

**GOVERNMENT OF THE DISTRICT OF COLUMBIA
Department of Forensic Sciences**



**FY2014-15 Department of Forensic Sciences
Council Performance Oversight Hearing**

Testimony of
Max M. Houck, Ph.D.
Director, Department of Forensic Sciences

Before

Committee on the Judiciary
Kenyan McDuffie, Chairperson
Council of the District of Columbia

March 12, 2015

Room 123
John A. Wilson Building
1350 Pennsylvania Avenue, NW
Washington, DC 20004



Good morning Chairman McDuffie and staff, I am Dr. Max Houck the Director of the Department of Forensic Sciences. I am pleased to testify before you today on the Department of Forensic Sciences' FY 2014-15 Performance. The full text of my statement will be available on the Department's website at DFS.dc.gov.

The mission of the Department of Forensic Sciences (DFS) is to produce high quality, timely, accurate, and reliable forensic science with the use of the best available technology and practices, unbiased science, and transparency with the overall goal of enhancing public health and safety.

The Department of Forensic Sciences began as a new agency on October 1, 2012, with employees, resources, and finances transitioned from both the Metropolitan Police Department (MPD) and the DC Department of Health (DOH). Since FY2013, the Department has grown by 67% in budget and increased its FTE count by 110%. Our major activities have centered on building the Department, hiring staff, getting the laboratories accredited, and implementing internal programs so that we can support our stakeholders. We have established the Department's Quality Assurance program, Training and Development program, the Operations program, and hired key management, including a Deputy Director, General Counsel, and Chief Operating Officer to address the more comprehensive mission and goals of the new agency. We recently issued our second Annual Report on the activities of the Department, which I will summarize below.

The Department, housed in the Consolidated Forensic Laboratory, a Platinum LEED certified building, is composed of three main science Divisions: Forensic Science Laboratory, Public Health Laboratory, and Crime Scene Sciences; supported by four agency-wide services: Quality Assurance, Training and Development, Information Technology, and Operations. The Department also supports the Science Advisory Board and the Stakeholder Council.

The following is a summary of the three main science Divisions and their achievements to date:

The **Forensic Science Laboratory (FSL) Division** provides independent scientific examinations and analysis to stakeholders submitting physical evidence in criminal cases, providing these services to District governmental agencies and neighboring Federal agencies. The FSL provides examinations for biological samples (DNA and fingerprinting), physical samples (firearms), and digital evidence. We hope to soon be

able to analyze chemical and materials samples (paint, glass, fibers). The FSL works with law enforcement, public attorneys—both prosecution and defense—as well as the courts and allied criminal justice agencies to serve and improve scientific information for public safety.

Within eight months of the Department's opening, the FSL achieved international accreditation (to the ISO 17025 standard) for the Forensic Biology Unit, Latent Fingerprint Unit, and the Firearms Examination Unit. Since then, FSL has focused on improving services to stakeholders. Submissions to the Forensic Biology Unit jumped from 330 in 2012 to 879 in 2014, an increase of 166%. An Automated workflow to process all known DNA samples was developed. Turn-Around Time for the FSL has held steady, for a period of time it was significantly reduced and allowed the Division to work on backlog cases. The Latent Fingerprint Unit increased productivity and reduced turnaround time significantly, from a high of about 175 days to less than 80 in one year. The Firearms Examination Unit has also reduced turnaround time to less than half from the start of 2014. Each unit of the FSL met the targets set for productivity and the FSL is now operating at a better-than-average rate for reports (see DFS Annual Report FY2014 on our Open Government site). A significant development for the Department included launch of the new Digital Evidence Unit in late December, where an assessment of service needs revealed that mobile device forensics (cell phones, smart phones, tablets) was a primary need.

The **Public Health Laboratory (PHL) Division** provides testing of biological and chemical samples that relate to public health and safety, such as infectious diseases, hazardous chemicals, or biological contamination, up to and including biological or chemical terrorist attacks. The PHL routinely liaises with the Centers for Disease Control and Prevention (CDC) and the Association of Public Health Laboratories (APHL), representing the national capital region as the laboratory of record.

In the Fall of 2013, a year after PHL came under the control of DFS, the District received approval from the CDC to begin operations of the first Biosafety Level 3 laboratory in the national capital region. This means PHL now conducts biological analysis to identify materials that have the potential to pose a severe threat to public health and safety, including bubonic plague, smallpox virus, anthrax, and toxins such as ricin. In January 2014, the PHL became a top-tier member of the CDC's Laboratory Response Network, joining 10 existing facilities nationwide as the front-line defense to respond to bioterrorism, chemical terrorism, and other public health emergencies. Most recently, in October 2014, PHL received CDC certification for Ebola testing after successful completion of its proficiency test in just four days.

The **Crime Scene Sciences (CSS) Division** consists of the Central Evidence Unit (CEU), and the Crime Scene Sciences Unit (CSSU), all with highly trained civilian scientists who have begun to transition responsibilities for evidence intake and crime scene response in the District from the Metropolitan Police Department (MPD). The goal is provide additional science at the scene, to generate forensic intelligence—backed by science—early in the investigation, and to process and track evidence for immediate and future analysis.

