

2021
ANNUAL
REPORT

SOLID SCIENCE. SAFER STREETS.



DISTRICT OF COLUMBIA
DFS
DEPARTMENT OF
FORENSIC SCIENCES



GOVERNMENT OF THE
DISTRICT OF COLUMBIA
DC MURIEL BOWSER, MAYOR



IN FISCAL YEAR 2021 (FY21),

the Department of Forensic Sciences (DFS) faced many challenges. A surge in violent crime, the ongoing coronavirus pandemic, and the suspension of forensic casework hindered the agency's ability to provide quality, timely, accurate, and reliable forensic science services using best practices and the best available technology.

The agency's enabling statute requires accreditation by a national accrediting organization. In April 2021, the ANSI National Accreditation Board (ANAB), the laboratory's accrediting body, suspended and

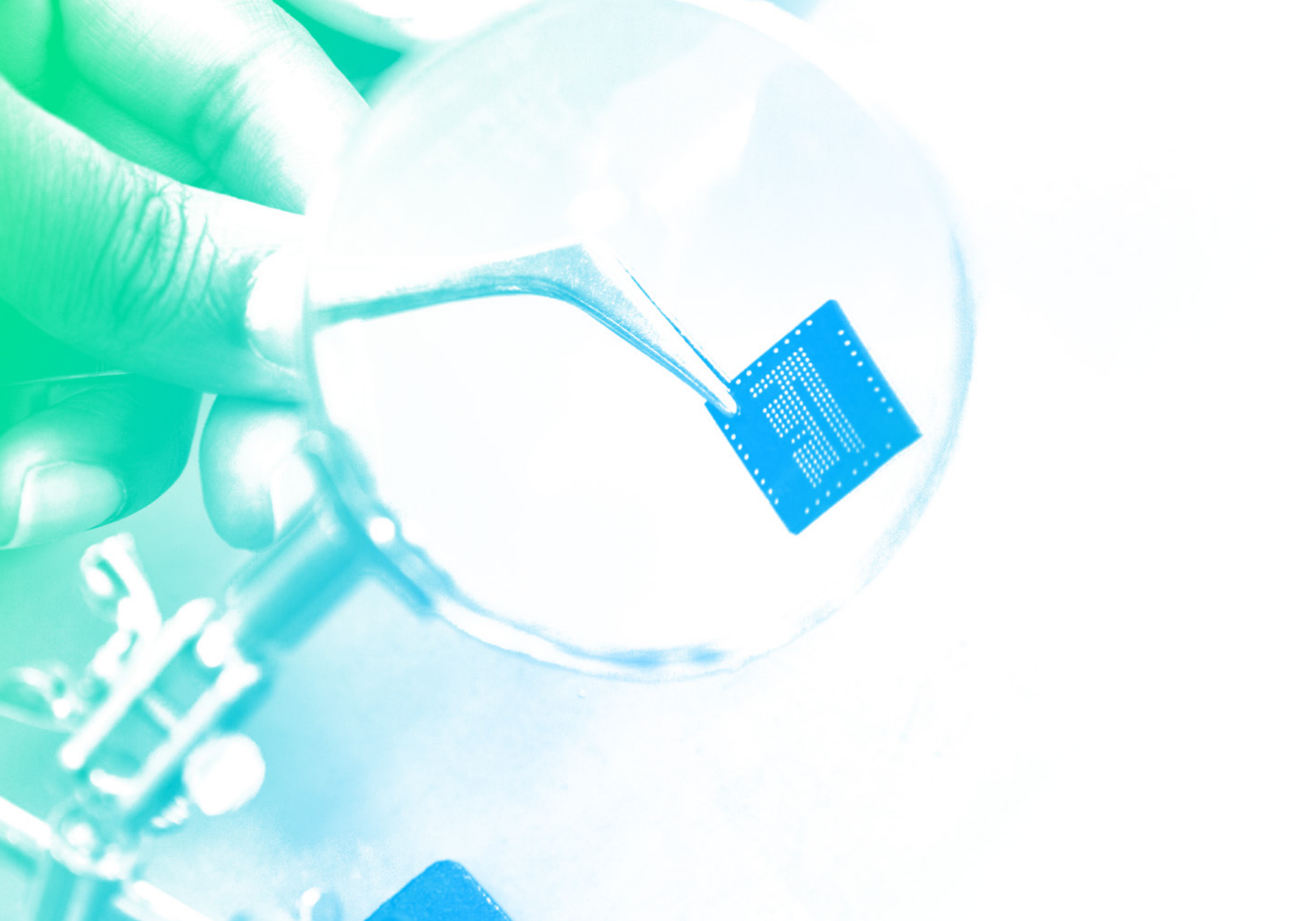
later withdrew the accreditation for all agency operations involving the analysis of forensic evidence. This action brought all internal forensic work to a halt.

ANAB's decision followed a report issued by the United States Attorney's Office and Office of the Attorney General for the District of Columbia on the operations at DFS, primarily within the Firearms Examination Unit. The report alleged mismanagement and conflicting results of forensic firearms examinations.

To address the allegations, Mayor Muriel Bowser commissioned SNA

International, a private firm with extensive forensic science and laboratory experience, to conduct a broadscale and independent audit of the agency and develop recommendations to assist with re-obtaining accreditation.

The forensics work at DFS is integral to the fair administration of justice. The agency remains committed to its goal: Abiding by the District's stated policy of having a forensics lab that is independent of prosecutors and law enforcement while fully supporting transparency, accountability, and trust in the criminal justice system.



