

Forensic Science Laboratory | Public Health Laboratory | Crime Scene Sciences

Fiscal Year 2019 Performance Oversight Hearing

Before the Committee on the Judiciary & Public Safety Council of the District of Columbia The Honorable Charles Allen, Chairperson

February 6, 2020

FY 2019 APPROVED OPERATING BUDGET

Description	FY2019	FY 2019	Α
Budget	\$28,041,000	Proposed Budget	FAIR SHOT
FTEs	218.2	Financial Plan	GOVERNMENT OF THE DISTRICT OF COLUMBIA DX MURIEL BOWSER, MAYOR

Budget Component	Funding	FTEs
Local	\$26,101,000	207
Federal	460,000	5
Intra-District	1,480,000	6.25
Total	\$28,041,000	218.25



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DFS FY19 HIRING



Total interview hours = 441





FSL & PHL QUALITY

Forensic Science Laboratory (FSL)

- Reaccreditation ISO/IEC 17025:2017
 - Firearms Examination Unit (FEU)
 - Latent Fingerprint Unit (LFU)
 - Forensic Biology Unit (FBU)
 - Digital Evidence Unit (DEU)
- Scope extension within LFU Friction Ridge Enhancement
 - Transition from pre-assessment to scope extension in Friction Ridge Enhancement
 - o No findings
- FBI Quality Assurance Standards for DNA Testing: FBU Compliance
 - No findings of non-conformity 4th year in a row

Public Health Laboratory (PHL)

- Clinical Laboratory Improvement Amendments (CLIA): Certification
- Centers for Disease Control and Prevention's (CDC) Division of Select Agents and Toxins (DSAT): Certification



CRIME SCENE SCIENCES



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CRIME SCENE SCIENCES (CSS)

Measure	FY17	FY18	FY19
Number of evidence items received (CEU)	88,683	74,360	77,253
Number of crime scene service requests (CSSU)	7,844	9,227	9,069

 CSSU processed 6,541 crime scenes – nearly 700 more than last year – with the same personpower
 In FY19, CEU received 77,253 pieces of evidence, a 3.9% increase over FY18 totals





CRIME SCENE SCIENCES (CSS)

Assisted MPD to render **13,856** firearms safe from old cases in the Evidence Control Branch

Evidence backlog projects - over 10,000 items transferred









FORENSIC SCIENCE LABORATORY





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FY19 FSL **KEY PERFORMANCE INDICATORS**

KPI	Program Responsible	FY19 Q1	FY19 Q2	FY19 Q3	FY19 Q4	Target
Percentage of <u>priority cases</u>	FSL - FBU	98%	99%	100%	100%	90%
as designated by the contributor and marked in	FSL - DEU	100%	100%	100%	100%	90%
LIMS completed within 60 days from the date the analyst was assigned the case	FSL - FEU	100%	100%	100%	100%	90%
	FSL - LFU	100%	97%	100%	100%	90%
Percentage of <u>homicide cases</u> completed within 60 days from the date the analyst was assigned the case	FSL - FBU	100%	100%	96%	100%	90%
	FSL - DEU	100%	100%	100%	100%	90%
	FSL - FEU	98%	96%	98%	98%	90%
	FSL - LFU	100%	98%	98%	100%	90%



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DIGITAL EVIDENCE UNIT (DEU)

DEU nearly doubled its caseload in FY19

Year	Caseload	TAT
2017	394	4.59
2018	636	5.2
2019	1,147	2.28

DEU purchased new digital storage:

- Dell Isilon system added 148 TB of storage
- Digital storage will continue to be a need that must be met as more systems come online and HIPPA & BioWatch requirements do not permit cloud storage





NEW DIGITAL CAPABILITIES

DEU acquired the capability to unlock iPhones and Androids

iPhones Received	iPhones Unlocked	iPhones Processing
482	322	166

Expansion of Crash Data Recovery Technology allowing DEU to extract event data such as the speed during impact, deployment of seatbelts, and navigation, in addition to the existing capabilities of infotainment and telematics information.







FIREARMS EXAMINATION UNIT (FEU)

- Completed 980 cases with an average turnaround time of 37 days
- Average backlog of 253 cases in FY19 from 701 in FY18
- Conducted 2,229 test fires of weapons received

In FY19, FEU recruited two firearms examiners and a supervisor.

