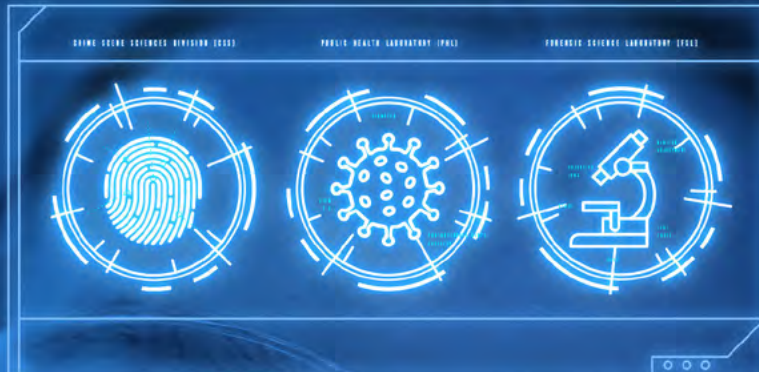


STATE-OF-THE-ART SCIENCE, SAFER STREETS.

2019 ANNUAL
REPORT

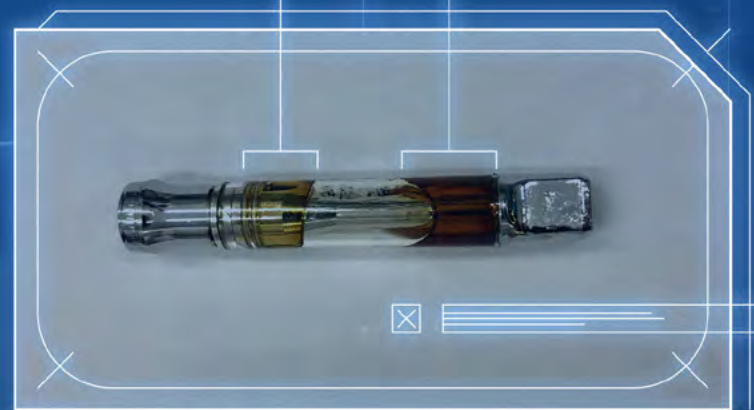


DISTRICT OF COLUMBIA
DFS
DEPARTMENT OF
FORENSIC SCIENCES

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



2. STRESSOR TO BE IDENTIFIED
HABITAT SIMILARITY
HABITAT TO IDENTIFY



WATER/LEVEL

WATER/TEMP



WATER/QUALITY



98%

CONTINUOUSLY IMPROVING

3806430015

During the initial 1000h, the highest values for organic materials and elements have been observed as the system has begun.

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LETTER FROM THE MAYOR



Dear Resident:

The nation's capital must always be a leader in all aspects of government. The Department of Forensic Sciences (DFS) leads in matters of public health and safety by continuing to be on the cutting-edge of science and technology. The scientists at DFS have the passion and dedication necessary to be completely independent and self-reliant in delivering accurate forensic science to fight crime and public health challenges that threaten our city.

During Fiscal Year 2019, DFS implemented a range of strategic initiatives and delivered on a host of performance measures that fortified their independence. Measures of success include: initiating a partnership with Trinity University to provide students with a "hands-on" apprenticeship in forensic science and a pathway to the middle class, working to protect the National Capital Region against bioterrorism threats, and helping to create the Physical Evidence Recovery Kit database allowing sexual assault survivors to track their sexual assault kit forensic exam.

I stand behind this agency and my entire Administration as we work collectively to keep DC residents and visitors safe from crime and from public health problems. I am confident that our synergy, commitment, and strong leadership will continue to make the District of Columbia an ideal place to live, work and visit.

Please enjoy DFS' 2019 synopsis of "State-of-the-Art Science, Safer Streets."

Sincerely,

Muriel Bowser
MAYOR

LETTER FROM THE DIRECTOR



Dear Resident:

As the COVID-19 global pandemic emerges introducing many Americans to the essential work of public health and forensic laboratories, the Department of Forensic Sciences (DFS) stands ready to identify and respond to the invisible threats that can endanger the health and well-being of those who call the nation's capital home. It is our job to examine what cannot typically be seen – from tiny airborne particles that carry deadly illnesses to untraceable weapons used in the most heinous of crimes. The accomplishments and foresight of our diverse team of professionals encompass our guiding principle for Fiscal Year 2019 (FY19): State-of-the-Art Science, Safer Streets.

Thanks to new technical capacities and accreditations in FY19, DFS continues to lead in forensic science efforts. Not only are we independently capable of meeting all of the District's forensic science needs, but we are also able to make our own contributions to the field. Our research has wide-reaching and important impacts on the accuracy and reliability of criminal investigation and prosecution, public health and homeland security.