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LETTER FROM THE DIRECTOR

Dear Resident:

The Department of Forensic Sciences is steadfast in its commitment to ensure the health and safety of the residents and visitors of the District of Columbia. Despite the significant challenges faced in FY2021, the basis of our science is solid, and our agency is firm in its conviction that unbiased science is vital to the administration of impartial justice.

This past year, a dedicated corps of top-level scientists continued to report to work and make a meaningful impact on the quality of life of District residents. Our team of crime scene scientists work 24 hours a day responding to countless shootings and other violent crime in all the District's eight wards. The members of the Public Health Laboratory continued to lead much of the District's

COVID-19 testing and genomic sequencing to both frontline employees and residents. The Forensic Chemistry Section conducted critical drug surveillance, as well as assisted the Office of the Chief Medical Examiner with death investigations. Additionally, our forensic scientists continued to maintain the national databases that bring closure to victims' families impacted by some of the most heinous crimes in our community.

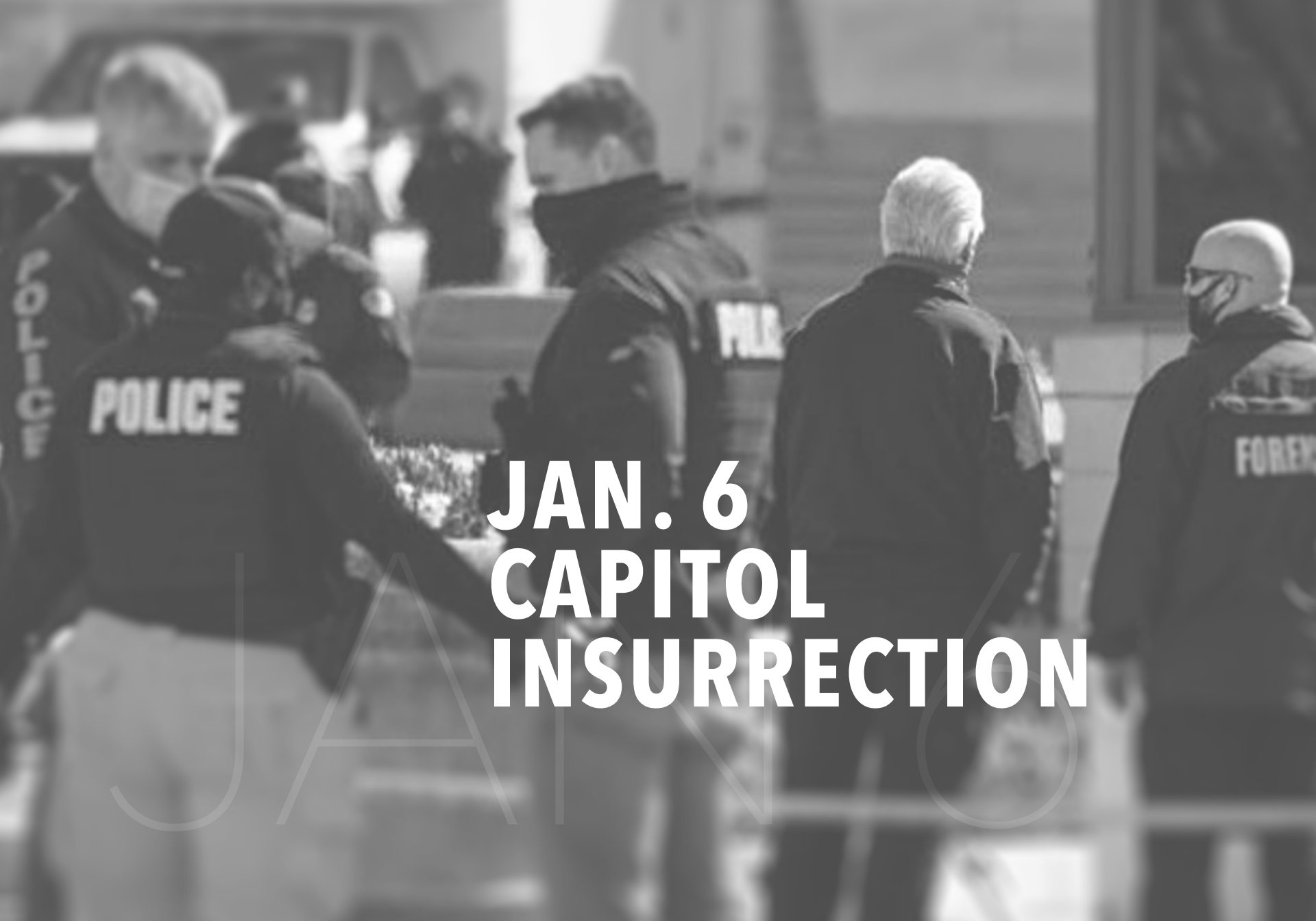
At the Department of Forensic Sciences, our priority is to science and using the established accountability processes to ensure the integrity of the agency's work. We remain fully committed to ensuring that DFS lives up to the standards District residents expect and deserve.

We also acknowledge the support of Mayor Muriel Bowser and Deputy

Mayor Chris Geldart, as well as our federal and local partners. We are proud to have this opportunity to share our Fiscal Year 2021 annual report with you, and to demonstrate that Solid Science leads to Safer Streets.

Sincerely,

Anthony Crispino
INTERIM DIRECTOR



JAN. 6 CAPITOL INSURRECTION

On January 6, 2021, a large group gathered to support President Donald J. Trump on the Ellipse and marched to the U.S. Capitol to disrupt a joint session of Congress convened to formalize President-elect Joe Biden's victory. Rioters assaulted law enforcement officers and occupied the Capitol for several hours. Five people died and many others were injured, including more than 100 police officers.

