



DISTRICT OF COLUMBIA  
**DFS**  
DEPARTMENT OF  
FORENSIC SCIENCES

Forensic Science Laboratory | Public Health Laboratory | Crime Scene Sciences

# FY 2020 Budget Oversight Hearing

Dr. Jenifer Smith  
Director  
April 11, 2019



DISTRICT OF COLUMBIA  
**DFS**  
DEPARTMENT OF  
FORENSIC SCIENCES

DC Department of Forensic Sciences  
Forensic Science Laboratory | Public Health Laboratory | Crime Scene Sciences

WE ARE  
WASHINGTON  
DC GOVERNMENT OF THE  
DISTRICT OF COLUMBIA  
**MURIEL BOWSER, MAYOR**

# MAYOR BOWSER FY 2020 BUDGET

---



*"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.



DISTRICT OF COLUMBIA  
**DFS**  
DEPARTMENT OF  
FORENSIC SCIENCES

DC Department of Forensic Sciences  
Forensic Science Laboratory | Public Health Laboratory | Crime Scene Sciences

WE ARE  
WASHINGTON  
DC GOVERNMENT OF THE  
DISTRICT OF COLUMBIA  
**MURIEL BOWSER, MAYOR**

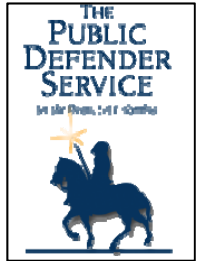
# § 5-1501.13 - STAKEHOLDER COUNCIL



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;
- (7) The Federal Public Defender 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.



# FY 2020 OPERATING BUDGET

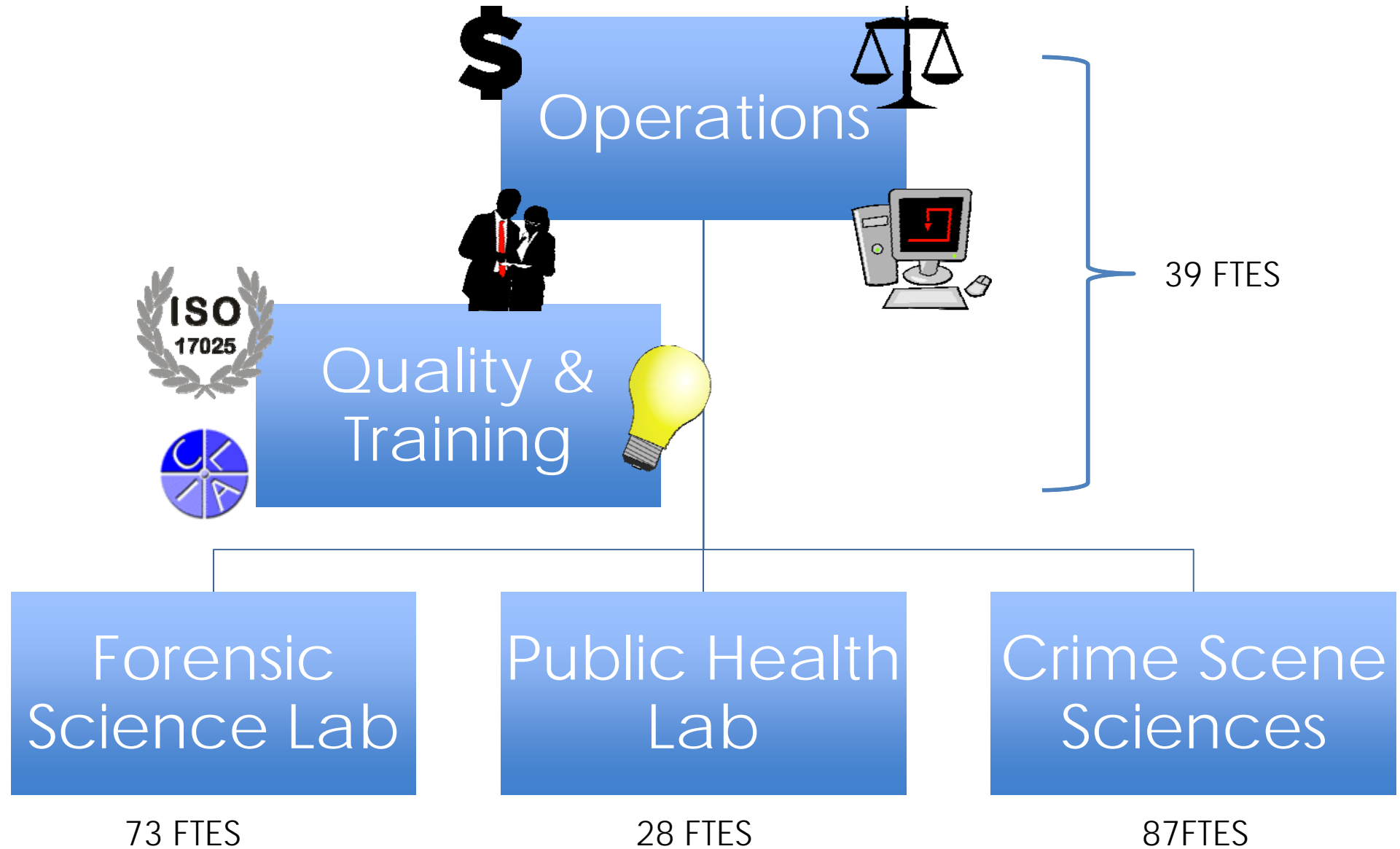
| Description | FY 2020      |
|-------------|--------------|
| Budget      | \$30,305,499 |
| FTEs        | 227          |



| Budget Component | Funding             | FTEs       |
|------------------|---------------------|------------|
| Local            | \$28,257,221        | 212        |
| Federal          | \$460,100           | 5          |
| Intra-District   | \$1,588,178         | 10         |
| <b>Total</b>     | <b>\$30,305,499</b> | <b>227</b> |



