

DC DEPARTMENT OF FORENSIC SCIENCES ANNUAL REPORT

FISCAL YEAR 2013

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To Our Stakeholders

INTRODUCTION

The District of Columbia Department Of Forensic Sciences (DFS) became operational on 1 OCT 2012 through the *DFS Establishment Act of 2011* to provide high-quality, timely, accurate, and reliable forensic science services with the use of best practices and best available technology; a focus on unbiased science and transparency; and the goal of enhancing public safety. The DFS is the first independent forensic agency created based on the 2009 report from the National Research Council of the National Academies of Science, *Strengthening Forensic Science in the US: A Path Forward*.

The DFS is to provide high-quality, timely, accurate, and reliable forensic science services with the use of best practices and best available technology; a focus on unbiased science and transparency; and the goal of enhancing public safety.

The DFS resides in the Public Safety and Justice Cluster of the District of Columbia government and is a local agency that has jurisdictional responsibilities of a municipal, county, or state entity, as relevant.

STRATEGIC HIGHLIGHTS

The DFS achieved accreditation for its Forensic Science Laboratory Division (FSL) under ISO 17025 in November 2013, *two months ahead of the mandated deadline*. Accreditation for the Public Health Laboratory Division (PHL) was achieved under the Centers for Disease Control (CDC) and the Association of Public Health Laboratories (APHL) in 2013.

The DFS PHL is now a Tier 1 laboratory for biological terrorism samples, one of only a handful of facilities in the nation capable of handling and testing these materials. This establishes the DFS PHL as the laboratory of record for the National Capital Region (NCR) for this important testing capability.

OPERATIONAL HIGHLIGHTS

The Crime Sciences Division (CSS) created the Central Evidence Unit (CEU) as the main intake of items for analysis in the FSL and began processing submitted evidence for latent fingerprints and DNA swabbing. The processing of vehicles for all types of physical evidence was also transitioned from MPD to the DFS-CSS in October of 2013.

Numerous standard operating procedures, internal policies, and memoranda of agreement (MOA) and understanding (MOU) were created in accordance with District policies. To date, the DFS is staffed at 89%.

Grants totaling \$1,362,686 were awarded from various local and federal agencies for backlog reduction, capacity building, and testing services.

The DFS held its first Stakeholders Advisory Council meeting November 29, 2012. The DFS is scheduled to hold its first Science Advisory Board (SAB) meeting on March 3, 2014.

OUTREACH HIGHLIGHTS

The Consolidated Forensic Laboratory has won numerous awards for its design, environmental efficiency, and functionality.

DFS staff had three publications in peer-reviewed journals, including *Forensic Science Policy and Management*, *FSI Genetics*, and *genomeA*.

Numerous media outlets have published stories on the DFS, the CFL, and its staff, including *The Washington Post, The New York* Times, *The BBC, The Canadian Broadcasting Corporation, The Legal Times*, and *Chemical & Engineering News*, among others.

The DFS has provided scientific and technical education and training to regional agencies via cooperative arrangements, including Metropolitan Police Department, U.S. Secret Service, U.S. Park Police, U.S. Attorney's Office, and the Office of the Attorney General for D.C.

Sixty four professional groups have toured the CFL, including the American Academy of Forensic Sciences, American Association for the Advancement of Science, American Chemical Society, the Department of Defense, the National Institute of Standards and Technology, U.S. Department of State, U.S. Department of Treasury, U.S. Secret Service, and many others.

Ten international groups have toured the CFL, including professional representatives from Australia, Canada, China, Kingdom of Jordan, Mexico, the Netherlands, Russia, Singapore, United Kingdom, and Uzbekistan, among others.

LOOKING AHEAD

In FY14, the DFS anticipates the pursuit of ISO 17025 for the PHL and the CSS Divisions and two new Units in the FSL, Digital Evidence and Materials Analysis. Advances in process and workflow, improvement in service delivery, and additional opportunities for outreach and enhancement are expected in FY14.

