or other criminal justice agencies. In 2009, federal labs (35%) were more likely than state (12%), county (17%), and municipal (14%) labs to receive requests that were sent out for analysis by another lab. Receiving requests from other labs can place additional burdens on labs and potentially impact their ability to complete their own workload. The collection of this information is necessary to understanding backlogs.

Topic: Quality Assurances (F1-F6)

The CPFFCL-14 will provide much-needed data on the practices and policies implemented by crime labs to assure the quality of their work, including accreditations, written standards, codes of ethics, proficiency testing, examiner certifications, and research. Accreditation is where an independent third party uses established standards to assess and verify the competence of a lab. Most labs receive accreditation either through ASCLD or Forensic Quality Services-International. However, the 2009 NAS report recommended mandatory accreditation for all forensic science service providers. The NAS report also called for the certification of all forensic science practitioners. The CPFFCL-14 will allow the forensic science community to track this objective by capturing information on the number of crime labs that are accredited and the number of crime lab analysts who possess an external certification.

Publicly funded crime labs perform proficiency testing to ensure the accuracy and reliability of their forensic examinations, including:

- Declared tests: an examiner knew the sample he or she was analyzing was a test sample.
- Random case reanalysis: an examiner's work was randomly selected for reanalysis by another examiner.
- Blind tests: the examiner was not aware of being tested.

Between 2002 and 2009, the percentage of labs that performed random case reanalysis has declined from 54% to 36%. The CPFFCL-14 will allow BJS to determine whether this is a continuing trend. To better understand how labs administer proficiency tests and to address an information need identified by the White House Subcommittee on Forensic Science, BJS will also ask labs to report if each type of test is conducted internally or externally (i.e., outside of the lab).

The CPFFCL-14 will also ask labs whether they had resources dedicated to forensic science research (i.e., experimentation aimed at the discovery and interpretation of facts and the revision of accepted methods). The CPFFCL-09 found that a larger percentage of federal labs than state and local labs had resources devoted to research—29% compared to about 5%.

3. Use of Information Technology

The CPFFCL-14 will primarily be conducted as an online data collection, using a web-based system that is managed and updated by the Urban Institute. Although alternative methods will be available for those unable or unwilling to complete the questionnaire online, BJS and Urban will encourage web-based responses. Of the 397 labs that responded to the CPFFCL-09, 94% (375) submitted data through the web system. The vast majority of respondents found this system easy to use. Only two percent of the contacts with respondents were requests for technical assistance with the web system.

The web interface is the initial page that a respondent sees when accessing the CPFFCL website. It will mirror what was deployed by the Urban Institute in the CPFFCL-09 in order to minimize new learning by respondents about how to navigate the website and thereby decrease the reporting burden and potential non-response. The web-based system will be tested with the five most common browsers (i.e., Explorer, Firefox, Chrome, Safari and Opera) and will insure that third-party software beyond the capabilities of the user's web browser will not be required.

Several additional features designed to minimize burden and non-response and increase data security will also be incorporated into the web-based collection system. Access to the website behind the initial interface will be controlled by lab-specific passwords in order to maintain respondent confidentiality and data security. The OMB control number and burden statement will be provided on the login screen (Attachment E). After their first login, respondents will be taken to a webpage where they will verify their eligibility for the CPFFCL-14 (Attachment F). The web-based system will also provide respondents with access to: 1) their existing questionnaire forms and links to edit, view, or print responses to date; 2) links to help pages and glossary items; and 3) the current reporting status for their lab. This will allow respondents to be able to easily update, correct, and complete previous incomplete items.

Respondents will be able to navigate across the six sections of the questionnaire and to items within each section (Attachment G). As the respondent navigates from item to item a record will be maintained by the Urban Institute's secure server. As a result, respondents can complete sections of the CPFFCL in the order that is most convenient for them. If additional information is required, respondents can return to the webpage on another day to complete missing items. This functionality will help to ensure the goal of 100% item response rate is achieved.