# DFS ORGANIZATIONAL COMPONENTS



DC Department of Forensic Sciences  
Forensic Science Laboratory | Public Health Laboratory | Crime Scene Sciences

WE ARE WASHINGTON  
GOVERNMENT OF THE DISTRICT OF COLUMBIA  
MURIEL BOWSER, MAYOR

# FY20 BUDGET SUPPORTS:

---

## Sustained Training

As of FY19(Q2) DFS has delivered over 760 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
- Enhanced management skills

## Continuous Quality

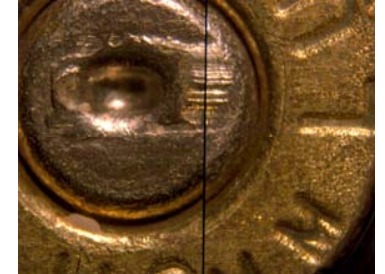
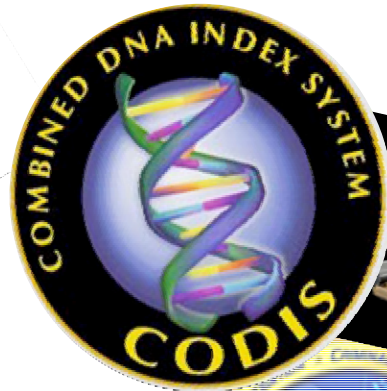
In FY20 DFS will conduct internal inspections and participate in external audits needed to demonstrate compliance with

- ISO/IEC 17025:2017 standard in critical forensic disciplines.
- Centers for Medicare & Medicaid Services' Clinical Laboratory Improvement Amendments (CLIA) regulatory guidelines.
- CDC's Division of Select Agents and Toxins (DSAT) within our PHL.

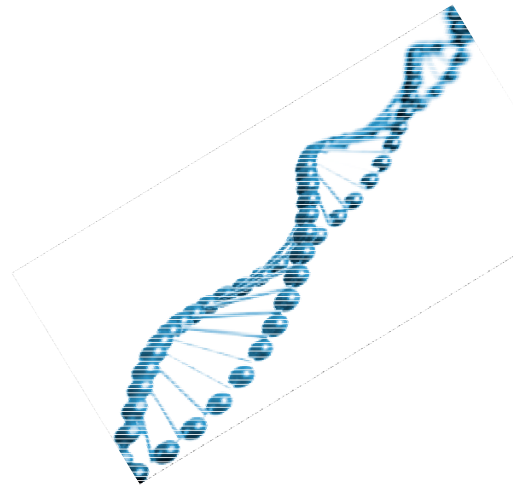
# FORENSIC SCIENCE LABORATORY

---

Forensic Intelligence Unit



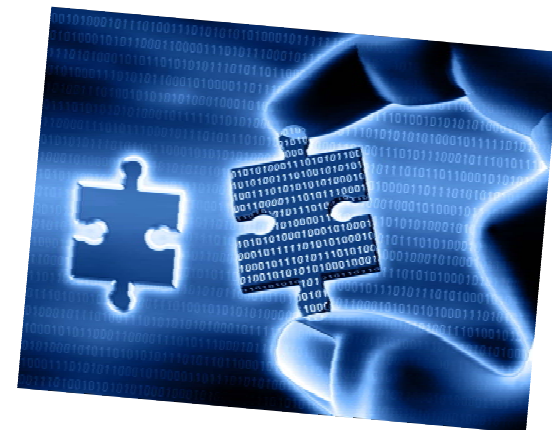
Firearms Examination Unit



Forensic Biology Unit



Latent Fingerprint Unit



Digital Evidence Unit



# FY20 BUDGET SUPPORTS

---

Continued Productivity within all FSL Units - As of Q2FY19

- Latent Fingerprint Unit (LFU) reported out:
  - 98% of homicide cases within 60 days and
  - 97% of priority cases within 60 days.
- Firearms Examination Unit (FEU) reported out:
  - 96% of homicide cases within 60 days and
  - 100% of priority cases within 60 days.
- Digital Evidence Unit (DEU) reported out:
  - 100% of their homicide cases within 60 days and
  - 100% percent of their priority cases within 60 days.
- Forensic Biology Unit (FBU) reported out:
  - 100% of their homicide cases within 60 days and
  - 99% percent of their priority cases within 60 days.
  - Continues to have no backlog in sexual assault kits
  - Avg. TAT for kits is 63 days

# FY20 BUDGET SUPPORTS

|                                  | New FTEs | Local Funds        | Description  |
|----------------------------------|----------|--------------------|--|
| Firearms Examiners & Technicians | 5        | \$967,146          | increases to Personal Services (\$441,950) and Non-Personal Services (\$525,196)   |
| Career ladder pay increases      | 0        | \$898,604          | increases to Personal Services across multiple divisions to support career ladder pay increases (salary, fringe, adjusted gross pay) for eligible employees on career ladders.           |
| Nonpersonal Services Budget      | 0        | \$290,751          | contractual costs associated with Forensic Science Laboratory, and increases to costs for laboratory supplies, uniforms, personal protective equipment, and professional services costs. |
| Total increase to local funds    | 5        | <b>\$2,156,501</b> |  |



# FY18 FIREARMS EXAMINATION UNIT (FEU)

---

- FY18 FEU Staffing
  - Thirteen (13) DFS Personnel
  - One (1) MPD Officer
  - Four (4) contractors - CGIC Dedicated Team