That night, the DFS **CRIME SCENE SCIENCES UNIT (CSSU)** responded to assist Capitol Police and the Metropolitan Police Department (MPD) with a police-involved shooting investigation.

Several items of evidence were brought to the laboratory for immediate examination:

The **DIGITAL EVIDENCE UNIT (DEU)** received a victim's smartphone. In less than 24 hours, the phone was unlocked, processed, and a report was ready for investigators to review.

The **LATENT FINGERPRINT UNIT (LFI)** received wood pieces and a pole with tape. Prints were examined and compared in the local, regional, and the national FBI fingerprint databases.

The **FIREARMS EXAMINATION UNIT (FEU)** examined a Glock .40 S&W pistol with magazine, a damaged bullet, and a fired cartridge case linked to an officer's firearm. In addition, eight firearms were test-fired and uploaded into the national ballistics database.

The **PUBLIC HEALTH LABORATORY (PHL)** also played a role in the agency's response. PHL provided COVID-19 testing to Capitol Police officers who may have been exposed to the virus during the insurrection. Testing was performed multiple times after the incident.

This concerted response demonstrates the agency's commitment to the residents and visitors of the nation's capital, and effectuates the agency's duty to provide accurate and reliable forensic analysis to law enforcement in the District of Columbia.

A person wearing a white lab coat and gloves is examining a sample in a petri dish. The background is a blurred laboratory setting with various pieces of equipment. The image has a blue and green color overlay.

CRIME SCENE SCIENCES DIVISION

THE CRIME SCENE SCIENCES (CSS) DIVISION

is on duty 24/7 responding to thousands of crime scenes to collect and preserve more than 68,000 items of evidence – at or as close as possible to their original state.

CSS comprises 60 specially trained individuals, eight of whom were hired in FY21. The diverse team includes law enforcement professionals, forensic laboratory technicians, civilian crime scene

technicians, and property technicians. This diversity of backgrounds is the team's strength.

CSS provides high-quality, around-the-clock support through its two units – the Central Evidence Unit (CEU) and the Crime Scene Sciences Unit (CSSU).

When crimes occur, there are often hundreds if not thousands of pieces of evidence (e.g., blood, fingerprints, weapons,

cartridge casings, and clothing) that must be collected and preserved for later analysis. Once identified, CSS personnel thoroughly document, collect, and preserve the evidence to keep it from degrading or changing over time. To yield greater clarity on what occurred during a crime, the evidence must be viewed within the context in which the crime took place. Its integrity must not be compromised.

CENTRAL EVIDENCE UNIT WORKLOAD MEASURES

Providing an invaluable resource to MPD's Evidence Control Branch, CEU received 68,501 pieces of evidence in FY21. This evidence is collected from crime scenes across the District and brought to CEU for evaluation.

Here are the most common evidence types and quantities of evidence CEU receives:

Quantity of Most Common Evidence Types

Cartridge casings	18,071	Vehicle Swabs	2,455
Fingerprints	11,085	Firearms	2,348
Bullets/projectiles	3,673	Swabs (general)	2,219
Clothing	3,504	Buccal (cheek) swabs	2,173
Cartridges	3,085	Narcotics/drugs	1,713





CRIME SCENE SCIENCES UNIT WORKLOAD MEASURES

CSSU independently processed 5,855 crime scenes and received 7,818 service requests in FY21. Below is a breakdown of the unit’s activity by quarter.

CSSU Activity by Quarter, FY21

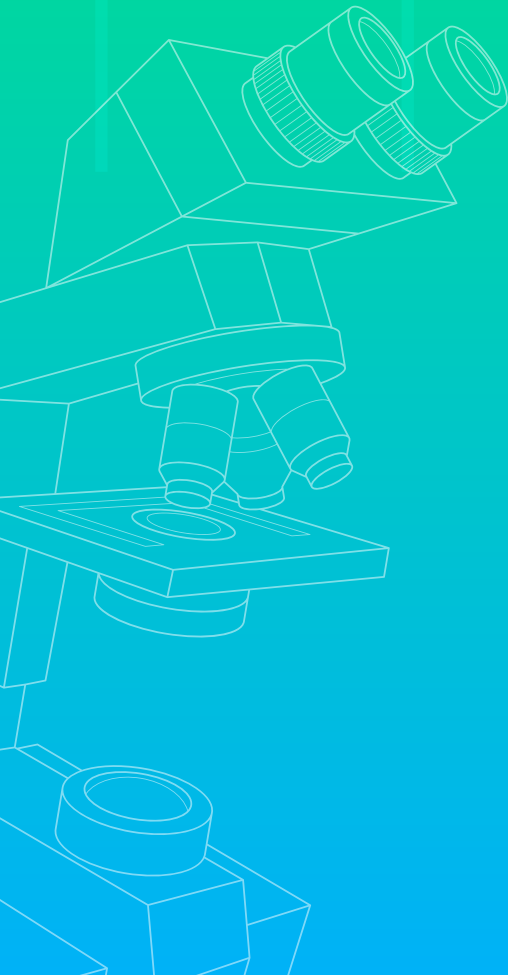
CSSU Measures	Q1	Q2	Q3	Q4	Totals
Number of evidence items received	21,504	18,586	12,086	16,325	68,501
Number of crime scene service requests	2,124	1,669	1,827	2,198	7,818

CRIME SCENE SCIENCES DIVISION ACCOMPLISHMENT

Filing project: CEU and CSSU embarked on a massive, multiyear project to digitally upload or discard files dating back to 1985.