Respondents will be able to log in and make response revisions as many times as they wish during the data collection period up to the point when they decide that the form is complete. To submit, the respondent will navigate to a *complete and submit* page. The system will be equipped with a data validation script that will alert respondents to answers that are invalid or improperly entered (i.e., letters where numbers were requested). However, designation of the questionnaire as complete and submitting it will not require changing items that failed the validation check. Rather, respondents will be advised that the Urban Institute will contact them to follow up on flagged items.

Additional features of the web-based system include item-specific help text bubbles (i.e., icons), which, when clicked, will produce further explanation about the purpose of the question and the response options; a glossary of key terms; and help flags that respondents can use to alert the Urban Institute's help desk that they require assistance (Attachment H).

In the event that a respondent cannot or prefers not to complete the questionnaire online, three alternatives will be made available: mailing a paper copy of the completed questionnaire, faxing a paper copy, or emailing a scanned copy to the CPFFCL email address (cfcl@urban.org). In all cases, the help desk and alternative modes of response will be offered to labs in the correspondence from Urban.

In order to effectively monitor and manage the administration of the CPFFCL-14, Urban will also use an updated version of the management, tracking and reporting system developed for the CPFFCL-09. The foundation of this system will be a Microsoft SQL Server database that will include tables containing respondent contact information and report form status (i.e., progress, follow-up necessity, validation, and submission), records of why and how paper forms were received, and a log of all contacts between Urban and the respondents. On this foundation, we will build a user interface that is navigable using a web browser and no additional software will be required.

Important features of this management system include multiple user access, audit trails, and report generation. All CPFFCL project members from Urban and BJS will have user accounts on this web-based system. Urban will be able to create and modify response records of all respondents and maintain up-to-date contact records throughout the project. BJS staff will be provided with read-only access to respondent forms, response status reports, and other performance tracking information.

In order to track item changes from returned questionnaires, the audit trail feature will permit the retracing of each change from initial record creation through validation and submission. Dates, times, and user information will be recorded for each respondent change. When survey records

are updated by a staff member at Urban (e.g., during follow-up clarifications and validations), he or she will be required to provide a reason for the change.

The system will include a menu of reports that will display summary information related to the data collection. These reports will be available to Urban and BJS for performance monitoring purposes. Examples of the kinds of reports that will be available include: 1) response status (not started, in-progress, requires follow-up, validated); 2) response status by completion mode (e.g., web, mail, email, or fax); 3) response status by survey section and individual item; 4) response status by lab and designated lab respondent; 5) item-level missing data, aggregate and by individual respondent; and 6) Urban's contacts with respondents by mode (e.g., email, phone, fax, or mail) or reason (e.g., technical assistance, data validation, or non-response follow-up).

The data management system will allow BJS and Urban to monitor the status of survey completion for each respondent in real-time and follow up with respondents who may need assistance. The team will also be able to develop a database of responses for preliminary data downloads and cleaning to look for inconsistencies, errors, and other anomalies in the entries.

The integrity of data is critical given its potentially confidential nature. Urban plans to utilize a signed SSL encryption certificate to protect privacy and prevent unauthorized third party access to the CPFFCL system. Both the web server and the database server are located in a restricted card-access-only room at Urban. Only appropriate project personnel will have access to this area. The entire database will be encrypted and backups of any confidential information will be secured onsite. Following completion of the project and database archiving (absent personal identifiers), all CPFFCL data will be destroyed.

4. Efforts to Identify Duplication

The proposed CPFFCL-14 is the only systematic data collection on the nation's federal, state, and local publicly funded forensic crime labs. BJS consulted with NIJ's OIFS, ASCLD, and other forensic science agencies to confirm there is no duplication of effort based on the nature and scope of the CPFFCL. There is also no identified duplication with any other OJP data collections. A thorough review of the internet and relevant literature also found no duplication. ASCLD periodically conducts surveys of crime labs; however, these data collections are limited to its membership and the questions focus on laboratory management and ASCLD membership issues, such as:

- How inclusive should ASCLD be with regards to membership?
- In a laboratory system with multiple labs in the organizations, should there only be one delegate from the entire system, or one delegate from each lab within the system?
- What should our criteria be for awarding Emeritus Membership?⁹