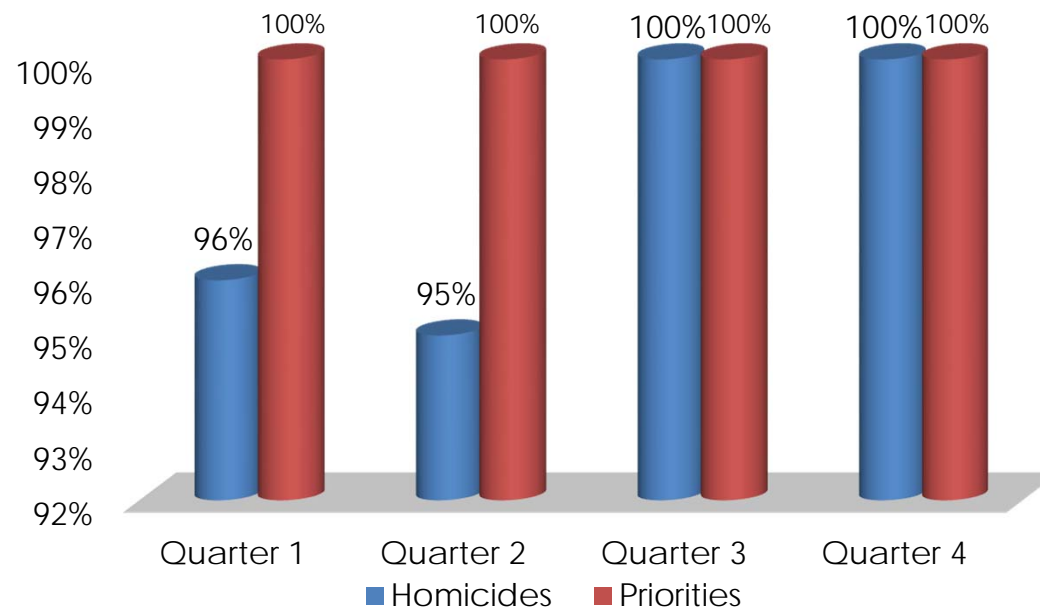


In FY17, FEU was sub-awarded a Crime Gun Intelligence Center (CGIC) grant for approximately \$500,000 for contractor support to:

- Streamline processes for the National Integrated Ballistic Information Network (NIBIN), and
- Support timely entry of all cartridge casings collected at crime scenes.

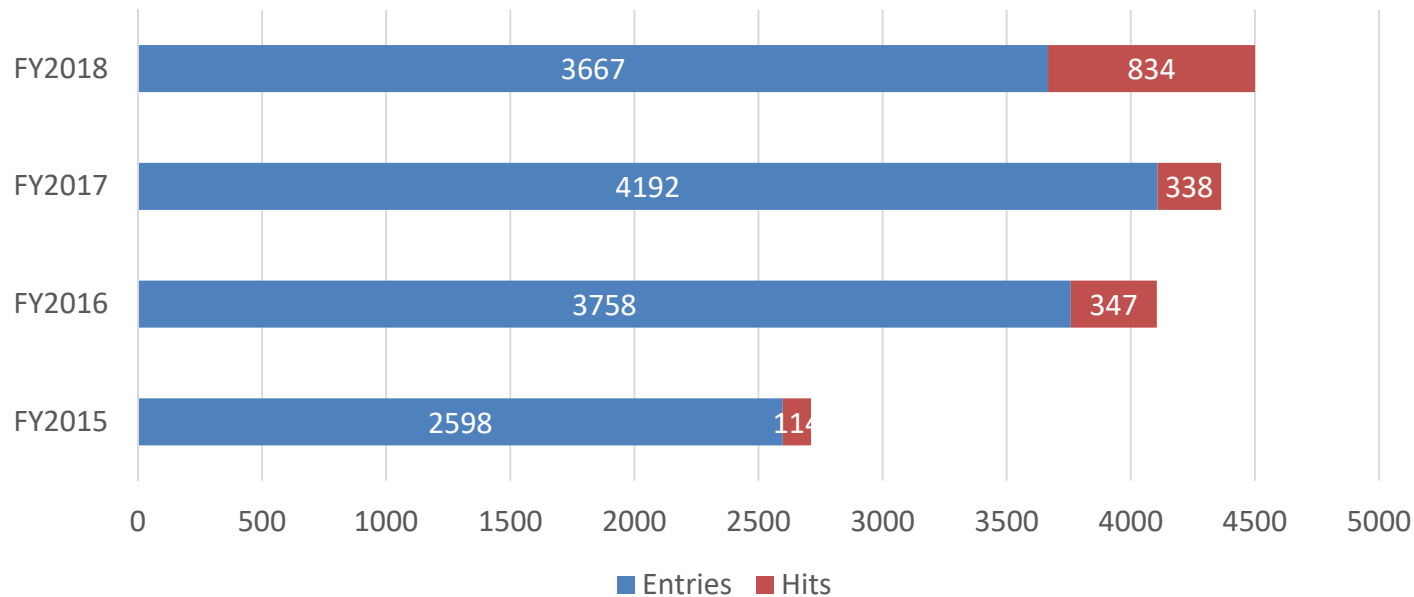
# FEU ACCOMPLISHMENTS-FY18

- Completed **767** cases with an average turnaround time (TAT) of **4.25** days.
- Conducted **1,981** test fires of weapons received by DFS.
- Had an average backlog of **701** cases at the end of FY18.
- Achieved targets for two Key Performance Indicators every quarter
  - % of Homicide cases worked within 60 days.
  - % of Priority cases worked within 60 days.