Thanks to Mayor Bowser's and the DC Council's continued investment in the people of DFS, the tools they use, and techniques available to them, we are proud to have this opportunity to share our FY19 annual report with you, to demonstrate that State-of-the-Art Science leads to Safer Streets.

Sincerely,

Jenifer Smith, Ph.D.
DIRECTOR

OPERATIONS

DFS' Operations team provides high-level oversight and support to each division within the agency: Crime Scene Sciences (CSS), Forensic Science Laboratory (FSL), Public Health Laboratory (PHL) and the Training and Quality team. The following pages include our FY19 workload measures and major accomplishments by area of responsibility.

OPERATIONS WORKLOAD MEASURES



HUMAN RESOURCES
Number of Employees
On-boarded



**FORENSIC INFORMATION
TECHNOLOGY**
Number of IT Service
Requests Received

OPERATIONS ACCOMPLISHMENTS

Purchasing and Budgeting

Identifying and securing funds to better serve residents: Each year DFS receives local government support and works to identify alternative funding sources, such as federal government grants, that target specific forensic science and public health

issues. In FY19, the Public Health Lab (PHL) received funding for the Gonococcal Isolate Surveillance Program (GISP) from the Centers for Disease Control and Prevention (CDC) Epidemiological Laboratory Capacity grant and began testing for gonorrhea from the DC Health and Wellness Center.

Human Resources

Attracting the right talent for the agency: In FY19, DFS implemented several successful outreach efforts resulting in 28 new hires, including the department's first Human Resources Manager and Director of Communications.

Information Technology

Improving our systems to facilitate ongoing work: The Forensic Technologies Unit (FTU) is housed within the Operations team and manages several vital and highly specialized systems that support the work of our agency. This year, FTU began the process of integrating DFS' Laboratory Information Management System (LIMS) with Metropolitan Police Department (MPD) EMS to support a unified system to track evidence and property. FTU also completed the migration from old storage to new flash blade storage for virtual machines and databases.



Cross-Divisional Initiatives

Overtime system improvements: In FY19, DFS revamped the overtime authorization system as a part of the one-stop-shop initiative to support the District's overtime laws and internal policies.

Employee retention plan: In FY19, DFS worked with the District Government Department of Human Resources (DCHR) to implement a retention program for scientists who are examiners within the Firearms Examination Unit (FEU).



CRIME SCENE SCIENCES DIVISION (CSS)

CSS plays a vital role in the District's response to crime and crime scenes. Our scientists work to preserve evidence at, or as close as possible to, its original state until it can be recorded and brought back to the laboratory for analysis. CSS provides high-quality, round-the-clock support through its two units—the Central Evidence Unit (CEU) and the Crime Scene Sciences Unit (CSSU).

CEU WORKLOAD MEASURES

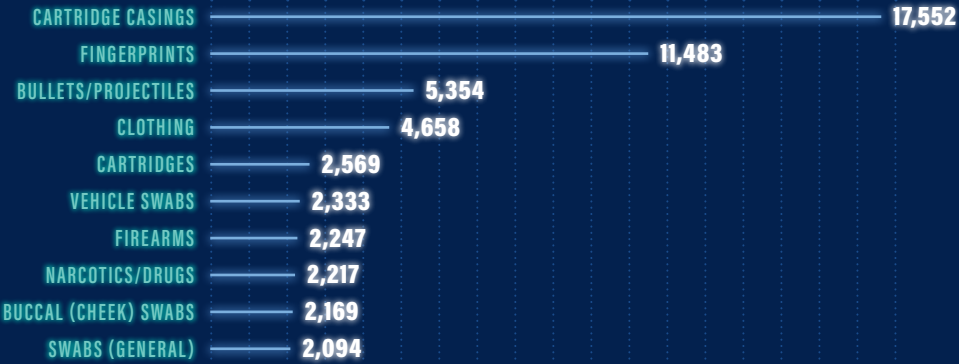


PERCENT INCREASE
OVER FY18



PIECES OF EVIDENCE
RECEIVED IN FY19

MOST COMMON
TYPES OF EVIDENCE
RECEIVED BY CEU



CEU ACCOMPLISHMENTS

Eliminating backlogs: CEU eliminated the backlog of more than 10,000 items from the storage vault. The items included firearms, swabs, trace evidence and autopsy evidence.

