FY 2019 Budget Oversight Hearing

Dr. Jenifer Smith
Director
April 19, 2018
"Investments Build on the District’s Growth and Prosperity to Give More Washingtonians a Fair Shot"
§ 5–1501.02. DEPARTMENT OF FORENSIC SCIENCES ACT OF 2011

(a) There is established as a subordinate agency in the executive branch of the government of the District of Columbia, the Department of Forensic Sciences.

(b) The mission of the Department shall be to provide high-quality, timely, accurate, and reliable forensic science services with:

(1) The use of best practices and best available technology;

(2) A focus on unbiased science and transparency; and

(3) The goal of enhancing public safety.
§ 5–1501.13 - STAKEHOLDER COUNCIL

There is established a Stakeholder Council, which shall consist of the following members:

1) The Deputy Mayor for Public Safety and Justice;
2) The Chief of MPD;
3) The Chief Medical Examiner;
4) The Attorney General;
5) The United States Attorney for the District of Columbia;
6) The Director of the Public Defender Service for the District of Columbia;
8) The Director of the Department of Health;
9) The Chief of the Fire and Emergency Medical Services Department;
10) The Director of the Department; and
11) The head of any other government agency that regularly utilizes the forensic science services of the Department.

(b) The chairperson of the Judiciary Committee of the Council of the District of Columbia shall be an ex officio, non-voting member of the Stakeholder Council.
FORENSIC SCIENCE AT DFS....

“Application of scientific principals and technological practices to the purposes of assisting decision makers in matters of criminal justice, national security and public health.”
FY19 DFS BUDGET
“STRONGER SCIENCE/SAFER STREETS”

- Provide high-quality, timely, accurate and reliable forensic science services with the use of best practices and best available technology;
- Maintain continued accreditation;
- Ensure a qualified workforce through efficient hiring and continual training;
- Provide discovery documentation to critical stakeholders for court procedures; and
- Conduct crime scene investigations with a majority civilian work force supplemented with experienced MPD officers who possess crime scene experience.
# FY 2019 OPERATING BUDGET

<table>
<thead>
<tr>
<th>Description</th>
<th>FY 2019</th>
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<tbody>
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<td>FTEs</td>
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<table>
<thead>
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Mayor Bowser Highlights 2017 Year End Crime Reductions and Lauds Turnaround at the Department of Forensic Sciences
DFS ACCOMPLISHMENTS

Elimination of DNA Sexual Assault Kit Backlog
- Forensic Biology Unit (FBU) reduced the backlog of forensic biology by increasing laboratory capacity
- Completely eliminated the District’s sexual assault kit backlog

Established the Digital Evidence Unit
- Increased the Districts investigation testing capabilities concerning a wide variety of cybercrimes and fraud

Established the Forensic Intelligence Unit
- Increase understanding of the “impact” of forensic services to more effectively apply analyses on most probative items

The Public Health Lab passed 4 federal audits
- 3 Centers for Medicare & Medicaid (CMS) Clinical Laboratory Improvement Amendments (CLIA) audit
- 1 CDC’s Division of Select Agents and Toxins (DSAT) audit
MONTHLY FORENSIC SCIENCE OUTPUTS

Requests Completed by Month

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<td>DNA</td>
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<td>213</td>
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<td>48</td>
<td>87</td>
<td>104</td>
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<td>96</td>
<td>107</td>
<td>80</td>
<td>121</td>
<td>85</td>
<td>134</td>
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</table>
Continued Productivity within all FSL Units
  o Supports contract analysts within FEU and LFU
    o LFU reporting out 98% of their homicide cases and 100% of their priority cases within 60 days
    o FEU reporting out 95% of their homicide cases and 100% of their priority cases within 60 days
  o Supports outsourcing of DNA cases
    o FBU continues to have no backlog in sexual assault kits
    o Avg. TAT for kits is 42 days
    o Outsourcing allows for additional DNA cases to be worked in timely fashion (60 days)
DNA OUTSOURCING

![DNA Outsourcing Graph]

- **DFS Case Output**
- **Total Outsourced**

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<th>2017</th>
<th>2018</th>
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<td>250</td>
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<td>Q2</td>
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<td>300</td>
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<tr>
<td>Q3</td>
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</tr>
<tr>
<td>Q4</td>
<td>350</td>
<td>400</td>
<td>450</td>
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</table>
To date, DFS CSS personal have:

- Responded to 2,951 scenes
- Average response time of 25 minutes
- 76% of reports provided in less than 14 days
- Took custody of 37,745 items of evidence
FY18 ENHANCEMENTS FOR IT

DFS implemented several new technologies that are IT data intensive:
- Mideo in both LFU and FEU
- NGS of DNA within PHL

New technologies will generate two (2) to four (4) terabytes of analytical data.