# CGIC ACCOMPLISHMENTS

## NIBIN METRICS



| Measure             | FY2016 | FY2017 | FY2018 |
|---------------------|--------|--------|--------|
| NIBIN Entries       | 3806   | 4192   | 3667   |
| NIBIN Leads         | 1415   | 2816   | 1938   |
| NIBIN Hits          | 347    | 338    | 834    |
| Firearms Test Fired | 1870   | 2206   | 1981   |



DISTRICT OF COLUMBIA  
**DFS**  
DEPARTMENT OF  
FORENSIC SCIENCES

DC Department of Forensic Sciences  
Forensic Science Laboratory | Public Health Laboratory | Crime Scene Sciences

WE ARE  
WASHINGTON  
GOVERNMENT OF THE  
DISTRICT OF COLUMBIA  
**MURIEL BOWSER, MAYOR**



# FY20 BUDGET SUPPORTS

---

|                                  | New FTEs | Local Funds | Description  |
|----------------------------------|----------|-------------|--|
| Firearms Examiners & Technicians | 5        | \$967,146   | increases to Personal Services and Non-Personal Services |

Personal Services: \$441,950, 5 FTES

NonPersonal Services: \$525,196

- Equipment (workstations and microscopes) - \$326,000
- Laboratory supplies - \$25,900
- Training - \$14,346
- Contractors - \$158,950

# CRIME SCENE SCIENCES

---



**DFS**  
DISTRICT OF COLUMBIA  
DEPARTMENT OF  
FORENSIC SCIENCES

DC Department of Forensic Sciences  
Forensic Science Laboratory | Public Health Laboratory | Crime Scene Sciences

WE ARE  
WASHINGTON  
DC GOVERNMENT OF THE  
DISTRICT OF COLUMBIA  
MURIEL BOWSER, MAYOR

# FY20 BUDGET SUPPORTS

---

## Continued Productivity within all CSS Units - As of Q2FY19

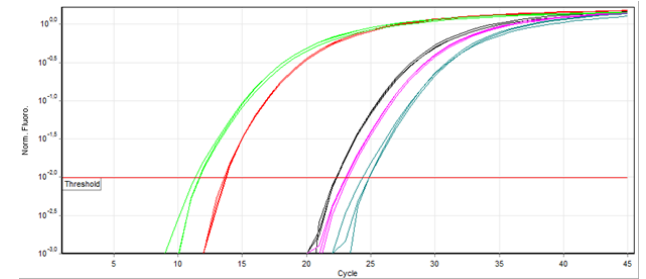
- Number of crime scenes processed to date = 2880
- Number of items of evidence submitted to date = 35,976
- Percent of all Crime Scene reports prepared by CSSU will be completed within 14 calendar days = 96%
- Percent of all crime scenes CSSU is responsible for processing will be responded to within 30 minutes = 86%
- Percent of all firearms will be transferred to the Evidence Control Branch (ECB) within 21 days after all forensic tests are completed = 97%
- Percent of all jewelry received will be transferred to ECB within 14 days = 100%
- Percent of all drugs will be transferred to ECB within 30 days after all forensic testing is completed = 98%
- All positions will be filled within CSS by mid April.



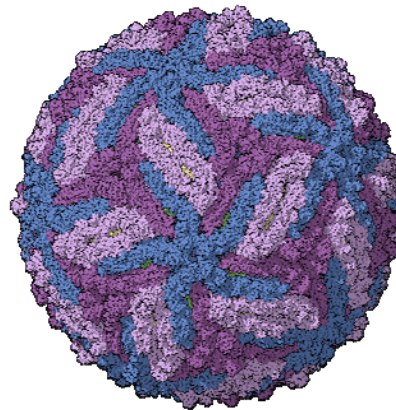
# PUBLIC HEALTH LABORATORY



Microbiology Unit



Molecular Diagnostics Unit



Virology & Immunology Unit



Chemistry



Accessioning Unit



DISTRICT OF COLUMBIA  
**DFS**  
DEPARTMENT OF  
FORENSIC SCIENCES

DC Department of Forensic Sciences  
Forensic Science Laboratory | Public Health Laboratory | Crime Scene Sciences

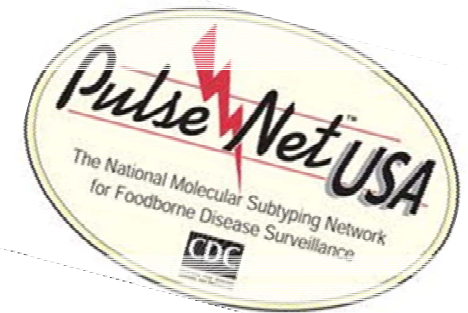
WE ARE  
WASHINGTON  
DC GOVERNMENT OF THE  
DISTRICT OF COLUMBIA  
**MURIEL BOWSER, MAYOR**

# FY20 BUDGET SUPPORTS

---

Continued Productivity within all PHL Units – As of FY19Q2

- Rabies testing - 64 specimens tested
- Influenza testing - 1158 clinical samples from DC hospitals
- Mosquito testing for West Nile
- Testing for Office of the Chief Medical Examiner (meningitis)
- Next Generation Sequencing for PulseNet for Foodborne Disease Surveillance
- Improved Norovirus testing capability
  - rapid molecular detection method
  - NGS capability
- LRN support for CT and BT Surveillance
- Forensic Chemical Analysis of Controlled Substances