CSSU WORKLOAD MEASURES



CRIME SCENES
INDEPENDENTLY
PROCESSED BY
CSSU IN FY19



SERVICE
REQUESTS
RECEIVED IN
FY19





BREAKDOWN OF CSS ACTIVITY by Quarter

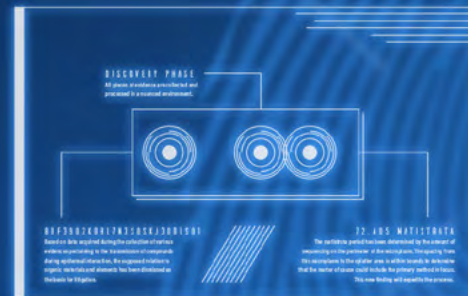
	Q1	Q2	Q3	Q4	FY19 TOTALS
Number of evidence items received (CEU)	17,798	18,178	19,861	21,416	77,253
Number of crime scene services requested (CSSU)	2,312	2,208	2,053	2,496	9,069

CSSU ACCOMPLISHMENTS

Conducting training on Leica: CSSU implemented a training program to DFS' law enforcement partners of the Leica 3D laser capabilities, the most advanced tool used today for creating a 3D digital reproduction of a crime scene.

Rendered Safe Project: Through a collaborative effort with MPD, in FY19 CSSU rendered 13,586 firearms from old cases safe at the Evidence Control Branch.

FORENSIC SCIENCE LABORATORY (FSL)



FSL has a particularly unique charge in support of our organizational thrust, because we house the largest laboratory within DFS. We provide a comprehensive set of services involving the collection, examination, analysis and reporting of physical evidence submitted in criminal cases.



FSL ACCOMPLISHMENTS

DFS Educational Initiative: In FY19, DFS established a partnership with Trinity University and developed a Pattern Recognition Course, which forms part of the university’s Forensic Science Program.

FORENSIC INTELLIGENCE UNIT (FIU)

FIU is charged with ensuring that evidence submitted to FSL is prioritized, subjected to all appropriate testing and reported in a timely and efficient manner. FIU acts as a statistical review board of sorts, following FSL’s testing and reports through their return to DFS stakeholder agencies and tracking their effects and impacts in the criminal justice process.

FIU WORKLOAD MEASURES

FIU’s FY19 requests for testing are broken out by unit, illustrating the relative volume of requests passed on to each unit.

FIU CUSTOMER REQUESTS

by Unit	FBU	FEU	DEU	LFU	EVID PROC*	FY19 TOTALS
Metropolitan Police Department (MPD)	1,386	213	702	625	298	3,224
United States Attorney’s Office (USAO)	590	42	93	86	39	850
Office of the Attorney General (OAG)	24	2	4	5	4	39
Office of Inspector General (OIG)	0	0	3	0	0	3
Others	13	9	27	12	21	82
Total	2,013	266	829	728	362	4,198

*LFU Evidence Processing was formerly referred to as Chem Lab.

FSL automatically initiates forensic processing of all firearms and related evidence as depicted in the below chart, in addition to the handling of all customer-generated requests:

FIU PROACTIVE TESTING

	TEST FIRES	FIREARM ANALYSIS	EVIDENCE PROCESSING	LATENT ANALYSIS
FEU	2,229	497	N/A	N/A
LFU	N/A	N/A	1,228	386



FIU ACCOMPLISHMENTS

Supporting the Mayor's FY19 Summer Crime Initiative (SCI): For the Mayor's FY19 SCI, FIU was successful in tracking daily offenses, confirming evidence submissions to DFS as well as prioritizing forensic examination requests, and collating analyzed information into viable intelligence.

Performing major cases tracking: FIU was able to determine linkages between offenses and those linked through DNA tests or through National Integrated Ballistic Information Network (NIBIN), a

database that allows scientists to upload and check digital images of cartridge casings against similar images uploaded by other forensics laboratories nationwide.

Analyzing intelligence impact: FIU and the MPD Investigative Services Branch collaborated to determine the criminal justice impact of various pieces of forensic evidence. Impact, in these cases, is defined by evidence that leads to an arrest, confirmation of an arrestee or provides an investigative lead.

Automated Fingerprint Identification System (AFIS): FIU investigated 1,087 latent print identifications made by LFU through AFIS, a biometric database that uses digital imaging technology to obtain, store and analyze fingerprint data to determine impact. Sixty-seven percent of those AFIS identifications had a criminal justice impact.

Combined DNA Index System (CODIS): FBU scientists use CODIS to search DNA profiles to possibly link violent crimes to each other and to known offenders. CODIS yielded 560 hits or matches

for offenses ranging from robberies, carjacking and property crimes to sex cases, assaults and offenses that resulted in death. Of these hits, FIU determined that almost 95 percent had a criminal justice impact.

National Integrated Ballistic Information Network (NIBIN): There were also outcomes of forensic intelligence linking NIBIN hits to MPD cases. Of the 775 NIBIN hits produced by FEU, 97 percent (755 hits) linked MPD cases to each other, and the remaining 3 percent linked MPD cases to outside jurisdictions, namely in Maryland.

DIGITAL EVIDENCE UNIT (DEU)

Responsible for extracting and analyzing seized digital evidence from nearly any device, our DEU scientists utilize evolving techniques in digital forensics in order to obtain data from devices that are part of crime scenes.