5. Minimize Burden

BJS and Urban have worked to minimize the complexity of questions from previous CPFFCL instruments and have included extensive help text (i.e., instructions), counting rules, and a glossary of definitions that conform to current standards and practices in crime labs. In an effort

⁹ <http://www.asclد.org/wp-content/uploads/2014/04/2014-ASCLD-Membership-Survey-Results.pdf>

to reduce respondent burden, an automated version of the data collection instrument will allow for submission of data via an online interface. Respondents will also be able to complete the data collection using a paper-based version of the questionnaire and a glossary of terms identical to those provided in the web version. Urban will establish a help desk to assist all respondents by phone or email. It is expected that most respondents will access the data collection instrument through a web-based interface. Respondents that choose to use the online interface can have their answers reviewed by help desk staff in real time thereby providing timely and accurate assistance. This system will automatically save respondent's entries and will trigger skip patterns based on responses. This feature streamlines the data collection instrument and ensures that the questions presented to each respondent are relevant to the tasks completed in that facility.

During the spring of 2014, Urban administered a pretest version of the CPFFCL-14 questionnaire to a small sample of labs varying in size and government affiliation to test revisions to items in the CPFFCL-09 and new items developed for the upcoming census. To improve the clarity, BJS and Urban revised the instructions for the questions that generated frequent help desk calls during the CPFFCL-09.

Urban conducted follow-up cognitive interviews with the pretest agencies about their experiences in completing the questionnaire. The results of the pretests are provided in Attachment I. Feedback from the pretest respondents as well as subject matter experts at NIJ and ASCLD have resulted in several improvements to the clarity of the questions and a reduction in the burden to provide responses. BJS also modified several items from the draft questionnaire following the pretest. For instance, computer analysis and mobile device analysis were broken out into individual subcategories of digital evidence because mobile device analysis is usually performed in the initial stages of a criminal investigation while computer analysis is conducted later on. In addition, the subcategory "DNA casework" was changed to "forensic biology casework" in the workload section to better define the types of requests that should be reported in this new data item.

6. Consequences of Less Frequent Collection

The CPFFCL statistics are not attainable from any other source. Data from the last CPFFCL are now five years old. Since the CPFFCL-09, resources have been allocated to decrease the forensic evidence backlog, increase laboratory efficiency, and support the hiring of staff and the construction of new labs. New data from the CPFFCL are vital to assessing the national impact of these resources and to define the needs that still exist. These data have also been used to inform policy and appropriation decisions at the local, state, and federal level. Failure to update the CPFFCL-09 data will result in uninformed decisions. Insight into the operations and workloads of crime labs is needed as the justice system faces a growing need for the analysis of physical evidence to disrupt criminal activity and convict criminal offenders.

The CPFFCL has helped define important scholarly research questions in both the physical and social sciences. Physical scientists have used these data to identify forensic analyses that would benefit most from new technologies designed to optimize or replace current business-as-usual techniques. Social scientists have used these data to identify forensic science disciplines with

maximum impact on the criminal justice system and designed research to measure this impact. Failure to update the CPFFCL-09 will result in an uninformed academic community and research less relevant to the current state of forensic science.

7. Special Circumstances

No special circumstances have been identified for this project.

8. Federal Register Publication and Outside Consultation

This research under this clearance is consistent with the guidelines in 5 CFR 1320.8(d). The 60-day notice for public commentary was published in the Federal Register, Vol. 79, Number 179, pages 55503-55504 on September 16, 2014. The 30-day notice for public commentary was published in the Federal Register, Volume XX, Number XX, page XXXXX, on November XX, 2014. No comments were received in response to the information provided.

Throughout the history of the CPFFCL, BJS has consulted with a variety of key forensic science organizations, including ASCLD and NIJ, to develop the data collection procedures and ensure the accuracy and reliability of the statistics. BJS has also met with the interagency working groups from the White House Subcommittee on Forensic Science: Standards, Practices, and Protocols; Education, Ethics, and Terminology; Accreditation and Certification; Outreach and Communication; and Research, Development, Testing, and Evaluation.

