

## **B. Statistical Methods**

### **1. Universe and Respondent Selection**

This data collection will be a census of all publicly funded forensic crime laboratories. No sampling is involved with this collection. A publicly funded forensic crime laboratory is defined as: 1) a laboratory either funded solely by the government or whose parent organization is a government agency; and 2) one that employs one or more full time scientists whose principal function is the examination of physical evidence for law enforcement agencies that provides reports and testimony to courts of law with respect to such evidence. Any laboratory that meets this definition will be included in the universe of respondents; this includes laboratories that may stand alone, are part of a multi-lab state system, and/or have administrative operations within law enforcement agencies. A public crime lab operated by a law enforcement agency that serves a local jurisdiction (e.g., city, county, municipal) is included in the BJS Census, as long as it employs at least one full-time scientist whose primary function is the examination of physical evidence.

While some laboratories operate in law enforcement agencies, not all forensic functions performed within these agencies are included in this universe. Police forensic identification units, while sometimes responsible for crime scene and fingerprint development and comparison, do not employ full time scientists for the purpose of examining physical evidence, and therefore do not meet the scope of the study and will not be included in this Census.

### **2. Procedures for Collecting Information**

Respondents will receive an introductory letter from BJS, individualized login information for the online data collection instrument, and instructions for completing the questionnaire. The introductory letter will contain information about the importance of this data collection effort to the relevant forensic science community and contain examples of how data from previous efforts have been used. Respondents will be informed that the CPPFCL data are being collected for statistical purposes (under Title 42 USC 3735 and 3789g) and that participation is voluntary. This information will be repeated on page one of the paper and web questionnaires. (An example of the introductory letter from an earlier CPPFCL collection is attached.)

The content of the web-based and paper surveys are the same, and there will only be minor formatting differences in the two as the paper version will present all of the information at the same time allowing the respondent to respond to questions out of order. The web-based version will also allow respondents to move forward and backwards through the questions, but the formatting will automatically direct the respondent through the questionnaire from start to finish. The OMB Burden Statement will also appear on the first page of the 2009 CPPFCL questionnaire. The formatting of the web-based version is the final step for the contractor before administering the survey, so the web-based screenshots are not yet available.

The CPPFCL began providing an electronic data submission in 2002. In 2005 a majority of the respondents, 56 percent, used the electronic submission option. With the 2009 data collection, the usability of the web based modality has been significantly improved to include the ability to

stop and save work and imbed help text into the questions themselves for easy reference. These improvements have addressed the concerns voiced from those respondents in 2005 that did not use the web collection. We expect that a significant majority of the respondents will use the electronic collection, limiting any mode effect that could occur. That is not to say there is no nonrandom error, for instance coverage error in those few labs with secured computer systems that cannot access the web instrument; however, the current methodological literature leads us to believe there should be no significant mode effects between the two modalities.

Since the Census of Publicly Funded Forensic Crime Labs (CPFFCL) will employ two modes of data collection; a web-based instrument and pencil and paper questionnaire, BJS will explore the possibility of mode effects in the results. Following the completion of the 2009 CPFFCL, the data collection agent, the Urban Institute, will provide BJS with a report outlining the respondents' use of the web versus paper and pencil modality, when labs responded, follow-up with non-respondents, and which questions caused the most difficulty for respondents. BJS will then examine any bias or error related mode effects that may have occurred.

Outreach to non-respondents will begin 2-3 weeks after the introductory letter is sent. The Urban Institute staff will follow up with non-respondents by sending a hard copy of the questionnaire to encourage completion of the census, reminding non-respondents that they could complete the questionnaire online or by paper and pencil. Outreach via email and phone will be an ongoing process in order to maximize response rate for this data collection effort, with a particular focus on electronic submission of the data.

### 3. Methods to Maximize Response

BJS has successfully achieved high rates of response on the 2002 and 2005 CPFFCL data collection efforts, 87% and 90% respectively. This demonstrates a high level of compliance within the relevant respondent community.

This version of the data collection instrument was conceived and designed with the input from forensic experts and practitioners from all parts of the country and all level of government (local, state and federal). UI and BJS has sought the counsel of the forensic community to ensure that the 2009 CPFFCL reflects the current issues of interest to the relevant community, avoids overly burdensome or irrelevant questions and maintains the core structure of the 2002 and 2005 instruments. Maintaining a core group of questions already familiar to the community is vital to maximizing response rate.

Before and during the census distribution announcements will be posted in the American Society of Crime Laboratory Directors (ASCLD) Newsletter. These announcements will alert respondents to expect the survey, as well as provide examples of some of the more burdensome items to help respondents prepare the necessary information for efficiently completing the survey. This publication is widely received by forensic laboratory directors nationwide.

BJS and the Urban Institute believe that our efforts to minimize the respondent burden along with the increased adoption of electronic laboratory information management systems by the respondent population will work in tandem to maximize response. Planned outreach to non-

respondents will include telephone and email contact.

#### 4. Testing of Procedures

As noted above, BJS has conducted the CPFFCL twice before with high rate of response 87% and 90% respectively. The 2009 Census instrument was piloted with 9 jurisdictions. Municipal, state and federal publicly funded crime laboratories were included in the pretest. Feedback from the pilot sites has been incorporated into the data collection instrument and their time-to-complete data used to generate a new respondent time burden.

#### 5. Consultation Information

BJS contacts include:

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### **C. Attachments**

1. Copy of the 2009 CPFFCL pilot survey form
2. Copy of the 2009 CPFFCL pilot Help Text
3. Copy of the 2009 CPFFCL pilot Glossary

4. Copy of the regulatory authority (42 U.S.C. 3732)
5. Letter of Support from the American Society of Crime Laboratory Directors
6. Letter of Support from the American Society of Crime Laboratory Directors / Laboratory Accreditation Board
7. Letter of Support from the National Institute of Justice Office of Investigative and Forensic Sciences.
8. M.R. Durose. 2008. Census of Publicly Funded Forensic Crime Laboratories, 2005. U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics.
9. J.L. Peterson. M.J. Hickman. 2005. Census of Publicly Funded Forensic Crime Laboratories, 2002. U.S. Department of Justice Programs, Bureau of Justice Statistics.
10. Copy of the 2005 CFPFCL introductory letter.
11. CCFPCL questionnaire: 2005-09 side-by-side comparison and summary of changes.
12. 2009 CFPFCL Pretest Results.

#### **D. Works Cited**

1. National Research Council (NRC) of the National Academy of Sciences (NAS). Committee on Identifying the Needs of the Forensic Sciences Community. *Strengthening Forensic Science in the United States: A Path Forward (2009) (p. 36,39,55,193,217)*  
[http://www.nap.edu/openbook.php?record\\_id=12589&page=36](http://www.nap.edu/openbook.php?record_id=12589&page=36)  
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4. President's DNA Initiative: Advancing Criminal Justice Through DNA Technology  
<http://www.dna.gov/statistics/laboratories/>  
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5. CRS Report for Congress "DNA Testing for Law Enforcement: Legislative Issues for Congress" Order Code RL32247.
6. FY '06 Commerce, Justice, Science Senate Appropriations Committee Report. 109-88,

June 23<sup>rd</sup> 2005, pp. 45-46.