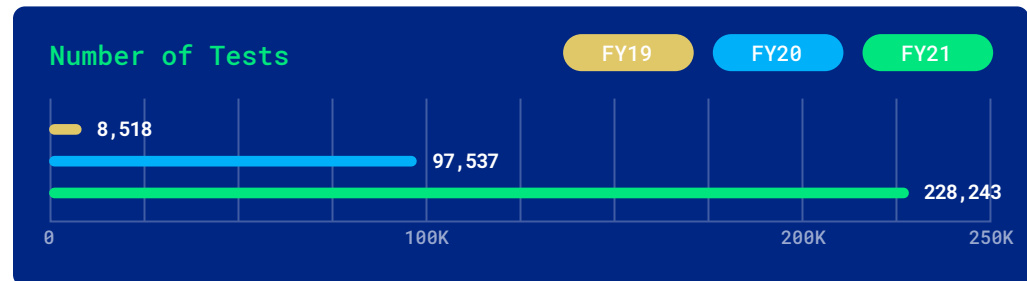


**PUBLIC HEALTH
LABORATORY**



THE PUBLIC HEALTH LABORATORY (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. The community relied on those services as COVID-19 infections remained a serious concern, especially for vulnerable populations in FY21.

PHL performed more than two-and-a-half times as many tests in FY21 compared to FY20. In the past two years, the division's test requests have grown 26-fold. Total PHL testing included 228,243 tests on samples received, 86 proficiency tests, and 31 validation efforts to bring on new tests.



ACCESSIONING UNIT

In FY21, the Accessioning Unit (ASU) continued to receive high numbers of COVID-19 samples for testing. ASU received 219,167 samples for molecular testing, an average of 600 per day. The samples tested

included those from the District's first responders and those submitted by health care providers to the lab. In addition to COVID-19 molecular testing, PHL also provided serology testing to detect viral antibodies.

IMMUNOLOGY/ VIROLOGY UNIT

PHL's Immunology/Virology Unit (IVU) remained the lab's workhorse for COVID-19 testing. Using the Panther Fusion, a real-time RT-PCR in vitro diagnostic test, IVU maintained an average turnaround time of 1.7 days from date of collection.

IVU also performed rabies testing, receiving 132 animal brain specimens. The overall rabies positivity in the District was 5.3%, with raccoons as the only animal species testing positive in FY21.

COVID-19 Testing Submissions

Type of Test	FY20	FY21
Molecular Total	71,028	219,167
Serology Total	7,231	67
Total	78,259	219,234

MICROBIOLOGY UNIT

PHL provided regular COVID-19 testing for MPD and DC Fire and Emergency Medical Services (FEMS) to detect whether first responders were infected. The testing was completed within an average turnaround time of 11 hours.

Police and Fire Submissions

DC FEMS	1,895
DC MPD	1,898
Total	3,793

MOLECULAR DIAGNOSTIC UNIT

To support the Office of the Chief Medical Examiner (OCME), the Molecular Diagnostic Unit (MDU) verified the use of the Centers for Disease Control and Prevention (CDC) test for post-mortem specimens. PHL provided 212 results to aid in death investigations in FY21.

PHL remains one of the few public health laboratories with the ability to perform whole genome sequencing of SARS-CoV-2, providing definitive epidemiological linkages to

assist with outbreak investigations and detect new mutations of the virus like the Delta and Omicron variants. PHL also provides sequencing data to GISAID, a global database tracking genotypes to identify emerging sequence variants of public health significance.

Our diverse sequencing team received national recognition in the media, with profiles on NBC News, MSNBC, Telemundo, and several local outlets.

OFFICE OF HEALTH AND SAFETY

The PHL Health and Safety group continued to update policies to meet the CDC's workplace recommendation requirements on face coverings,

group gatherings, and social distancing for employees and visitors. Safety officers also developed a cloud-based inventory program to track supplies.

CLINICAL TOXICOLOGY UNIT AND FORENSIC CHEMISTRY UNIT

Working within the Laboratory Response Network for Chemical Threats, the Clinical Toxicology Unit (CTU) has maintained its clinical testing capabilities to assess exposure to a wide range of chemical threats, from chemical terrorism (e.g., attacks involving ricin, nerve agents, or cyanide) to accidents involving industrial chemicals (e.g., xylene, toxic metals, or lead).

The Forensic Chemistry Unit (FCU) has continued to closely work with MPD

and DC FEMS. FCU and CTU conduct critical investigations on drug impurities, support knowledge sharing with law enforcement regarding fentanyl, streamline synthetic opioid detection in syringes for OCME, and screen-controlled buys within the District to gain an upper hand in detecting emerging drugs. FCU pivoted from its drug evidence surveillance to syringe exchange surveillance, establishing a clinical toxicology capability for drugs of abuse.



PUBLIC HEALTH LABORATORY ACCOMPLISHMENTS

Pandemic response: In FY21, PHL tested more than 220,000 samples for COVID-19. PHL increased its SARS-CoV-2 whole genome sequencing capacity providing data to assist with outbreak investigations and epidemiological studies in real time.

Clinical Laboratory Outreach Forum: PHL hosted a virtual forum with hospitals and community partners to discuss the lab's submission procedures and testing capabilities while soliciting recommendations to improve lab operations.

Clinical testing support: PHL initiated testing services for drugs screenings for other District agencies. As this process is improved and incrementally grown, the impact will steadily increase.





**FORENSIC SCIENCE
LABORATORY**

FSL

THE FORENSIC SCIENCE LABORATORY (FSL) comprises three units: Forensic Biology Unit (FBU), Latent Fingerprint Unit (LFU), and the Firearms Examination Unit (FEU). FSL independently examined evidence submitted

by any DC government agency investigating a criminal offense throughout the first half of FY21; however, the agency's loss of accreditation in April halted all forensic casework in these units.