In 2009, BJS hosted a workgroup meeting for the CPFFCL. Participants included representatives from professional forensic science organizations and managers from federal, state, and local crime labs. Representatives from NIJ and the FBI were also in attendance. Participants discussed a variety of topics, including the content of the questionnaire, data availability, clarity of instructions, methods to maximize response, and ways to minimize respondent burden.

In 2010, BJS met with DEA staff members who oversee the National Forensic Laboratory Information System (NFLIS) to discuss the key features and objectives of both data collections. The NFLIS program staff also explained their uses of the CPFFCL and how it provides helpful statistical information on the operations of labs that conduct controlled substance analysis. The meeting provided BJS with a better understanding of how the CPFFCL can help to inform drug enforcement policies and initiatives.

In an effort to expand the scope of the CPFFCL to capture more information on digital evidence, BJS and the Urban Institute have spoken with several subject matter experts in this field, including:

- Special Agent Rick Voss in the FBI Digital Evidence Section who is the former director of the Regional Computer Forensics Laboratories in Chicago.
- Carrie Whitcomb, the director of the National Center for Forensic Science at Central Florida University.

- Martin Novak who oversees the NIJ grant funding programs that support the digital evidence field.
- Richard Vorder Bruegge, a Senior Photographic Technologist at the FBI, who oversees science and technology developments in the imaging sciences.
- Special Agent Timothy Allen in the U.S. DOJ's Cyber Investigations Office who is the membership chair for the Scientific Working Group on Digital Evidence.

In the spring of 2014, the CFFFCL-14 questionnaire was administered to a small sample of state, local, and federal crime labs and cognitive interviews were conducted with the lab directors. The respondents included:

Jay Henry
 Director
 Utah Bureau of Forensic Services
 ASCLD President

Eric Lawrence
 Director
 Indiana State Police Crime Laboratory

Jeff Ban
 Central Laboratory Director
 Virginia Department of Forensics

Irvin B. Litofsky
 Director
 Baltimore County Police Crime Laboratory

Linda Netzel
 Director
 Kansas City Missouri Police Crime Laboratory

Leah King
 Acting Director
 Montgomery County Crime Laboratory

Bruce Houlihan
 Director
 Orange County Crime Laboratory

Kirsten Singer
 Director
 Forensic Document Laboratory
 Department of Veterans Affairs, Office of the Inspector General

9. Paying Respondents

Payment or gifts to respondents is not provided in return for participation in this collection. Respondents will participate on a voluntary basis.

10. Assurances of Confidentiality

BJS and the Urban will collect these data with in accordance with Title 42 USC, Section 3735 and with the approval of an institutional review board. Labs will be informed on the cover page of the questionnaire that their participation is voluntary. The information gathered in this data collection will be used only for statistical or research purposes and will be gathered in a manner that precludes their use for law enforcement or any purpose relating to a particular individual other than statistical or research purposes. The information collected about the operations of these publicly funded crime labs is in the public domain and will be made available for public use. The names, phone numbers, and email addresses of those who completed the questionnaire will be removed from the data files prior to deposition in the National Archive of Criminal Justice Data.

11. Justification for Sensitive Questions

There are no questions of a sensitive nature in the proposed CPFFCL-14.

12. Estimate Respondent Burden

In 2015, the CPFFCL-14 questionnaire will be sent to the approximately 410 publicly funded forensic crime labs identified from the CPFFCL-09 as well as about 100 public labs that solely analyze digital evidence and were added to the scope of the data collection. These labs will be asked to respond to the questionnaire only once. The time burden reported by the eight crime labs that completed the pretest ranged from 15 minutes to nearly 6 hours, and the average time to complete the survey per agency was 2.9 hours. Based on the pretest, the estimated overall burden for the CPFFCL-14 is 1,479 hours.

The workload section took the pretest sites the longest amount of time to complete, averaging about 2 hours, while the average completion times for the organization, budget, staff, outsourcing, and quality assurance sections ranged from 3 to 24 minutes. The workload section asked labs to report the number of requests received and completed for each forensic function they performed in 2014. BJS also asked respondents to report the overall number of pending requests and the number of backlogged requests at both yearend 2013 and 2014. The burden hours were primarily driven by the fact that these agencies provided an average of eight different forensic functions during 2014. The completion time for the workload section is expected to be shorter for labs in the CPFFCL-14 that provide fewer forensic functions. For instance, one pretest lab that only provided one forensic function in 2014 reported that it took them 10 minutes to complete the workload section.