The staff of the DFS is thrilled at our progress this first year and look forward to improving the services we offer to make the District of Columbia a safer and healthier place to work and live. I am honored to work with such fine professionals on this worthy mission.

Sincerely,

Max M. Houck, Ph.D.

Director, Department Of Forensic Sciences

February 14, 2014

Strategic Summary

Overview

The DFS was created on 1 OCT 2012; this report runs through 30 SEP 13. The DFS was designed by the Director to have four operational groups, three scientific and one business (see chart). The three scientific groups are the Forensic Science Laboratory (FSL), the Public Health Laboratory (PHL), and the Crime Scene Sciences (CSS); the business entity is the Operations Division (OPS) DFS has a Directorate level of management covering areas that affect the whole of DFS, consisting of the Director, a Deputy Director, and Deputy Directors for Quality, Training and Development, and Information Technologies; a full-time General Counsel is also a part of the Directorate. The Executive Assistant works with the Director and Deputy Director. Each Division is divided into Units lead by a Unit Manager.

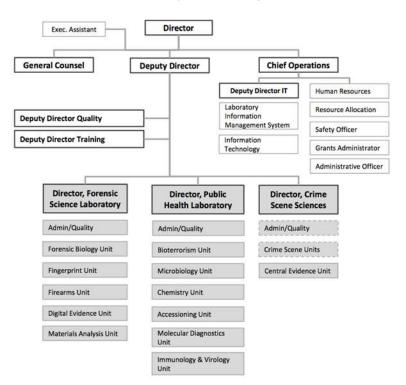


Figure 1. DFS Organizational Chart

- The **FSL** is led by a Director and consists of three Units, Forensic Biology, Fingerprint Analysis, and Firearms Examination. Additional Units are planned for Materials Analysis and Digital Evidence.
- The **PHL** is led by a Director and consists of Bioterrorism, Microbiology, Chemistry, Accessioning, Molecular Diagnostics, and Immunology and Virology Units.
- The CSS is led by a Director and consists of Units of appropriate size to cover needed shift work; the

CSS Director will also oversee the DFS Central Evidence Unit (CEU). CSS Units will be added as approved to fulfill the requirement for District scene demands.

• The **OPS** is led by the Chief Operations Officer and consists of human resources, resource allocations, safety, and grants administration.

The DFS enterprise architecture mirrors the structure of the sciences at other agencies, such as National Science Foundation, and groups evidence types by their source, providing potential for sharing of cognate knowledge. The architecture also provides for expansion or additions, and demonstrates clear paths of responsibility and promotion.

In the first year, DFS established a management structure, hired staff, established operational procedures and polices that align with District requirements for procurement, travel, training, resource management, and accountability. A second year budget was developed along with training programs for each Division, along with a quality assurance program.

Key first year issues for the DFS were 1) move into the Consolidated Forensic Laboratory, 2), integration into a new agency, and 3) achieve accreditation.

1. Move-in

The components of the DFS were in place beginning on 1 OCT 12 and fully moved in by the end of the first of January 2013. Operations were imperceptibly disrupted and no significant issues arose for service delivery.

2. Integration

The DFS consists of components from two other agencies plus new components required by the agency's legislated mission. The forensic components were inherited from the DC Metropolitan Police Department's (MPD) forensic functions while the public health components were transitioned from the DC Department of Health; crime scene response was created new with the agency, although aspects were developed based on MPD's prior experience with its Crime Scene Investigation Division (CSID).

The goal was to transition the staff to the "science first" culture of the agency while providing continuity of service to historic stakeholders. The staff embraced this approach solidly, with the expected issues accompanying a management change of this scale. The management culture holds these five statements as core concepts:

- 1. Reduce re-work
- 2. Simplify.
- 3. Standardize.
- 4. Push policy up to embrace as much as practical (policy reduction).
- 5. Push responsibility down to the first point of resolution (empowerment).

With these concepts as a guide, the staff moved forward, stabilizing operations while pursuing accreditation.