In FY20, FEU will validate the Evofinder Automated Ballistic Identification system to use as a virtual comparison microscope. This system is a scanning device that generates 3D images of bullets and cartridge cases used for comparison purposes.



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FORENSIC INTELLIGENCE UNIT (FIU)



More than 97% of the hits linked Agencies Cases (MPD, USPP and ATF) to each others (755 hits)

Less than 3% of hits link Agencies Cases (MPD, USPP and ATF) to Other Jurisdictions Cases (20 hits) (Montgomery County, PG County, and US Park Police)



GHOST GUNS

FEU has seen a spike in Ghost Guns used in crimes

2019	116
2018	25
2017	3
Jan 1 – Feb 5, 2020	22







GHOST GUNS

Most Common Offenses involving Ghost Guns:

- Carrying a Pistol Without a License
- o Possession with Intent to Distribute
- o Unregistered Firearms
- o Used in three homicides







FSL DIVISION INITIATIVE

DFS and Trinity University established an Educational Partnership to incorporate DFS led Forensic Pattern Recognition (latent fingerprints and firearms examination) courses into Trinity's Forensic Science Program. The course will include a "hands on" apprenticeship opportunity at DFS for Trinity students.





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LATENT FINGERPRINT UNIT (LFU)

Completed 2,724 cases with an average TAT of 13 days
Homicides and Priority Cases: 97% within 60 days
LFU has no current backlog

LFU Evidence Processing completed 2016 cases with an average TAT of 9 days.

Mideo LatentWorks Implementation:

- Successful transition of current image management (DCS4 and DIMS) to Mideo
- Incorporation in training program
- Use of GYRO in LOV and identification cases
- Customer training/notification

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FORENSIC INTELLIGENCE UNIT (FIU) FY19 AFIS IMPACT

FY19 AFIS Identifications by Offense Type



- Death (HO/DI/10-50 F)
- Property Crimes (BI, BII, UE, DOP, Thefts, SOG)
- Firearm Possession (CPWL, FIP, UF/UA)
- Robberies (Uttering)

- Assaults (AWIK/ADW/10-50 Hit and Run/Injury)
- Sexual Assaults, Kidnapping
- Carjacking (RSA I/L,UUV)

Of LFU's 1,087 latent identifications, 67% had a criminal justice impact leading to an arrest, confirming identification or providing an investigative lead

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FORENSIC BIOLOGY UNIT (FBU)

FBU received 294 Sexual Assault Kits for testing with an average turnaround time was 73 days



- All testing on sexual assault kits was completed within 90 days outlined in the Sexual Assault Victim's Rights Amendment Act (SAVRAA), with the exception of four kits due to judicial delays associated with Permission to Consume
- FBU has no current backlog



FORENSIC INTELLIGENCE UNIT (FIU) FY19 CODIS IMPACT

FY19 CODIS Hits/Matches by Offense (560)



- Deaths (HO, DI)
- Property Crimes (BI/BII, DOP, Thefts, RSA)
- Firearm Possession (CPWL, FIP, UF/UA, PWID)
- Robberies

- Assaults (AWIK/ADW/APO)
- Sexual Assaults (FDSA, Sexual Abuse Allegation, etc.)
- Carjackings
- Other (Missing person, SOG)

Of 560 CODIS Hits/Matches, almost 95% had a criminal justice impact by leading to an arrest or providing an investigative lead.



PERK TRACKING DATABASE

Allows survivors to track their sexual assault kit







PUBLIC HEALTH LABORATORY



Microbiology Unit



Immunology & Virology Unit



Tier 1 BT Lab and Tier 2 CT Lab





Molecular Diagnostics Unit





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LIVE LONG DC



- DFS has been involved in DC's
 Strategic Plan to Reduce Opioid
 Use, Misuse, and Related Deaths
- Placing our controlled substances testing in the PHL allow our Forensic Chemistry Unit (FCU) to conducts surveillance of all suspected opioids submitted to DFS to determine the composition of illicit drugs
- FCU can determine:
 - Presence and prevalence of drugs of interest

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- New synthetic opioids
- Distribution patterns

DRUG SURVEILLANCE PROGRAM SYNTHETIC OPIOIDS

Synthetic Opioid monitoring began at peak of opioid fatalities (2017)