In October 2013, DFS took over evidence intake responsibility from MPD's Evidence Control Unit and formed the Central Evidence Unit (CEU). This Unit initiated a new submission form and process in FY14 for stakeholders. While the form has gone through several refinements in the first year, these efforts have led to greater information exchange from the investigation phase to the forensic testing phase. This additional information has led to greater efficiencies and timeliness of analysis. These efforts will continue to be enhanced through continued cooperation with our agency partners and initiation of a Laboratory Information Management System in FY15.

In FY14, Crime Scene Sciences Unit (CSSU) began processing evidence for the first time and has made progress in achieving this initiative. This entails processing of evidence collected from crime scenes for fingerprints and DNA. The CSSU implemented additional chemical procedures and techniques to the array of procedures available to the District prior to the establishment of DFS. Further enhancements include the requirement of strict measures to ensure that evidence is protected from DNA contamination from external sources. Training for greater awareness for other types of physical evidence was accomplished and will enhance the CSSU abilities both in the laboratory and at crime scenes. Most recently, all 22 Crime Scene Sciences Forensic Scientists are active in casework productivity as of January 2015. CSS deployed independently to 104 crime scenes in January and February. DFS is working closely with MPD on the transition and I want to thank Chief Lanier and MPD for their efforts in this complicated process.

Since October 1, 2012, the Department of Forensic Sciences has accomplished what some individual laboratories take many years to accomplish.

As our services grow, basic performance measures will be critical for enhancing and improving the quality, timeliness, and cost-effectiveness of our services. We have established such performance measures for the three active FSL Units (DNA, Firearms, and Fingerprints). Similar performance measures are being established for the Public

Health Laboratory (PHL) to assist in establishing performance goals and monitoring progress.

In meeting the District's Open Government requirements, we have established an Open Government tab on our website at DFS.dc.gov. We continue to work toward updating it on a regular basis.

Finally, two separate but distinctly important activities we look forward to are the quarterly meetings with our Science Advisory Board to enhance DFS' performance and reliability; and the implementation of a laboratory information management system to provide seamless accountability and tracking of evidence from receipt to return for all DFS services.

Conclusion

The Department of Forensic Sciences represents a turning point for public science, one that has generated positive discussion through the forensic and scientific community about our scientific independence, our melding of forensic and public health services, and the progressive view on having DFS as a "science-first" organization. Agencies around the US and the globe are paying attention to us and our progress.

FY13 was a startup year for the agency that has yielded many opportunities and advantages. We have been blessed with experienced employees transferred from their previous agencies, and the recruitment of new employees who came to us excited at the prospects for our new endeavor.

In FY14 and FY15, we will continue to work toward completing the transition of crime scene responsibilities from MPD to DFS; pursue ISO 17025 Accreditation for the Public Health Laboratory Division and Crime Scene Sciences Division; establish the Materials Analysis Unit within the Forensic Science Laboratory Division; reduce the average Turnaround Time for all Forensic Science Laboratory units (measured as the time in days from receipt of evidence to the issuance of a report in a case); and seek ways to improve forensic services, and research capabilities as mandated by our Statute.

Major issues that we continue to be confronted by include Laboratory independence as the first Department to be created based on the recommendations of National Academies of Science 2009 report on forensic science; communications between and with stakeholders regarding competing interests; and creating a positive work environment for employees so that they stay and grow with the Department.

Let me take a moment to address the recent Washington Post articles on March 6 and 7 related to the US Attorney's Office. The core issue is that no national standards exist for DNA interpretation when the sample includes material from more than one person. DFS uses the most common technique for calculation, the Combined Probability of Inclusion method, but even that method is not as clear as it could be. As a result, I wanted to be more transparent about its application. The National Institute of Standards and Technology report shows that there is no one best way of using this method. We wanted to take a good method and make it better so we approached the Science Advisory Board, in accordance with our governing statute, to review current agency protocols for interpreting mixed DNA profiles and the application of appropriate statistics to aid in the estimation of the probability of including a person in the mixture. Four members of the Board who are experts in forensic biology and statistics reviewed the protocols, along with suggestions from outside experts, and found them to be adequate but offered a list of 12 recommendations to enhance the existing protocols. The members of the SAB found that of the 12 recommendations, some were already in place and others were already in the process of being incorporated into a new protocol. These reports are available at our DFS.gov Open Government site. I welcome the audit initiated by the Mayor and conducted by certified auditors. We look forward to the conclusion of this official audit and will make any necessary changes accordingly.

I want to thank my coworkers at DFS who have worked hard to make it a success and to serve the people of the District. As science is based on innovation and growth, under the direction of Mayor Bowser and her administration, we look forward to both a fresh start for the District of Columbia, and enhancements for DFS' purpose, mission, and values.

Thank you for the opportunity to appear before the Committee, I am happy to answer any questions regarding our performance as a new Department.