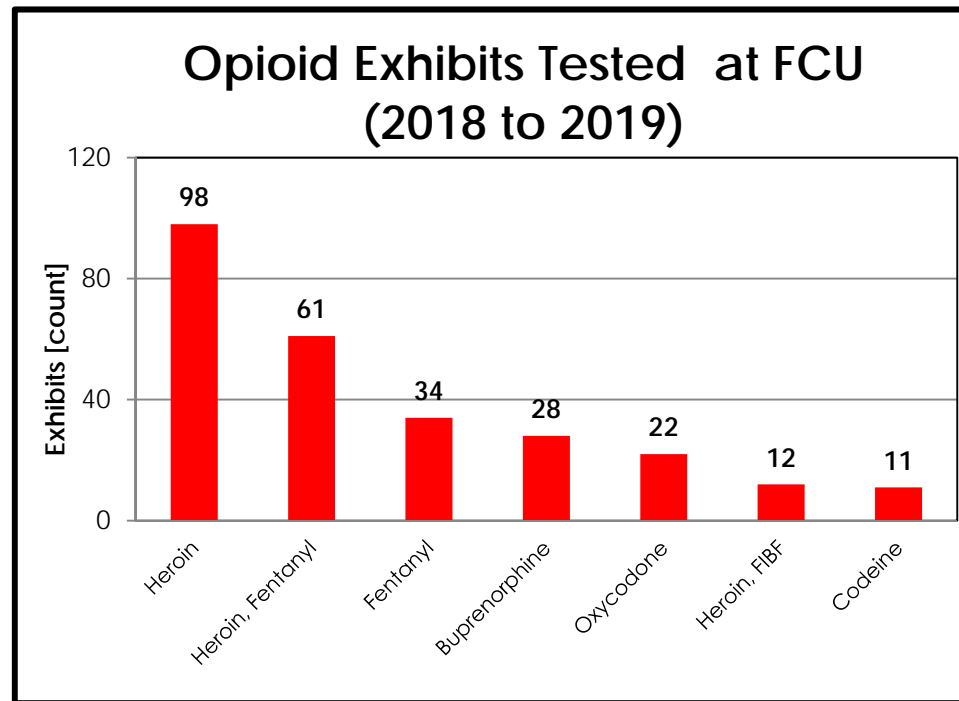




# FORENSIC CHEMISTRY

---

- Enforcement Support – Controlled substance identification
  - As of Q2FY19 - Performed 428 exhibits for USAO/NSID/OCME/DOC
- Public Health Support – Surveillance of ALL Opioids
  - Supports a critical goal within the DC Opioid Strategy, *Live Long DC*



**DFS**  
DISTRICT OF COLUMBIA  
DEPARTMENT OF  
FORENSIC SCIENCES

DC Department of Forensic Sciences  
Forensic Science Laboratory | Public Health Laboratory | Crime Scene Sciences

WE ARE  
WASHINGTON  
GOVERNMENT OF THE  
DISTRICT OF COLUMBIA  
**MURIEL BOWSER, MAYOR**

# OPIOID SURVEILLANCE LAB

---



The Opioid Surveillance Lab - new instruments, computers & workstations.

Supported by CDC grant of \$1 million



DISTRICT OF COLUMBIA  
**DFS**  
DEPARTMENT OF  
FORENSIC SCIENCES

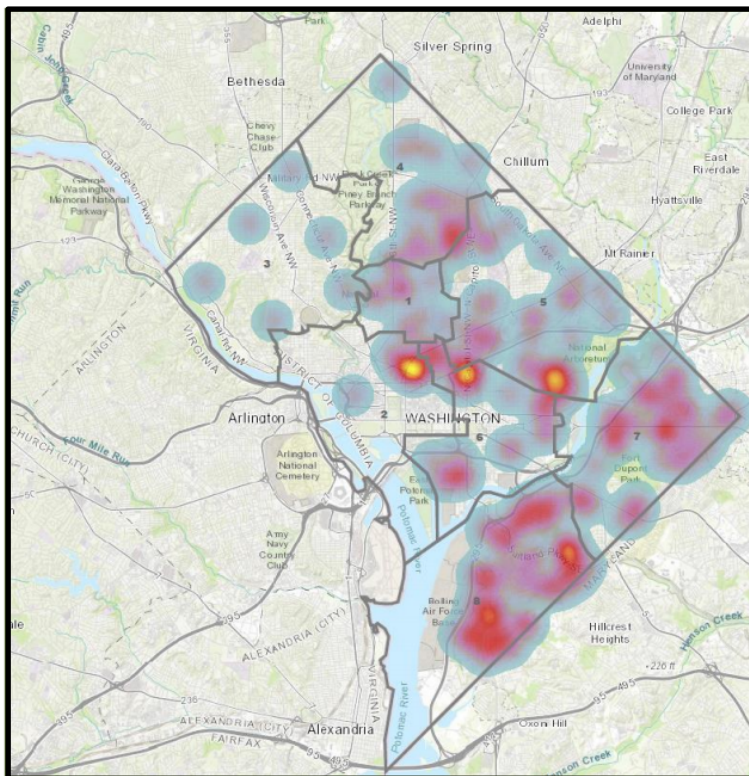
DC Department of Forensic Sciences  
Forensic Science Laboratory | Public Health Laboratory | Crime Scene Sciences

WE ARE  
WASHINGTON  
GOVERNMENT OF THE  
DISTRICT OF COLUMBIA  
**MURIEL BOWSER, MAYOR**

# FENTANYL-LACED HEROIN

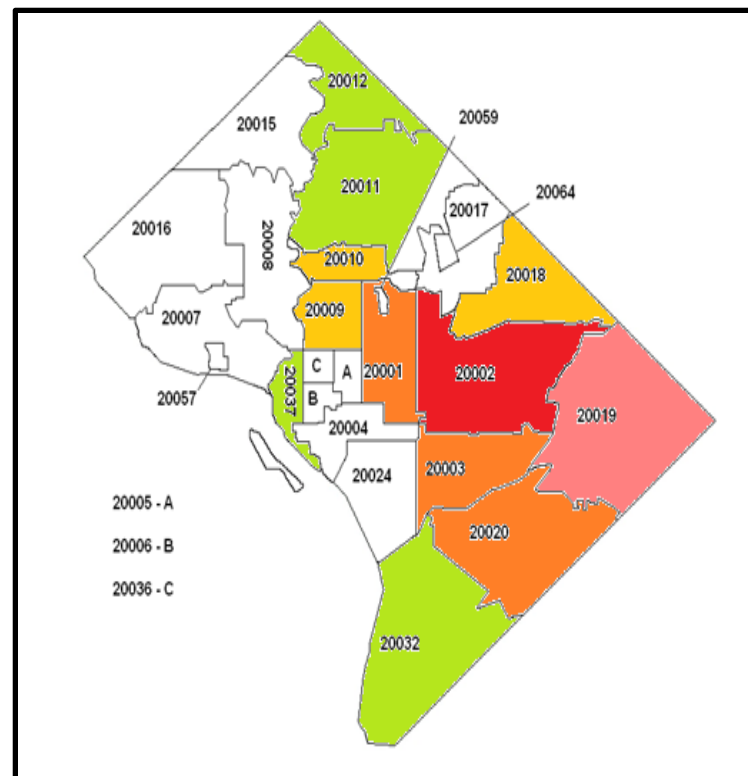
## Map of Opioid Overdoses by Jurisdiction of Residence

The map below displays opioid overdoses in 2017 by jurisdiction of residence. As stated previously, opioid overdoses are prevalent in Wards 5, 6, 7 and 8. The map also highlights a hotspot in Ward 2.