FORENSIC SCIENCE LABORATORY KEY PERFORMANCE INDICATORS

The loss of accreditation forced the FSL units to outsource forensic testing to contracted laboratories. This action impacted turnaround times for priority and homicide cases. FBU, LFU, and FEU performed at 73% or better with respect to processing priority cases within 60 days, and at 87% or better when handling homicide cases in FY21.

FSL Key Performance Indicators, FY21

Indicators	FBU	LFU	FEU*	Target
Percentage of priority cases as designated by the contributor and marked in the Laboratory Information Management System (LIMS) completed within 60 days of the date the analyst was assigned the case	84%	73%	100%	90%
Percentage of requested homicide cases completed within 60 days of the date the analyst was assigned the case	91%	87%	96%	90%

* Reflects data from October 1 - April 2, 2021

FORENSIC SCIENCE LABORATORY ACCOMPLISHMENT

January 6 Capitol Insurrection: LFU and FEU expedited testing of critical evidence collected at the U.S. Capitol to provide law enforcement quick results to aid in a police-involved shooting investigation.

FORENSIC BIOLOGY UNIT

DFS received 244 sexual assault kits from MPD and tested them with an average turnaround time of 83 days in FY21. Of these, 215 kits were completed within the 90 days, according to section 202(b) of the Sexual Assault Victims’

Rights Amendment Act (SAVRAA), which codified best practices by responding to the needs identified by sexual assault victims and survivors to strengthen their rights and enhance system responses.

FORENSIC BIOLOGY UNIT WORKLOAD MEASURES

FBU uses the FBI’s Combined DNA Index System (CODIS) to search DNA profiles in order to form possible

links between violent crimes, known offenders, and arrestees. FBU completed 389 CODIS entries and

obtained nearly 182 hits in FY21. Because of the suspension of forensic casework in April, FBU shifted CODIS entries to two partnering laboratories to ensure continuity of CODIS services to the District.

FBU Measures by Quarter, FY21

Measures	Q1	Q2	Q3	Q4	Totals
Number of CODIS database entries	193	196	-	-	389
Number of CODIS database hits	72	79	18	13	182

FORENSIC BIOLOGY UNIT ACCOMPLISHMENTS

SAVRAA education: FBU presented to a cohort of Sexual Assault Nurse Examiners (SANE) at the DC SANE Adult/Adolescent Seminar. Analysts explained the importance of the SAVRAA and the steps DFS takes to

ensure survivors of sexual assault receive timely information.

University outreach: FBU scientists participated in educational sessions

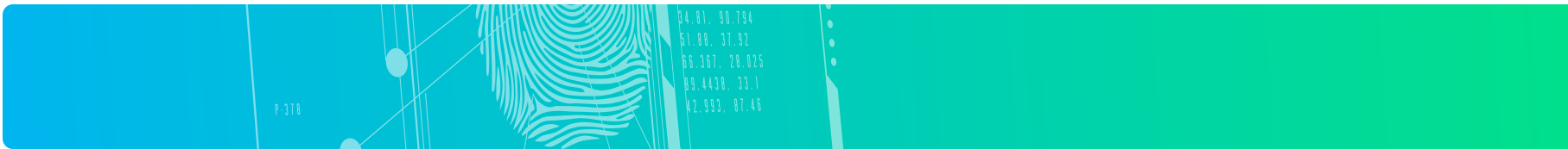
with American University's Washington College of Law, and Bowie State University. They discussed topics such as probative items for DNA testing, general laboratory processing, and CODIS.

LATENT FINGERPRINT UNIT

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 determine their

source. Latent prints may be entered into the Automated Fingerprint Identification System (AFIS), a biometric database that uses digital imaging technology to obtain, store, and analyze fingerprint data. Latent prints

are searched against stored known prints, and possible source candidates are generated and examined by LFU analysts. AFIS results have helped produce intelligence leads for several DFS customers.



LATENT FINGERPRINT UNIT WORKLOAD MEASURE

The collection and entry of latent fingerprints into AFIS are integral functions of LFU. The unit entered a total of 3,773 entries into AFIS and made a total of 917 hits in FY21. Below,

AFIS entries and hits are broken down by quarter. Due to the agency's loss of accreditation in April, LFU was unable to record AFIS entries beginning in the third quarter.

LFU Measures by Quarter, FY21

Measures	Q1	Q2	Q3	Q4	Totals
AFIS entries	1,942	1,805	26	-	3,773
AFIS hits	469	443	5	-	917

LATENT FINGERPRINT UNIT ACCOMPLISHMENTS

LFU evidence processing: LFU scientists acquired and validated the second DCS5 imaging system, a comprehensive imaging system for the detection, capture, and enhancement of almost any type of fingerprint on any surface or background to ensure that maximum detail is revealed.

Community outreach: LFU scientists participated in community outreach efforts, including conducting engaging demonstrations for the DFS STEM in the Community program to inspire young people to pursue careers in forensic science.



FIREARMS EXAMINATION UNIT

Firearms are used in various types of crimes, including rapes, robberies, homicides, and assaults. FEU examines and compares firearms, as well as the tool marks left when a harder object encounters a softer object. This vital unit evaluates the functionality of firearms, determines the distance from muzzle to target, and microscopically compares bullets

and cartridge cases to determine the possible source of firing.