DEU KEY PERFORMANCE INDICATORS

DEU consistently performed at 100 percent for quarterly processing of priority and homicide cases marked in the Laboratory Information Management System (LIMS) and completed within 60 days.



PERCENTAGE OF PRIORITY CASES COMPLETED WITHIN 60 DAYS

As designated by the contributor and marked in LIMS, 60 days from the date the analyst was assigned the case.



PERCENTAGE OF REQUESTED HOMICIDE CASES COMPLETED WITHIN 60 DAYS

From the date the analyst was assigned the case.

DEU CASE STATISTICS

Each year, DEU experiences significant increases in caseload. As in the previous fiscal year, in FY19, DEU nearly doubled its caseload over FY18.

DEU CASEWORK

By Year	CASELOAD	TAT
2014-15	23	N/A
2016	98	N/A
		for Annual
2017	394	4.59
2018	636	5.2
2019	1,147	2.28

DEU ACCOMPLISHMENTS

Implementation of new digital storage: The Dell Isilon system was purchased adding 148TB of storage. This will continue to allow DEU to provide high-quality, reliable and accurate forensic science using cutting edge technology in order to support investigation for the purpose of enhancing public safety.

Unlocking smart phones: DEU scientists acquired the capability to unlock iPhones and Androids. This capability has allowed access to data previously unattainable.

FIREARMS EXAMINATION UNIT (FEU)

Firearms are used in various types of crimes including rape, robberies, homicides and assaults. It is FEU's job to examine and compare firearms as well as the tool marks.

FEU KEY PERFORMANCE INDICATORS

FEU's FY19 target was to process 90 percent of received samples related to priority and homicide cases within 60 days from the date the analyst was assigned the case. FEU exceeded this target, consistently performing at 100 percent for priority and 96 percent or better for homicide cases.



PERCENTAGE OF PRIORITY CASES COMPLETED WITHIN 60 DAYS
As designated by the contributor and marked in LIMS, 60 days from the date the analyst was assigned the case.



PERCENTAGE OF REQUESTED HOMICIDE CASES COMPLETED WITHIN 60 DAYS
From the date the analyst was assigned the case.

FEU WORKLOAD MEASURES

FEU utilizes the NIBIN system to provide leads in shooting-related investigations. Below is the quarterly breakdown of entries, hits and firearms test fired:

FEU MEASURES by Quarter	Q1	Q2	Q3	Q4	FY19 TOTALS
NIBIN Entries	891	1,047	1,131	1,188	4,257
NIBIN Hits	187	233	178	177	775
Firearms Test Fired	450	571	589	619	2,229

FEU ACCOMPLISHMENTS

Evaluation of Automated Ballistic Identification System: FEU developed a strategic initiative to explore workflow applications for the Leeds Evofinder Automated Ballistic Identification System. This system is a scanning device that generates digital images of bullets and cartridge cases in both two-dimensional and three-dimensional formats for examination,

comparison, and correlative searches within existing databases.

Responding to the dramatic rise in homemade firearms: In FY19, FEU saw a 366 percent increase in receipt of homemade firearms recovering 84 assembled firearms. These firearms, often called "ghost guns" due to their untraceable nature, are manufactured by individuals and lack serial numbers.

FORENSIC BIOLOGY UNIT (FBU)

FBU continued to improve its serological and DNA testing (e.g., blood, skin cells and semen), surpassing its prior year performance levels for the second year running. In FY19, DFS received 294 sexual assault kits from MPD and tested them with an average turnaround time of 73 days.

FBU KEY PERFORMANCE INDICATORS

FBU performed at 98 percent or better with respect to processing priority cases within 60 days, and 96 percent or greater when handling homicide cases.



PERCENTAGE OF PRIORITY CASES COMPLETED WITHIN 60 DAYS
As designated by the contributor and marked in LIMS. 60 days from the date the analyst was assigned the case.



PERCENTAGE OF REQUESTED HOMICIDE CASES COMPLETED WITHIN 60 DAYS
From the date the analyst was assigned the case.

FBU WORKLOAD MEASURES

FBU uses CODIS to search DNA profiles to possibly link violent crimes to each other and to known

offenders. In FY19, FBU completed 654 CODIS entries and obtained 228 hits.

FBU MEASURES by Quarter	Q1	Q2	Q3	Q4	FY19 TOTALS
Number of CODIS Database Entries	138	172	141	203	654
Number of CODIS Database Hits	37	53	60	78	228

FBU ACCOMPLISHMENTS

Contributing to the validation of new technologies: In September 2019, FBU attended the 28th Congress of the International Society for Forensic Genetics in Prague, Czech Republic to provide support for their accepted scientific poster on Establishing STR and Identity SNP analysis thresholds for reliable interpretation & practical implementation of MPS Genomic DNA (gDNA) casework.