DC OCME, Opioid-related Fatal Overdoses: January 1, 2014 to December 31, 2017 (report date: March, 2018)

## HEROIN WITH **FENTANYL** EXHIBITS



Heat Map of Heroin Exhibits with Fentanyl Present (DFS Exhibits since 4/1/18)



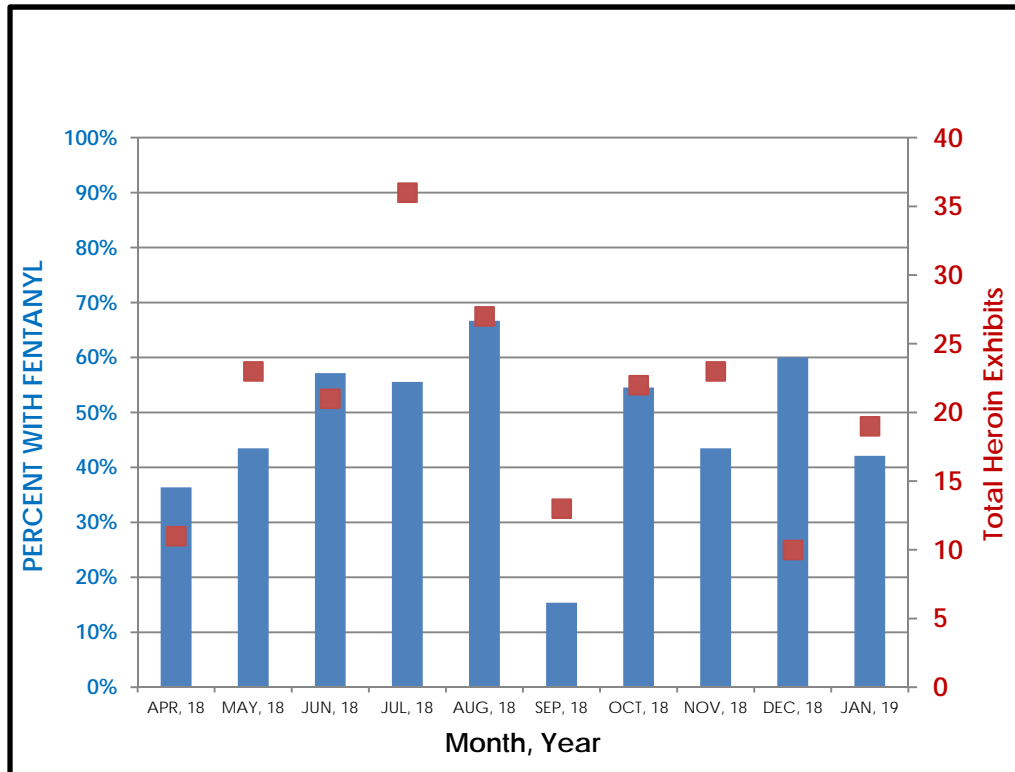
**DFS**  
DISTRICT OF COLUMBIA  
DEPARTMENT OF  
FORENSIC SCIENCES

DC Department of Forensic Sciences  
Forensic Science Laboratory | Public Health Laboratory | Crime Scene Sciences

WE ARE WASHINGTON  
GOVERNMENT OF THE  
DISTRICT OF COLUMBIA  
**MURIEL BOWSER, MAYOR**

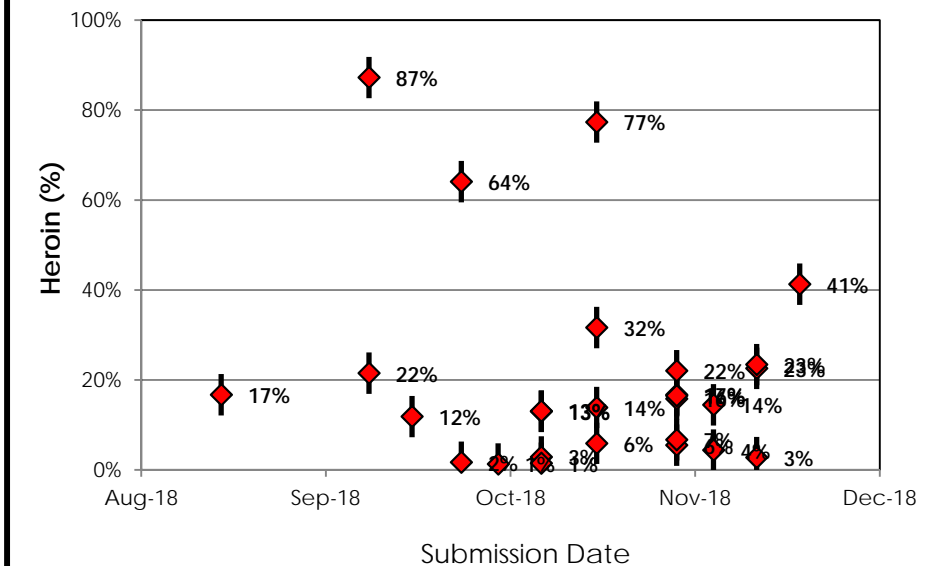
# HEROIN PURITY TRENDS

## PERCENT OF HEROIN EXHIBITS WITH FENTANYL



47% percent of Heroin exhibits contain Fentanyl

## Heroin Purity Tested at FCU



Average purity is **20%**  
(Range: <4% to 87%)