At the end of FY21, DFS undertook a reduction-in-force for FEU, eliminating all positions. DFS partnered with the Bureau of Alcohol, Tobacco, Firearms and Explosives (BAFTE) to continue providing forensic firearms analysis to our law enforcement partners.

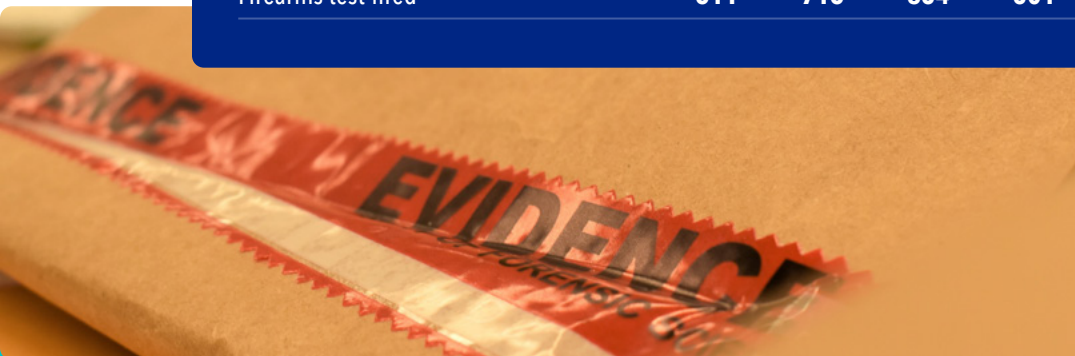
FEU Measures by Quarter, FY21

Measures	Q1	Q2	Q3	Q4	Totals
Firearms test-fired	611	716	354	501	2,182

FIREARMS EXAMINATION UNIT WORKLOAD MEASURES

FEU utilizes the National Integrated Ballistic Information Network (NIBIN) to provide leads in shooting-related investigations. NIBIN is a 3D-automated ballistics imaging and analysis system that populates a database of digital ballistic images of cartridge cases. The system identifies potential leads, which are used by forensic scientists to confirm NIBIN hits.

The unit and its partners at the ATF entered a total of 2,770 cartridge cases into the system, generating 21 confirmed NIBIN hits and test-fired 2,182 firearms in FY21. At left is the quarterly breakdown of firearms test-fired.





**OFFICE OF THE
SENIOR DEPUTY
DIRECTOR**

THE OFFICE OF THE SENIOR DEPUTY DIRECTOR (SDD)

consists of the Cyber Operations Section, Forensic Intelligence Unit (FIU), and the Human Resources, Training, and Quality departments. SDD provides high-level oversight and support to each division within DFS, ensuring that employee needs and concerns are met.

CYBER OPERATIONS SECTION

The Cyber Operations Section, made up of the Forensic Technologies Unit (FTU) and the Digital Evidence Unit (DEU), provides state-of-the-art support to combat cybercrime and any

crime that has been committed, orchestrated, or accompanied by a digital device. These scientists also offer technological support for forensic services.

FORENSIC TECHNOLOGIES UNIT

The Cyber Operations Forensic Technologies Unit (FTU) manages several vital and highly specialized systems that support the work of DFS. At the start of the pandemic, PHL test requests were manually input into the Laboratory Information Management System (LIMS), and results were

sent via fax machine. FTU helped create electronic test ordering and reporting to ensure speed and accuracy when sharing critical results with DC Health and other health care providers, while eliminating the tedious task of faxing paper reports.

DIGITAL EVIDENCE UNIT

Due to the pandemic, new forms of digital communication that leveraged new technologies came to being. The Digital Evidence Unit (DEU) examines the digital landscape for cases involving malware,

unauthorized network intrusions, and data breaches. DEU scientists utilized evolving techniques in digital forensics to extract and analyze seized digital evidence from a wide range of devices (e.g., smartphones,

personal computers, vehicles, credit card skimmers, and video recording systems). The number of requests for vehicle forensics increased significantly from 19 in FY20 to 49 in FY21.



DEU Case Statistics

Year	Caseload	Turn Around Time (TAT)
2014-2015	23	N/A
2016	98	N/A for annual
2017	394	4.59
2018	636	5.2
2019	1,147	2.28
2020	1,315	1.41
2021	675	1.3

DIGITAL EVIDENCE UNIT KEY PERFORMANCE INDICATORS

DEU consistently performed at 100% for quarterly processing of priority and homicide cases marked in LIMS and completed within 60 days.

DEU Key Performance Indicators by Quarter, FY21

Indicators	Q1	Q2	Q3	Q4	Target
Percentage of priority cases as designated by the contributor and marked in LIMS completed within 60 days of the date the analyst was assigned the case	100%	100%	100%	100%	90%
Percentage of requested homicide cases completed within 60 days of the date the analyst was assigned the case	100%	100%	100%	100%	90%

DIGITAL EVIDENCE UNIT ACCOMPLISHMENTS

Unlocking mobile devices: DEU unlocked 277 mobile devices, providing law enforcement partners with critical investigative data in FY21.

Standard operating procedures: DEU revised the unit's Standard Operating Procedures and forms to be uploaded into Qualtrax, the DFS Quality database, and on the agency's website.

FORENSIC INTELLIGENCE UNIT

The Forensic Intelligence Unit (FIU) ensures 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 tests and reports through their return to DFS stakeholder agencies and tracking their impacts on the criminal justice process. FIU performs statistical analyses of these impacts to ensure that FSL’s resources are being appropriately deployed to support District residents.