Validating Next Generation Sequencing (NGS): FBU pioneered the validation of NGS in collaboration with an external vendor. On May 1, 2019, the FBI National DNA Index System (NDIS) Board approved the use of two NGS kits for laboratory use and upload to the National DNA Database.

LATENT FINGERPRINT UNIT (LFU)

LFU analysts examine unknown or latent fingerprints and palm prints collected from items of evidence to determine their value. Suitable latent prints are then compared to known fingerprints to try and determine their source. In FY19, LFU received Evidence Processing accreditation.



LFU KEY PERFORMANCE INDICATORS

LFU's performance target for FY19 was to handle priority and homicide cases within 60 days. LFU far exceeded the 90 percent standard and consistently performed at 97 percent or higher with respect to priority and homicide cases completed within the stated timeframe, for each quarter of the year.



PERCENTAGE OF PRIORITY CASES COMPLETED WITHIN 60 DAYS
As designated by the contributor and marked in LIMS. 60 days from the date the analyst was assigned the case.



PERCENTAGE OF REQUESTED HOMICIDE CASES COMPLETED WITHIN 60 DAYS
From the date the analyst was assigned the case.

LFU WORKLOAD MEASURES

The collection and entry of latent fingerprints into AFIS is an integral function of LFU. The division maintained its threshold for high levels of entries for three

years running. In FY19, LFU entered a total of 7,238 entries into AFIS and made a total of 1,553 hits. Below, AFIS entries and hits are broken down by quarter:

LFU MEASURES by Quarter	Q1	Q2	Q3	Q4	FY19 TOTALS
AFIS Entries	1,985	1,526	1,502	2,225	7,238
AFIS Hits	354	373	356	470	1,553

LFU ACCOMPLISHMENTS

Managing the transition of initial evidence processing to LFU: In FY18, responsibility for this initial evidence processing and preservation successfully transitioned from CSSU to LFU through a pilot program. Once the pilot was successfully completed, LFU hired three full-time analysts, identified and started purchasing new technology and reagents, and redesigned its Evidence Processing Laboratory.

Mideo Implementation: In FY19, LFU completed the successful transition of the former image management system (DCS4 and DIMS) to Mideo LatentWorks, which has also been implemented in latent print examinations.

Managing casework to achieve zero backlog: LFU processed over 1,000 requests in FY19 with zero backlog for those requests.

PUBLIC HEALTH LABORATORY (PHL)



PHL is responsible for thoroughly testing samples of various materials for bacterial and viral infections, heavy metals, toxic or volatile materials and other hazards to public health and safety.

PUBLIC HEALTH LABORATORY (PHL) TESTING

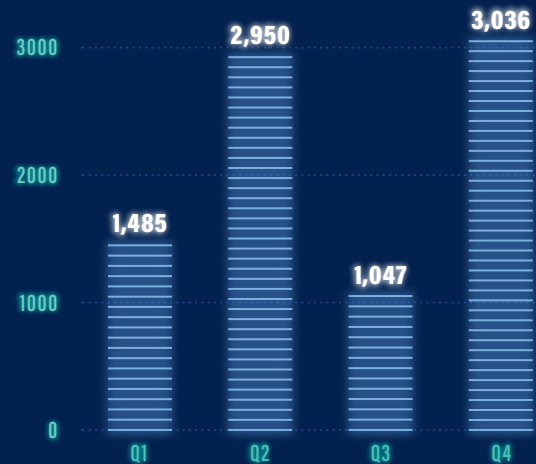
PHL performed a total of 8,518 tests on samples received in FY19 (200 percent more than FY18), a total

of 46 proficiency tests and a total of 28 validation efforts to bring on new tests.

PHL provides clinical diagnostic testing, disease surveillance, emergency response support, applied research, laboratory training and other essential services through its eight units: Accessioning Unit (ASU), Bioterrorism Unit (BT), Microbiology Unit (MBU), Clinical Toxicology Unit (CTU), Immunology/Virology Unit (IVU), MDU, Forensic Chemistry Unit (FCU), and the Office of Health and Safety.

NUMBER OF TESTS PERFORMED

By Quarter



PHL KEY ACCOMPLISHMENTS

Major increases in influenza sample testing volume: In FY19, the number of influenza samples tested at PHL increased nearly 200 percent from 822 to 1,623. PHL reported 338 Influenza subtypes to CDC, predominantly Influenza A subtype.

Validation of testing for Vaccine Preventable Diseases:

Despite being eradicated from the United States in 2000, measles has now reached the highest case number in the United States since 1992 with 1,282 reported cases nationwide in 2019. In response to the growing number of cases, the PHL brought online molecular based and serological based testing for measles in 2019 to identify cases in the District.