The Forensic Technology Unit begins implementing the Forensic Evidence Digital Storage Capital requirement (Phase I):
- $1 million in Capital Funds to expand digital storage capacity
- DFS purchased server and online storage capacity
SUMMER OF 2015

Sale of Synthetic Drugs Emergency Amendment Act of 2015
July 10, 2015

Interim Director Named For Dept. of Forensic Sciences
July 17, 2015

cases in the District

Synthetic cannabinoid patient cases reported by the department remained below 30 a month until 39 cases last June and 43 in July. Authorities say the common denominator in these incidents was the use of synthetic drugs. Emergency legislation to deal with the rising use of the dangerous substances comes none too soon.

Mayor Muriel E. Bowser (D) on Friday signed into law a measure that aims to combat the use of these drugs by cracking down on the businesses that trade in them. The drugs – smokable herbal products coated with chemicals that mimic the active ingredient in marijuanas – are marketed under names such as Scooby Snax or K2 and can be found at liquor and convenience stores and gas stations. Popular with young people, their appeal has spread to vulnerable populations such as the homeless, and abuse is fast becoming a national problem.
DFS “DRUG LAB” DEVELOPMENT
DFS “DRUG LAB” DEVELOPMENT

SAFE DC PASSES!

First Case! (DOC)

MAY 16

APR 16

MAR 17

JUL 16

APR 17

5-Fluoro-ADB
July, 2017 – New Synthetic Opioid Discovered!

Methoxyacetyl Fentanyl

- Screen of syringe resulted in a “no hit” peak (DEA and NIST database)
- Peak had characteristics of a fentanyl analog
- Structural elucidation indicated Methoxyacetyl Fentanyl (confirmed)
- OCME could then order expanded toxicology test
FCU ACCREDITED (Feb. 18)
In total, about 19% are tested by DEA lab
(6 chemists, 1 instrumentalist, 1 evidence tech)
(About 26 – 30% time to testimony)

(MPD Statistics estimated from subsample of 450 exhibits from Feb to April, 2017)
(DEA Statistics are 100% sampling over 2.5yrs)
FY19 BUDGET SUPPORTS: PHL

Influenza Surveillance Program

In FY18 PHL tested 464 patient samples an increase from 80 samples in FY17.

- 231 - Influenza A detected
- 63 - Influenza B detected
- 170 - Influenza A/B not detected
FY19 BUDGET SUPPORTS: PHL

PHL is the only laboratory that can conduct rabies testing for the District in support of the DC Health.

- In FY17, 191 samples were brought to PHL.
- To date, in FY18, 107 samples have been tested.

![Rabies 2017 Updates and Final](image)

<table>
<thead>
<tr>
<th>Animal Type</th>
<th>Negative</th>
<th>Positive</th>
<th>Inconclusive</th>
<th>Liquified</th>
<th>Grand Total</th>
<th>% Positive</th>
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<td>Bat</td>
<td>38</td>
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<td>Fox</td>
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<td>Raccoon</td>
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<td>17</td>
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<td>39</td>
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<tr>
<td>Grand Total</td>
<td>160</td>
<td>23</td>
<td>7</td>
<td>1</td>
<td>191</td>
<td>12.0%</td>
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</table>

Figure 4: Location of Wildlife Rabies positive cases in the DC area
FY19 BUDGET SUPPORTS:

SUSTAINED TRAINING
This year DFS has delivered over 648 hours of instruction, covering issues such as
- cognitive bias and quality assurance,
- discipline-specific topics for DNA, firearms, fingerprint examiners, and public health lab scientists, and
- Sexual Harassment Prevention Training.

CONTINUOUS QUALITY
In FY19 DFS will conduct internal inspections and participate in external audits needed to maintain
- compliance with the Centers for Medicare & Medicaid Services’ Clinical Laboratory Improvement Amendments (CLIA) regulatory guidelines.
- compliance with CDC’s Division of Select Agents and Toxins (DSAT) within our PHL.
## FY 2019 – 2024
### CAPITAL IMPROVEMENTS PLAN

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<th>Project</th>
<th>FY19</th>
<th>FY20</th>
<th>FY21</th>
<th>FY22</th>
<th>FY23</th>
<th>FY24</th>
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<td>Crime Scene Specialized Vehicles</td>
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<td>Laboratory &amp; Hospital Equipment (Replacement)</td>
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<td>$200</td>
<td>$200</td>
<td>$200</td>
<td>$0</td>
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<td><strong>Total</strong></td>
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<td><strong>$200</strong></td>
<td><strong>$200</strong></td>
<td><strong>$200</strong></td>
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(Dollars in Thousands)
Capital Expenditures