3. Accreditation

Accreditation was mandated for the DFS in its establishing legislation. Accreditation was achieved for the Forensic Science Laboratory Division (FSL) under ISO 17025 in November 2013, two months ahead of the mandated deadline. All Units in the FSL, including Forensic Biology (DNA), Fingerprint Analysis, and Firearms Examination, are covered by this accreditation. Accreditation for the Public Health Laboratory

Division (PHL) was achieved under the Centers for Disease Control (CDC) and the Association of Public Health Laboratories (APHL) in 2013.

The DFS PHL is now a Tier 1 laboratory for biological terrorism samples, one of only a handful of facilities in the nation capable of handling and testing these materials. This establishes the DFS PHL as the laboratory of record for the National Capital Region (NCR) for this important testing capability. While the number and type of samples submitted is for official use only, the DFS PHL has already started successfully serving its purpose as a Tier 1 facility.

Operational Summary

To date, 46 staff have been hired throughout the agency, resulting in the DFS being staffed at 89% by the end of FY13 (total of 104 positions, 11 vacancies); a staffing compliment of 134 total positions is anticipated for FY14. Numerous standard operating procedures, internal policies, and memoranda of agreement (MOA) and understanding (MOU) were created among various District agencies.

Grants totaling \$1,362,686 were awarded from various local and federal agencies for backlog reduction, capacity building, and testing services. The breakdown is as follows:

Grant	Source	DFS Recipient	Amount
Epidemiology and Laboratory Capacity	DC DOH	PHL	\$250,000
Health Reporting and Licensing Administration	DC DOH	PHL	\$35,000
Public Health Emergency Preparedness	DC DOH	PHL	\$590,000
Coverdell Forensic Science Improvement Program	US DOJ	FSL	\$57,166
DNA Backlog Reduction	US DOJ	FSL	\$430,520

The emphasis on grants from FY13 forward will be to in-source, leveraging and enhancing capacity of the DFS to add greater value to its services and capabilities.

Crime Scene Sciences Division

The DFS Establishment Act of 2011 transfers responsibility and authority for all formerly MPD forensic activities to the DFS, including crime scenes; further, the Act requires accreditation for all appropriate DFS activities, including crime scene work. This means a wholesale change in processes, methods, and protocols to meet the proposed accreditation standards (ISO 17025).

The Crime Scene Sciences Division (CSS) created the Central Evidence Unit (CEU) as the main intake of items for analysis in the FSL and began processing submitted evidence for latent fingerprints and DNA swabbing.

The processing of vehicles for all types of physical evidence was also transitioned from MPD to the DFS-CSS in October of 2013. Training of personnel continues and initial deployment of CSS to crime scenes is anticipated starting in April of 2014.

Forensic Science Laboratory Division

The Forensic Science Laboratory Division received 6,176 cases in FY13, yielding only 1,371 reports. Much of the FSL backlog is "artificial backlog", that is, cases which were submitted but have been adjudicated or dismissed, with no testing conducted; the FSL was not advised of the updated status and, therefore, the cases remained "on the books". A system was devised to routinely check for court or investigative status; this resulted in over a 50% reduction in DNA backlog and a nearly 70% reduction in firearms backlog.

Using FORESIGHT, the metrics of the FSL have been estimated for FY12 (the year prior to DFS' creation) and measured for FY13. A report for FSL has been submitted to the FORESIGHT program; relevant indices are show below.