Tracking and discovering new drugs across the District:

In FY19, FCU began monthly opioid surveillance reporting to stakeholders. The program includes visual graphics and geographic information

system (GIS) mapping of confiscated drug locations in the District. FCU has discovered eight new synthetic cannabinoids and four synthetic opioids in FY19.

Helping save DC residents' lives through rabies testing:

In FY19, PHL received 248 animal brain specimens for rabies testing and 43 percent of these animals had human exposure (bites or contact with animal saliva including licks). About half of the submissions were domestic animals. The overall rabies positivity in the District was 4.4 percent and 21.7 percent in raccoons.

TRAINING & QUALITY



The Training and Quality team ensures that the agency maintains the highest standards with respect to technology and emerging methodologies, and regularly conducts trainings to equip scientists with the latest advancements in forensic science.

TRAINING AND QUALITY WORKLOAD MEASURES

Scientists completed a total of 3,719 hours of training in FY19. Below is a breakdown of training hours by employees over the past four years:

TRAINING & QUALITY MEASURES by Year	FY16	FY17	FY18	FY19
Hours Completed by Employees	N/A	2,200	3,400	3,719



TYPES OF TRAINING

Agency

- » Launched Diversity and Inclusion Initiative with leadership training

Multiple Divisions

- » Office of the Chief Medical Examiner (OCME) Field Disaster Morgue Training
- » ANSI National Accreditation Board (ANAB Assessor Course)

Crime Scene Sciences Division

- » Basic Bloodstain Pattern Recognition Course
- » Difficult Injury Photography
- » 3D Shoe Impression Photography and Casting
- » Courtroom Testimony Techniques
- » 33 scientists received International Association of Identification Certification

Forensic Science Laboratory (Forensic Biology Unit)

- » From Training to Trial... Probabilistic Genotyping
- » Annual CODIS Conference

Forensic Science Laboratory (Firearm Examination Unit)

- » Evofinder Automated Ballistics Identification User Training
- » Forensic Analysis of Shooting incidents

Forensic Science Laboratory (Digital Evidence Unit)

- » Advanced Cell Phone Data Recovery
- » Crash Data Recovery Technology Course

Forensic Science Laboratory (Latent Print Examination Unit)

- » Advanced Latent Analysis

Public Health Laboratory

- » CDC Influenza Testing Training
- » Options X: International Influenza Conference Singapore
- » DCLS Bioinformatics training
- » Bionumerics PulseNet CDC training
- » CDC CaliciNet Annual Meeting



TRAINING AND QUALITY ACCOMPLISHMENTS

Accreditation of chemical enhancement procedures for latent fingerprints: In FY19, LFU received accreditation to make chemical enhancement a DFS subcategory. LFU finalized policies, standard operating procedures, quality assurance and control documents, associated with the chemical enhancement of latent prints, to demonstrate compliance with international accreditation requirements.

The following audit was conducted in FY19:

DFS - ANAB Audit: FEU, LFU, DEU, FBU and FCU underwent the annual inspection for accreditation in accordance with ISO/ IEC 17025:2017 and AR3125. This surveillance assessment was successfully completed, and accreditation has been continued by ANSI National Accreditation Board (ANAB). Additionally, FBU successfully passed its FBI Quality Assurance Standards (QAS) audit and, for four consecutive years, has yielded no findings of non-conformance with the standards.



OUTREACH



ALPHABET

Alphabet is a program that helps students learn to read by using letters of the alphabet to form words.

ALPHA

Alpha is a program that helps students learn to read by using letters of the alphabet to form words.

BETA

Beta is a program that helps students learn to read by using letters of the alphabet to form words.

GAMMA

Gamma is a program that helps students learn to read by using letters of the alphabet to form words.

DELTA

Delta is a program that helps students learn to read by using letters of the alphabet to form words.

ETA

Eta is a program that helps students learn to read by using letters of the alphabet to form words.

THETA

Theta is a program that helps students learn to read by using letters of the alphabet to form words.

PHI

Phi is a program that helps students learn to read by using letters of the alphabet to form words.

CHI

Chi is a program that helps students learn to read by using letters of the alphabet to form words.

Community outreach is critical to DFS' mission. It is the vehicle by which we engage with and educate District residents about our work, continue to build trust in DFS' services within our neighborhoods and support a robust Science, Technology, Engineering and Mathematics (S.T.E.M.) career pipeline for District residents and those that choose to work in our city.



OUTREACH INITIATIVES

DFS awards ceremony

This ceremony was designed to celebrate our 6th anniversary and acknowledge outstanding contributions from the DFS team. Employees were nominated by their peers and recognized across several categories including: Employee of

the Year, Supervisor of the Year, Years of Service Award, Gauntlet Award for Teams, and the Phoenix Award—a one-time recognition of DFS employees and agencies and individuals outside DFS for their leadership and creative solutions.