- General Renovations: 71.79%
- Forensic Evidence Digital Storage: 87.85%
- Laboratory Information System: 85.26%
- Specialized laboratory Equipment: 99.92%
PHL EQUIPMENT PURCHASES

PHL Specialized Laboratory Equipment

FY2017 - $433,580.96 (Capital)
- Aigilent Technologies
- Biomerieux (eMAG)
- Dynex Technologies
- DiaSorin

FY2018 - $145,000 (Capital + Local)
- High Performance Liquid Chromatography (HPLC)
CAPITAL AND IT EQUIPMENT

<table>
<thead>
<tr>
<th>FY19</th>
<th>FY20</th>
<th>FY21</th>
<th>FY22</th>
<th>FY23</th>
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<td>$1,211</td>
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Laboratory Equipment
DFS anticipates $1.2 M in that will need to be purchased in FY19
- Dell PS6610 Equilogic
- LEEDS Comparison Microscope
- Microscope Upgrade
- Agilent Tape Station
- Cepheid GeneExpert
- Blood Drying Cabinets

(Dollars in Thousands)
CAPITAL RENOVATIONS

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<th>FY20</th>
<th>FY21</th>
<th>FY22</th>
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<td>$250</td>
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Biological Safety Level 3 (BSL-3)
- Analyses are conducted for potentially lethal microbes,
- Examples include Yellow Fever, Tuberculosis, Ebola, Rabies, and suspicious white powder samples submitted by the Federal Bureau of Investigations (FBI)
- BSL-3 can be improved for optimal workflow efficiency and enhance security measures.

(Dollars in Thousands)
# CRIME SCENE SPECIALIZED VEHICLES

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<th>FY21</th>
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<td>$375</td>
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**Crime Scene Sciences**

- Responsible for the collection and preservation of evidence from crimes scenes in the District of Columbia
- Vehicles are utilized 24 hours per day, 7 days a week
- Under the OCFO guidance, DFS has identified 9 crime scene vehicles that need to be replaced

(Dollars in Thousands)
LABORATORY INFORMATION MANAGEMENT SYSTEM

<table>
<thead>
<tr>
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<th>FY20</th>
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<th>FY22</th>
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<td>$4,500</td>
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Information Laboratory Management System - spent $2.2 million implementing LIMS for the:

- Forensic Science Laboratory & Crime Scene Sciences – JusticeTrax Lims+
- Forensic Biology Unit – STaCSDNA
- Public Health Lab – Chemware Horizon
- Comprehensive dashboard to track information and export data
- FY18 Cap. FY18 funds project to refine requirement
- FY19 will finalize requirements and review possible COTS LIMs products
- FY20 will cover implementation and anticipated development.

(Dollars in Thousands)
DIGITAL FORENSIC EVIDENCE STORAGE (Phase II)

<table>
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DFS is currently in Phase I of the Digital Forensic Evidence Storage Project

- Agency has purchased a Flash Storage Solution and currently in the process of upgrading equipment in CFL Server Room

Phase II – Data Protection and Disaster Recovery

- In FY19, DFS will expand the digital storage capability
- Purchase switch for High Availability and redundancy (DC-Net)
- In-rack fire suppression system to protect data

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<th>Items</th>
<th>Cost</th>
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<td>Phase II Storage Expansion</td>
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<tr>
<td>High Availability Switch</td>
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(Dollars in Thousands)
In FY 2017, DFS provided the OCFO with access to our Capital Equipment Inventory Tracker Database (InFlow)
  - OCFO entered equipment into the Capital Assets Replacement Scheduling System (CARSS)
  - OCFO adopted a 5 year replacement schedule
  - Specialized laboratory equipment was either purchased in FY 2011 or provided by MPD and DOH

<table>
<thead>
<tr>
<th>FY19</th>
<th>FY20</th>
<th>FY21</th>
<th>FY22</th>
<th>FY23</th>
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<td>$140</td>
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<td>$200</td>
<td>$200</td>
<td>$820</td>
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(Dollars in Thousands)
ACKNOWLEDGEMENTS

I would like to thank the Mayor and her staff for the generous support given to the Department. The resources allocated to DFS will play a critical role in supporting residents’ efforts to reach and remain on the pathway to the middle class.

I would like to recognize and thank all of the DFS employees for their support in ensuring the Department is run efficiently and effectively and for their untiring efforts to make the District a safer city.

Finally, The Council and this Committee, led by you, Chairperson Allen, have been key allies, and I appreciate your continued efforts to ensure our agency is appropriately staffed and adequately funded to support our mission to provide high-quality, timely, accurate, and reliable forensic science services with the use of best practices and best available technology.