Following the pretest, BJS reduced the amount of information being collected in the workload

section, including the elimination of the questions asking for the number of employees it took to complete the requests during 2014 and the number of pending and backlogged requests at yearend 2013. The workload section was also refined to alleviate some of the burden imposed by confusion with a new forensic biology casework category added to the questionnaire. Since the workload of most pretest sites included forensic biology, we expect the burden of this section will be reduced now that the instructions are clearer and the subcategories reflect what is typically captured in a laboratory information management system. This revision will allow many respondents to avoid running special queries to calculate their forensic biology request totals.

13. Estimate of Respondent’s Cost Burden

BJs anticipates that the full-time equivalent of employee with pay approximately equivalent to the GS-12 / 01 level (\$36 per hour) will complete the questionnaire for each crime lab. The base cost burden is estimated at approximately \$53,000 (\$36 x 1,479 total burden hours). Fringe benefit costs are estimated to average 46% of the base cost at \$24,000. In addition, indirect costs are estimated to average 37% of the base and fringe benefit costs at \$28,000. The overall total respondent cost burden is approximately \$105,000. No additional costs to respondents are anticipated beyond the employee time expended during completion of the questionnaire. This expectation was reinforced through the pretest where none of the responding agencies reported additional costs incurred by participating.

14. Costs to Federal Government

The total cost to the federal government for the CPFCCCL-14 data collection is \$534,421, which will be borne entirely by BJS. This work consists of planning, developing the questionnaire, preparation of materials, collecting the data, generating a research database, and producing statistical reports. The Urban Institute will be the data collection agent for BJS. Their total costs for the project are \$397,421. A BJS GS-14 level statistician will be primarily responsible for overseeing Urban’s work during this 24-month project. A breakdown of the total budget is shown below:

BJs costs	
Estimated staff salaries	
GS-14 Statistician (25%) x 2 years	\$54,000
GS-12 Statistician (15%) x 2 years	\$22,000
GS-13 Editor (10%)	\$9,000
Other editorial staff	\$3,000
BJs management	\$5,000
Subtotal salaries	\$93,000
Fringe benefits (28% of salaries)	\$26,000
Subtotal: Salary and fringe	\$119,000
Other administrative costs of salary and fringe (15%)	\$18,000
Subtotal: BJs costs	\$137,000

Data collection agent (Urban Institute)	\$397,421
Total estimated costs	\$534,421

15. Reason for Change in Burden

Despite an increase in the number of respondents due to the inclusion of standalone digital evidence labs in the CPFFCL-14, the estimated number of burden hours per respondent has decreased from 4.1 in 2009 to 2.9 in 2014 as indicated by the pretest results. The estimated overall burden hours also decreased from 1,660 to 1,479. This change is partially due to a reduction in the level of detailed information being requested in certain sections of the questionnaire, including the elimination of questions asking for an itemized breakdown of budget expenditures and the number of requests outsourced for each individual forensic service.

16. Project Schedule

The data collection and processing activities for the CPFFCL-14 are expected to occur between February and September 2015. The data will also be verified and cleaned throughout the collection period. The data analysis, including an assessment of nonresponse biases, will begin when the response rate reaches 50 percent. Once the response rate reaches 80 percent, work will begin on a full summary report entitled “Census of Publicly Funded Forensic Crime Laboratories, 2014.” The final report is expected to be released on the BJS website by December of 2015.

The dataset and supporting documentation will be made available for download without charge at the National Archive of Criminal Justice Data and Data.gov. It is expected the data will be available to the public for download by March of 2016. Access to these data permits analysts to identify the specific responses of individual crime labs and to conduct statistical analyses. These data will have agency and jurisdiction specific identifiers that will permit the public use of these data in combination with other data files with similar agency or location identifiers.

17. Display of Expiration Date

The expiration data will be shown on the data collection instrument.

18. Exception to the Certificate Statement

BJS is not requesting an exception to the certification of this information collection.