Purple Thursday

In FY19, we held an employee-wide initiative to wear purple in honor of Domestic Violence Month.

Celebrate our veterans

On Veteran's Day, DFS saluted veterans for their service to our country and for their contributions to forensic science.

Holiday initiatives

In honor of the holiday season, DFS hosted an internal toy drive to collect gifts for District youth between 5 and 10 years old. Our staff also participated in MPD's 6th District holiday party.

DFS Crab Feast

DFS employees were invited to a four-hour staff appreciation event dubbed "Crab Feast." More than 150 staff members attended.

Health and wellness initiatives

In FY19, DFS held a blood drive that led to the collection of 22 units of blood, saving 66 lives. The event also encouraged 13 employees to become first-time donors.





K-12 educational outreach

DFS scientists and staff participated in more than 60 outreach programs designed to help elementary, middle and high school students understand some of the work we perform within the agency.

Men in S.T.E.M.

This mentoring program finds creative and effective ways to introduce students to the world of forensic science.

Gun Violence Awareness Rally

DFS employees participated in the gun violence prevention rally to encourage responsible gun ownership.

National Forensic Science Week

This local event was held September 16-20, 2019, and included a myriad of activities across the city. DFS conducted community outreach during this event and hosted an in-house kick-off that brought together nearly 100 individuals across the city to learn about the power of forensic science and how it is used to keep our streets safe.

Outreach to local universities and colleges

DFS staff gave student and faculty presentations to several universities including Bowie, Penn State and University of Baltimore.





FUTURE PROJECTS

The accomplishments of FY19 allow DFS to build on the agency's success to further enhance public safety for DC residents. DFS is continually looking for opportunities to train and prepare for any public health or safety crisis that may occur.



Operations

- » Streamline budget planning, formulation and execution processes
- » Implement more efficient contract performance methods to achieve greater fiscal discipline
- » Create synergy between Capital Asset Replacement Scheduling System (CARSS) and DFS' electronic asset inventory management system, inFLOW

Crime Scene Sciences Division (CSS)

- » Develop a presentation for MPD on the collection of evidence, improving communication and expanded training opportunities
- » Complete the CEU refrigerator and freezer inventories, add all items into LIMS
- » Expand training opportunity with the interagency crime scene group

Forensic Science Laboratory (FSL)

- » **Firearms Examination Unit (FEU):** Validate the EvoFinder for casework
- » **Latent Fingerprint Unit (LFU):** Go paperless
- » **Forensic Biology Unit (FBU):** Implementing NGS platform for DNA testing and Marshall University partnership for Qiagen... QIAsymphony extraction instrument validation
- » **Forensic Intelligence Unit (FIU):** Examine and track the impact of Forensic Intelligence Reports from FSL Units in the criminal justice process

- » **Digital Evidence Unit (DEU):** Increase video enhancement capabilities (subject to funding approvals)

Public Health Laboratory (PHL)

- » **Forensic Chemistry Unit (FCU):** Expand testing capabilities for the opioid surveillance laboratory in support of the DC Opioid Strategy, "Live. Long. DC."
- » **Immunology Virology Unit (IVU):** Development and Validation of a panel of Non-Influenza Respiratory Viruses using Hologic Panther-Fusion system
- » **Microbiology Unit (MBU):** Implement appropriate techniques to rapidly identify Legionella isolates from both environmental and clinical sources
- » **Molecular Diagnostic Unit (MDU):** Clinical Laboratory Improvement Amendments (CLIA) validation of Whole Genome Sequencing (WGS) to report results clinically to healthcare providers; development of field-testing protocols for DNA based on-site testing in outbreak situations
- » **Clinical Toxicology Unit (CTU):** Implement quantitative toxicology testing for persons undergoing medically assisted treatment for controlled substances

Training & Quality

- » Expand and track internal quality specific training to increase employee familiarization with the latest laboratory guidelines and regulations
- » Develop DFS Training Strategy to include Individual Training Plans (IDP) that correlate appropriate training to the designated position descriptions