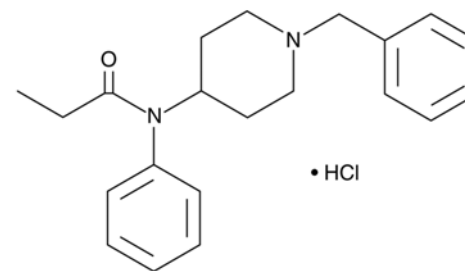
# OPIOID DISCOVERIES

---

## New Synthetic Opioids Discovered via Surveillance at DFS:

1. Benzyl Fentanyl (January, 2019)
2. Despropionyl *ortho*-fluorofentanyl (December, 2018)
3. U-51754 (November, 2018)
4. Para-fluorosobutyryl Fentanyl, PFIBF (July, 2018)\*
5. Cyclopropyl Fentanyl (August, 2018)\*
6. Methoxy Acetyl Fentanyl (November, 2017)\*
7. U-47700 (May, 2017)\*
8. Furanyl Fentanyl (May, 2017)\*

- Surveillance Samples (MPD)
- Syringe Surveillance (OCME)



Benzyl Fentanyl  
(New, 2019)



# FY19 and FY20

## CAPITAL IMPROVEMENTS PLAN

| Project                                       | FY19           | FY20           | 2 Year Total   |
|---|----------------|----------------|----------------|
| Capital and IT Equipment                      | \$1,211        | \$347          | \$1,558        |
| Capital Renovations                           | \$250          | \$0            | \$250          |
| Crime Scene Specialized Vehicles              | \$222          | \$154          | \$376          |
| Laboratory Information Management System      | \$500          | \$3,600        | \$4,100        |
| Forensic Evidence Digital Storage             | \$803          | \$2,000        | \$2,803        |
| Laboratory & Hospital Equipment (Replacement) | \$140          | \$80           | \$220          |
| <b>Total</b>                                  | <b>\$3,126</b> | <b>\$6,181</b> | <b>\$9,307</b> |

(Dollars in Thousands)

# CAPITAL AND IT EQUIPMENT

| FY19    | FY20  | FY21 | FY22 | FY23 | FY24 | 6 Year Total |
|---------|-------|------|------|------|------|--------------|
| \$1,211 | \$347 |      |      |      |      | \$1,558      |

DFS needs the following:

- Additional Crime Scene radios
- Illumina iSeq
- LEEDS comparison microscope
- Microscope digital cameras
- Direct Analysis in Real Time
- Air Science Chamber vent box
- Qiacube & Qiagility
- Ion S5/Chef System
- Q Cycler



(Dollars in Thousands)

# CAPITAL RENOVATIONS

| FY19  | FY20 | FY21 | FY22 | FY23 | FY24 | 6 Year Total |
|-------|------|------|------|------|------|--------------|
| \$250 | \$0  |      |      |      |      | \$250        |

(Dollars in Thousands)



The BSL3 suite is completed and the Rabies Necropsy Lab is in use for Rabies testing by Direct Immunofluorescent Antibody test using Fluorescent Microscope with attached camera.

# LABORATORY & HOSPITAL EQUIPMENT (Replacement)

| FY19  | FY20 | FY21 | FY22 | FY23 | FY24 | 6 Year Total |
|-------|------|------|------|------|------|--------------|
| \$140 | \$80 |      |      |      |      | \$220        |

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)
- Funding will cover replacement of specialized laboratory equipment or equipment needed to maintain a process that has been upgraded.



(Dollars in Thousands)

# CRIME SCENE SPECIALIZED VEHICLES

| FY19  | FY20  | FY21 | FY22 | FY23 | FY24 | 6 Year Total |
|-------|-------|------|------|------|------|--------------|
| \$222 | \$154 |      |      |      |      | \$375        |

## Crime Scene Sciences (CSS)

- Vehicles used to respond to crime scenes to support collection and preservation of evidence
- Vehicles are utilized 24 hours per day, 7 days a week
- CSS personnel processed 5,879 crime scenes and received 9,227 service requests in FY18
- Under the OCFO guidance, 9 crime scene vehicles will need to be replaced.



(Dollars in Thousands)



# LABORATORY INFORMATION MANAGEMENT SYSTEM

| FY19  | FY20    | FY21 | FY22 | FY23 | FY24 | 6 Year Total |
|-------|---------|------|------|------|------|--------------|
| \$500 | \$3,600 |      |      |      |      | \$4,100      |

Laboratory Information Management System – in previous years, spent \$2.2 million implementing LIMS for the:

- o Forensic Science Laboratory & Crime Scene Sciences – JusticeTrax LIMS+
- o Forensic Biology Unit – STaCSDNA
- o Public Health Lab – Chemware Horizon
- o FY19 will finalize requirements and review possible COTS LIMs products
- o FY20 will cover implementation and anticipated development.



HORIZON



(Dollars in Thousands)



DISTRICT OF COLUMBIA  
**DFS**  
DEPARTMENT OF  
FORENSIC SCIENCES

DC Department of Forensic Sciences  
Forensic Science Laboratory | Public Health Laboratory | Crime Scene Sciences