FORENSIC INTELLIGENCE UNIT WORKLOAD MEASURES

FIU received and processed a total of 4,088 requests from key stakeholder agencies in FY21. This unit provides an invaluable service to the following agencies: MPD, the United States Attorney’s Office (USAO), the Office of the Attorney General (OAG) for the District of Columbia, the Office of the Inspector General (OIG) for the District of Columbia, and other

entities including the United States Park Police, the Naval Criminal Investigative Service, the Federal Protective Service, and the Metro Transit Police Department.

Below, FIU’s FY21 requests for testing are broken out by unit, illustrating the relative volume of requests passed on to each unit.

Customer Requests					Evidence Processing	Total
FY21	FBU	FEU	DEU	LFU		
MPD	1,750	216	267	1,075	440	3,748
USAO	143	7	24	40	26	240
OAG	14	0	0	3	0	17
USCP	6	0	0	22	19	47
Others	8	9	5	9	5	36
Total	1,921	232	296	1,149	490	4,088

FORENSIC INTELLIGENCE UNIT ACCOMPLISHMENTS

Analyzing public safety and health trends:

FIU successfully prepared and delivered an analytical presentation in support of the Criminal Justice Coordinating Council's GunStat, a citywide effort to track gun cases through the criminal justice system. The presentation documented the impact of the Summer Crime Initiative on Gun Recoveries, and in coordination with the Forensic Chemistry Unit (FCU), disseminated drug analysis BOLO (be on the lookout).

Tracking ghost guns: FIU updated its partners in the criminal justice community on ghost guns in the District of Columbia.

TRAINING UNIT

The Training team ensures the agency maintains the highest standards with respect to technology and emerging methodologies, and regularly trains scientists on the latest advancements in forensic science. The unit also works to enhance the

staff's technical skills, knowledge, and professional development.

The Training team revised unit-specific training manuals and developed agency-wide Diversity and Inclusion workshops in FY21.

TRAINING UNIT WORKLOAD MEASURES

DFS scientists completed a total of 5,045 hours of training in FY21. Below is a breakdown of training

hours by employees over the past five years.

Training Measures					
Measures	FY17	FY18	FY19	FY20	FY21
Hours completed by employees	2,200	3,400	3,719	3,780	5,045

TYPES OF TRAINING

Multiple Divisions

Ethics Week 2020: Local Hatch Act, Social Media and Ethics, Ethics Best Practices Panel Discussion

Public, Safety, and Justice Cluster (PSJC) Budget Boot Camp

Diversity and Inclusion Workshops

Brady and Giglio Overview

Internal Audit and Management Review

Understanding Corrective Actions, Nonconformities, and Root Cause Analysis

ASCLD Covid-19 Emerging Issues: Remote Work in the Forensic Lab

Crime Scene Sciences Division

2020 IABPA Conference

The Crime Scene is Fluid: Land to Water Based Scenes

Evidentiary Photography

DNA Evidence in Groping Sexual Assault Cases

Forensic Science Laboratory (Forensic Biology Unit)

CODIS State Administrators Meeting

Forensic ISO/IEC 17025: 2017 Technical Assessor Training

Emerging Methods for Body Fluid Analysis

Verogen Virtual Workshop Stability and Persistence of Touch DNA for Forensic Analysis

Probabilistic Genotyping Users Group Workshop

Remote Testimony

STRmix Implementation and Casework Approach

Advancing Criminal Investigations: Rapid DNA Program Considerations

Forensic Science Laboratory (Firearms Examination Unit)

Firearms 3D Technology

NIBIN Annual Certification Training

National Institute of Justice (NIJ) Research and Development Symposium

Firearms and Toolmarks Research

Forensic Science Laboratory (Latent Print Examination Unit)

RS&A Palm Prints Searching Smart

Latent Print Suitability

European Association for Biometrics and NIST Workshop on Fingerprint Image Quality NFIQ2.1

Crime-lite Research Symposium

Latent Print Photography Webinar Series

Latent Print Processing
Testimony

Recover-Investigating
Knife Crime-Fingerprint
Recovery

Public Health Laboratory

2021 Annual DSAT Training

General Biology of Viruses

Abbott Alinity Training

Cepheid Virtual Training

Mycology Laboratory
Series

World Microbe Forum
2021

Biological Safety
Information Network
(BioNet) Virtual Mini
Symposium

Public Health and Clinical
Laboratory Response to
Melioidosis Cases in the
United States

Association of Public
Health Laboratories (APHL)
Annual Conference

Data Modernization
Initiative Workshop

Southwestern Assoc.
of Forensic Scientists
(SWAFS) Virtual
Symposium

VII International
Conference on Novel
Psychoactive Substances
Hazardous Waste
Management Training

Senior Deputy Director

Cellebrite Video Evidence
Recovery and Analysis

National Cyber Crime
Conference: Router
Forensics

MicroStrategy Training

Association for Talent
Development (ATD)
Instructional Design
Certificate Course

Use Training to Drive
Employee Engagement

Onboarding in Crime
Laboratories

Training for Crime Scene
Internal Audit

Qualtrax Administration

TRAINING UNIT ACCOMPLISHMENTS

Department Employees Sharing Knowledge (DESK) Series: The DFS Training Unit developed an internal, knowledge sharing virtual series where DFS employees spoke about their disciplines.

Employee onboarding: Unit launched new onboarding and offboarding tools for the agency in FY21.

QUALITY ASSURANCE UNIT

The Quality Assurance Unit provides oversight of all quality assurance measures that maintain DFS's validity and ability to conduct self-sustaining science. The unit is responsible for the coordination of audits, policy and procedure oversight, certifications, and accreditations. These processes

are designed to safeguard the public's confidence in DFS test results through imparting robust quality systems that improve responsibility, impartiality, traceability, reproducibility, transparency, and the overall utilization of scientific approaches to problems.