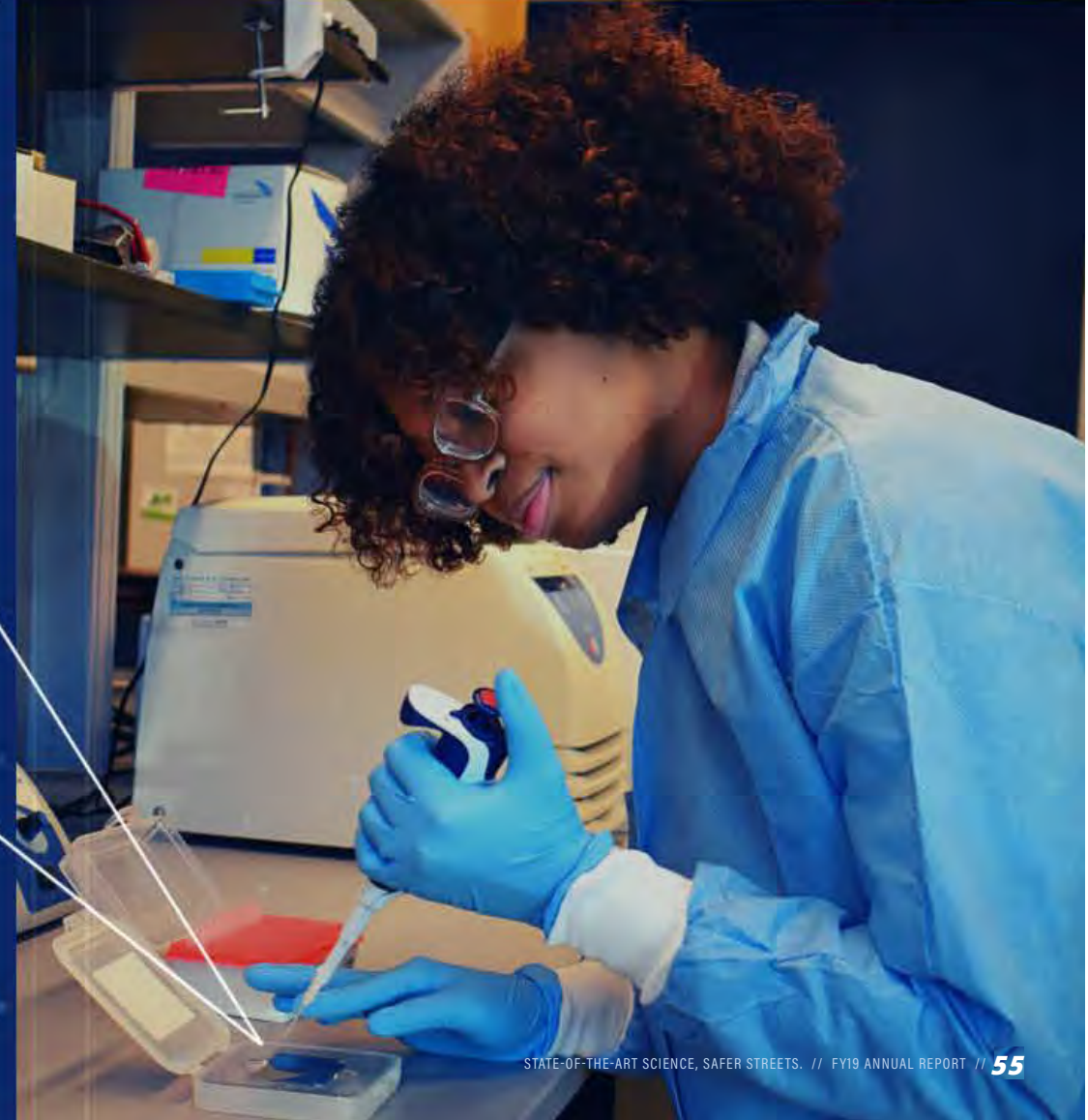
INTERN SPOTLIGHT



From the fall of 2018 through 2019, DFS attracted 46 interns through feeder programs across the country including US Army, DC Department of Disability Services, National Institutes of Health, McKinley Technology High School and multiple colleges and universities.

Cooldest Internship: The DFS internship program was voted #1 in the Coolest Forensic Science Internship by Forensics Colleges.

McKinley Tech Internship: The Public Health Lab (PHL) has hosted 10 McKinley Tech Biotechnology students. The students complete their senior projects for the school's annual S.T.E.M. Fair while learning about basic bacteriology and laboratory microbial identification systems.



INTERNS

Marie Shepard
Cierra Wiggins
Elizabeth Summerlin
Kim Nguyen
Samira Taylor
Casey Ryan
Shannon Taylor
Cristina Valianatos
Reyna Osbourne
Kayla Witmer
Miana Johnson
Frank Bailey
Emily Harrison
Christina Scott
Sheldone Horsford

Alexandra Moste
Brianna Starr
Cara Hazen
Anna Stuteville
Bailey Jones
Jade Bowman
Kylie Rapso
Melodie Nasr
Gabrielle Ogelsby
Francesca Winborn
Jasmine Penn
Jimi Aromolaran
Kashmiere Hayes
Olushola Shokunbi
Catarina Conran

Maniki Mathur
Yijian Cao
Sharon Brown
Emily Johnson
Rinella Casseus
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