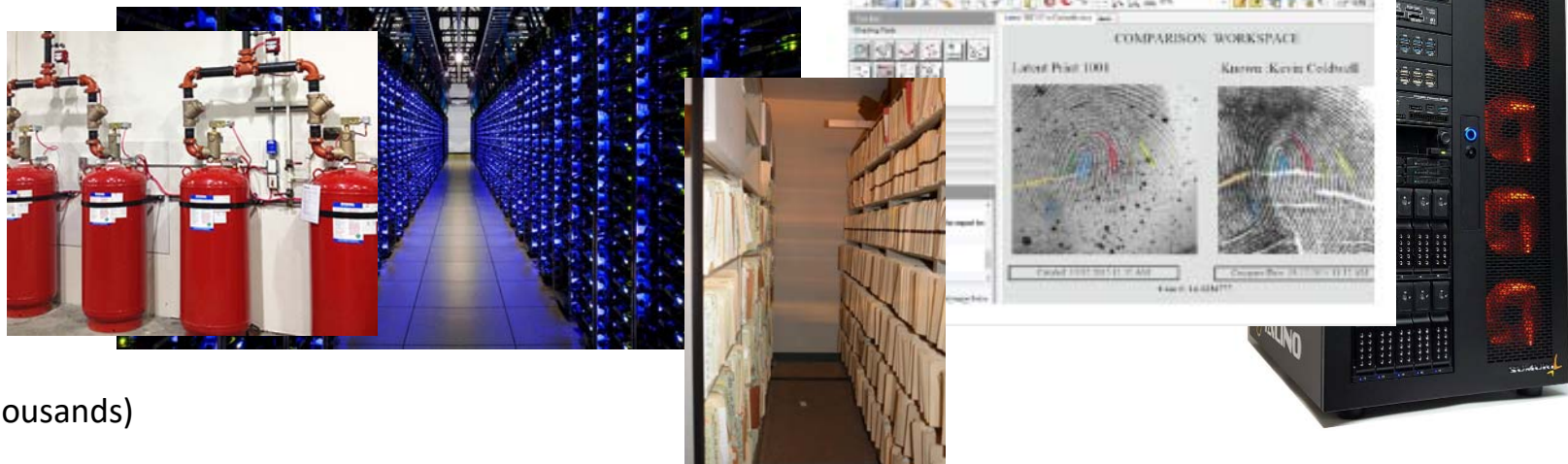
WE ARE  
WASHINGTON  
DC GOVERNMENT OF THE  
DISTRICT OF COLUMBIA  
**MURIEL BOWSER, MAYOR**

# DIGITAL FORENSIC EVIDENCE STORAGE

| FY19  | FY20    | FY21 | FY22 | FY23 | FY24 | 6 Year Total |
|-------|---------|------|------|------|------|--------------|
| \$803 | \$2,000 |      |      |      |      | \$2,803      |

## Data Protection and Digital Storage

- Purchase forensic workstation for Digital Evidence Unit
- Implement in-rack fire suppression system to protect data
- Purchase switch for High Availability and redundancy (DC-Net)
- DFS estimates potentially needing 10TB per day to keep pace with the storage needs for analytical, digital evidence for all laboratories.



(Dollars in Thousands)

# BUDGET SUPPORT ACT

---

- TITLE III. PUBLIC SAFETY AND JUSTICE
- SUBTITLE F. DEPARTMENT OF FORENSIC SCIENCES SERVICES AND FEES
- Referred to as the “Department of Forensic Sciences Services and Fees Clarification and Amendment Act of 2019”.
- New Section 7 (c-1) [lines 757 & 762] adds “public health laboratory services” (in addition to “forensic science services”)
- Lists services that DFS may provide:
  - Disease prevention, control, and surveillance testing;
  - Emergency preparedness testing
  - Food surveillance and testing; and
  - Reference and specialized testing.
- Under the new (c-2) [lines 763 & 764], District Government agencies fall under “shall provide” – same language as our current customers for forensic science services.



DISTRICT OF COLUMBIA  
**DFS**  
DEPARTMENT OF  
FORENSIC SCIENCES

DC Department of Forensic Sciences  
Forensic Science Laboratory | Public Health Laboratory | Crime Scene Sciences

WE ARE  
WASHINGTON  
DC GOVERNMENT OF THE  
DISTRICT OF COLUMBIA  
**MURIEL BOWSER, MAYOR**

# BUDGET SUPPORT ACT

---

- This means we will not charge DC government agencies but we will use MOU and intradistrict process if needed.
- This allows us to charge other jurisdictions, hospitals, and other health-related entities for services:
  - Water testing
  - Food testing (actual items)
  - Soil testing
  - Air testing
  - Human testing (STI, HIV, TB, Influenza, blood, urine testing from hospitals, whole genome sequencing)

Potential areas to provide services to: Academia, private, commercial, non-profit organizations, etc.



DISTRICT OF COLUMBIA  
**DFS**  
DEPARTMENT OF  
FORENSIC SCIENCES

DC Department of Forensic Sciences  
Forensic Science Laboratory | Public Health Laboratory | Crime Scene Sciences

WE ARE  
WASHINGTON  
DC GOVERNMENT OF THE  
DISTRICT OF COLUMBIA  
**MURIEL BOWSER, MAYOR**

# BUDGET SUPPORT ACT

---

- Under the new (c-3) [lines 765 & 766], other jurisdictions, hospitals and other health-related entities.
- Under the new 7a(b)(2) [lines 767 & 769] allows fees from "forensic science and public health laboratory services" to be deposited in the Department of Forensic Sciences Laboratory Fund.
- Under the new 16(a)(1)(A) [lines 770 & 772] changes our rulemaking authority to include:
  - (A) A fee schedule for "forensic science and public health laboratory services" provided by the Department, which may account for the provision of bulk services;
  - This gives us the capability to do a rulemaking to begin charging non-customer agencies for our services in FY20.



DISTRICT OF COLUMBIA  
**DFS**  
DEPARTMENT OF  
FORENSIC SCIENCES

DC Department of Forensic Sciences  
Forensic Science Laboratory | Public Health Laboratory | Crime Scene Sciences

WE ARE  
WASHINGTON  
DC GOVERNMENT OF THE  
DISTRICT OF COLUMBIA  
**MURIEL BOWSER, MAYOR**

# ACKNOWLEDGEMENTS

---

In closing, I would like to thank the Mayor and her staff for the support of DFS and its mission. The FY20 budget represents the city's deep commitment to public safety and its faith in objective, repeatable, and rigorously refined science. 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 tireless efforts to make the District a safer place.

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.

Thank you for the opportunity to testify today. I look forward to answering your questions at this time.



# Happy Emancipation Day April 16th

CFL Emancipation Week  
Annual Walk  
April 10, 2019