Ten new synthetic opioids have been discovered









GEOGRAPHIC DISTRIBUTION



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PHL RESPONDS TO VAPING



DC Health submitted items from six vaping-cases to PHL:

- $_{\odot}\,$ 5 out of 6 cases were found to contain THC
- In each of the five cases, at least one cartridge contained Vitamin E Acetate

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EMERGENCE OF VITAMIN E ACETATE



MONTH YEAR (DATE SEIZED/SUBMITTED)

YEAR	SCREENED	TESTED
2017	23	3
2018	284	14
2019	874	38





SUPPORTING OUTBREAKS

Norovirus confirmed at elementary school in DC: health officials

Published November 22 | Health | FOX 5 DC



WASHINGTON (FOX 5 DC) - D.C. health officials have confirmed several cases of the Norovirus at Beauvoir — an independent, coeducational elementary school housed on the grounds of the Washington National Cathedral.

Just in...

'Star Wars: The Rise of Skywalker' is almost here, but a dark side looms



Hallmark pulls Zola commercial of same-sex couple after pressure from conservative group



Arizona dad accused of killing man who tried to enter teen daughter's restroom stall gets 8-year prison term

Girl chokes on zipper in Walmart pie, mom claims: 'Good thing I was trained'



5-year-old boy diagnosed with brain cancer rides off to treatment on a magical



NOROVIRUS IN DC SCHOOLS





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MEASLES & MUMPS TESTING

- 1,282 Measles cases in the US in 2019
- PHL brought online RNA based and serological based testing for Measles to identify cases in the District
- DFS can confirm a case within 48 hours to DC Health and drastically shortens the turnaround time for results from the CDC (typically one week)
- To date, DFS has received several requests for testing all results were negative
- PHL also validated Mumps DNA based testing in 2019 (DC had a Mumps outbreak in 2017)



MICROBIOLOGY UNIT







- Includes identification, susceptibility testing, phenotypic detection and genotypic characterization of carbapenemases
- Improved support to OCME
 - Testing and report within 12 days of receipt for organisms that cause meningitis
- Gonococcal Isolate Surveillance Program (GISP)
 - Partnership developed with HAHSTA Health and Wellness Clinic
 - Clinic perform cultures









INTERNSHIP PROGRAM

DFS had 46 interns during the 2018-2019 school year

McKinley Tech High School: 10 PHL Interns to date



Ranked #1 in Forensics Colleges "Top 25 Cool Forensic Science Internships"

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SENIOR DEPUTY DIRECTOR (BEGAN AS A DLP INTERN AT DFS)



Abdel Maliky

- Chief Operating Officer of a non-profit organization Ο
- Financial, Operation and Quality Auditor: ISO 0 9002,17025 and 15189
- Appointed as Commissioner on African Affairs by \cap Mayor Bowser, served as Vice-Chair
- 25 years of experience with expertise in quality 0 management, process improvement, risk management, due diligence and actuarial projections and forecasting
- Actuarial Consultant for Fidelity Investments and Ο advised CFOs, CIOs and HROs on financial and **Operational** issues
- Bachelor Degree in Mathematics, MBA and MS in Ο Actuarial Sciences
- Quality Specialist for Public Health Laboratory Ο
- Forensic Intelligence Manager 0
- Acting as Quality Manager and Training Manager \cap since June 2019



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OUTREACH & ENGAGEMENT

Special Projects include Peace Rally, National Forensic Science Week, Men in STEM program, Beat the Streets



Educational Events	Laboratory Tours
61	40



THE PEOPLE'S LAB





RECOGNITION FOR SERVICE

Karen A. Wiggins Room

- First African American trained at the FBI in firearms examination
- First Woman trained at the
 FBI in firearms examination
- Dedicated DC Public
 Servant for 32 years







DFS MANAGEMENT TEAM



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DIVERSITY & INCLUSION INITIATIVE

- Reyarp Strategies Group interviewed 197 employees within all levels of DFS (executive team, unit managers, supervisors & staff)
- A final assessment report was provided to staff in November
- Next steps will identify & implement tools to enhance, improve, & develop skills such as:
 - o a stronger communications pipeline
 - o vicarious trauma counseling
 - Mid-management development
 - o team building
 - o conflict resolution







THANK YOU



The Women and Men at DFS Mayor Bowser, Deputy Mayor Donahue and the DC Council



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