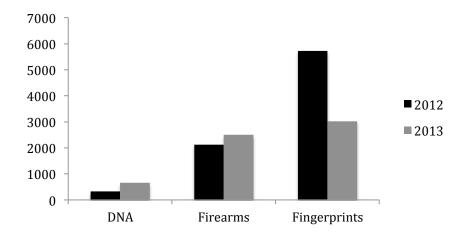


Figure 2. Case submissions to FSL FY12 and FY13

Case submissions were up significantly in DNA, with *FY13's rate being at 198% of FY12*; firearms submissions were up noticeably (118%) while fingerprint submissions were roughly of half the previous year's; *this difference is attributed to the method of case accounting used previously.*

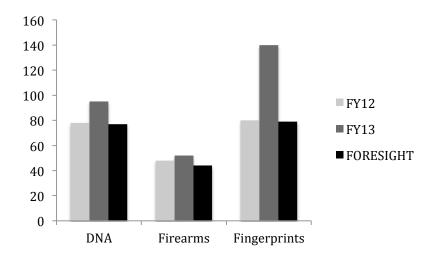


Figure 3. Turnaround time (receipt to report) for FY12 and FY13 with FORESIGHT averages.

Productivity reductions were to be expected based on the physical move to the CFL and the additional effort required for accreditation. Despite this, DFS continues to see gains in streamlining processes and expects these numbers to greatly improve in FY14 with accreditation firmly behind it.

Public Health Laboratory Division

The mission of the PHL covers the authority, responsibilities, duties, assets, and functions pertaining to public health laboratory services, including disease prevention, control and surveillance testing; emergency preparedness testing; food surveillance and testing; reference and specialized testing; integrated data management; education, training and partnerships.

The Public Health Laboratory conducted over 3,000 tests in FY13, including the following:

Total	3063
Other	6
Food Microbiology	180
Proficiency Tests	225
Referred Isolates	250
Reference Microbiology	1017
Screening and Confirmatory Tests	1391

Figure 4. Testing Conducted by PHL FY13

The PHL continues to improve it operations and services to DC DOH and the NCR.

Outreach Summary

The Consolidated Forensic Laboratory has won numerous awards, including:

- American Institute of Architects Technology in Architectural Practice BIM Award
- AIA Washington, DC Merit Award
- AIA Washington, DC Presidential Citation for Sustainability
- NAIOP Maryland/DC Award of Excellence Best Biotech / Science & Technology Project
- R&D Magazine Lab of the Year Special Mention
- US Green Building Council National Capital Region Chapter Award of Excellence / New Construction Project of the Year

Additionally, Laboratory Design Magazine noted,

"The inter-agency collaboration, co-location of forensic science units and the inclusion of modern laboratory design while still maintaining the proper protocols and chain of custody earned the D.C. Consolidated Forensic Laboratory the 2013 Laboratory of the Year Special Mention honors."

DFS staff had three publications in peer-reviewed journals, including *Forensic Science Policy and Management, FSI Genetics*, and *Genomic Announcement (genomeA)*.

Numerous media outlets have published stories on the DFS, the CFL, and its staff, including *The Washington Post, The New York* Times, *The BBC, The Canadian Broadcasting Corporation, The Legal Times*, and *Chemical & Engineering News*, among others.

The DFS has provided scientific and technical education and training to regional agencies via cooperative arrangements, including Metropolitan Police Department, U.S. Secret Service, U.S. Park Police, U.S. Attorney's Office, the Office of the Attorney General for D.C., and Capital Police.

Sixty four professional groups have toured the CFL, including the American Academy of Forensic Sciences, NASA, American Association for the Advancement of Science, American Chemical Society, the Department of Defense, the National Institute of Standards and Technology, U.S. Department of State, U.S. Department of Treasury, U.S. Secret Service, and many others.

Ten international groups have toured the CFL, including professional representatives from numerous countries, such as Australia, Canada, China, Kingdom of Jordan, Mexico, the Netherlands, Russia, Singapore, United Kingdom, and Uzbekistan, among others.

Educational programs were offered to DC high school science students, public tours for interested DC and regional agencies; local and regional universities toured the CFL and have discussed educational opportunities with the DFS.

Looking Ahead

In FY14, the DFS anticipates the pursuit of ISO 17025 for the PHL and the CSS Divisions and two new Units in the FSL, Digital Evidence and Materials Analysis. Advances in process and workflow, improvement in service delivery, and additional opportunities for outreach and enhancement are expected in FY14.

Accreditation Certificates









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