The following audits were successfully conducted in FY21:

CDC's Division of Select Agents and Toxins (DSAT) – PHL Bioterrorism (BT) Unit
DC Health Regulation and Licensing Administration (HRLA)
Clinical Laboratory Improvement Amendments (CLIA)
DC Office of Risk Management



QUALITY ASSURANCE UNIT KEY PERFORMANCE INDICATORS

The Quality Assurance Unit monitors competency and provides proficiency tests for scientists who perform functions in any of DFS's 14 scientific units. The number of scientists went from 161 to 143 in FY21.

Quality Assurance Unit Key Performance Indicators by Quarter, FY21

Indicators	Q1	Q2	Q3	Q4	Target
Percentage of scientists meeting technical competency requirements	100%	95%	100%	100%	95%

QUALITY ASSURANCE UNIT ACCOMPLISHMENTS

Quality tracking system: The Quality team developed a Quality Corrective Action Report (QCAR) and Quality Preventive Action Report (QPAR) master tracking spreadsheet to streamline and verify accuracy of reports.

Audits and assessments: The Quality team successfully completed 15 internal audits and oversaw four external audits in FY21.

A low-angle shot of a person climbing a rope structure, possibly a zipline or a climbing wall, against a blue and green color overlay. The person is seen from behind, reaching up to grasp a rope. In the background, a multi-story building is visible. In the bottom right corner, the heads and shoulders of several other people are visible, looking up at the climber. The overall scene conveys a sense of challenge and achievement.

OUTREACH

THE AGENCY INTERACTS WITH DISTRICT RESIDENTS and educates them about our work, continuing to build trust in our services within neighborhoods, and support a robust science, technology, engineering, and mathematics (STEM) career pipeline for District residents and those who choose to work in our city. DFS continued to support the

District's public safety agenda and deepened partnerships with stakeholders in FY21.

Through dozens of media reports, increased social media engagement, and community outreach, residents learned about the life-saving work DFS performed during the pandemic.



PEOPLE AND CULTURE

The scientists, laboratory technicians, senior leaders, administrative staff, and interns who do the important work of this agency are our “People.” It is our job as an agency to ensure they receive the training, education, and support necessary to continue to deliver on our commitment of solid science and safer streets. Equally important is the “Culture” that we cultivate for our employees. We want to build camaraderie and a support system that creates an enabling environment for our work.

To that end, FY21 brought with it several People and Culture initiatives, including:

Purple Thursday: In October 2021, the agency held an employee-wide initiative to wear purple in recognition of Domestic Violence Month.

Celebrate our veterans: On Veterans 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 a toy drive to collect gifts for DC youth. The agency partnered with MPD to deliver the donations to the community.

Health and wellness initiatives:

DFS held two blood drives on November 25 and May 26. The drives led to the collection of 30 units of blood, saving 90 lives.

Social media engagement:

DFS connects with the community on Instagram, Facebook, and Twitter, highlighting agency and employee achievements. The agency’s verified accounts saw significant growth in FY21, adding more than 2,600 Instagram followers, nine times as many as in FY19.



DIVERSITY AND INCLUSION

DFS's Diversity and Inclusion (D&I) program is designed to create an inclusive cultural climate to ensure

that the agency's diverse workforce has access to the tools and support they need to succeed. As part of

this effort, DFS employees strive to exemplify the agency's core values: accountability, trust, and integrity.

DFS EDUCATES AND MENTORS

Restrictions on in-person events impacted how we highlight the vitally important work of our agency and promote careers in forensic science and other STEM fields in FY21. While we were not able to open our doors for public tours, we continued to engage with students and community groups via embrace video technology.

Virtual educational outreach: DFS scientists and staff hosted high school students during virtual field trips to help young people understand some of the work we perform within the agency. We provided demonstrations for Eastern High School, Wilson High School, Excel Academy, Washington Jesuit Academy, and other schools.

STEM in the Community: This program finds creative ways to introduce students to forensic science. The sessions, which meet weekly for four weeks, allow groups to hear from DFS scientists in varying disciplines and ask questions about their respective fields.



SPECIAL PROJECTS AND INITIATIVES

Each year, DFS supports cross-cutting special projects and initiatives that involve stakeholders from across the District.

National Forensic Science Week:

This event was held September 19-25, 2021. In the past, it has included several community programs and a DFS open house. Because of the pandemic, this year's activities were scaled back in favor of an all-virtual celebration. DFS shared messages of appreciation with staff from District leaders and organized activities to celebrate all our forensic disciplines.

Medical Laboratory Professionals

Week: This event, commonly referred to nationwide as Lab Week, provides the laboratory profession with a unique opportunity to increase public understanding of and appreciation for clinical laboratory

personnel. During the week of April 18-24, 2021, DFS received video messages from our partners expressing their appreciation for the life-saving work performed by the Public Health Lab laboratorians.



INTERN SPOTLIGHT

Internships are an integral component of DFS's outreach efforts. The agency attracted 54 interns through myriad feeder programs and relationships with multiple colleges and universities, such as American, Bowie State, George Mason, George Washington, and Howard in FY21.

DFS also supports internship initiatives prioritized by the Mayor's Office, such as the District Leadership Program, which promotes employment opportunities that build pathways to the middle class.

The internship program provides students with practical experience and the type of exposure needed to

strongly consider careers in forensic science and public health. Our internship projects run the gamut from mentorship and shadowing opportunities to conducting research and data collection. Our pool of interns are just as diverse, interesting, and dynamic as the scientists, technicians, and administrative staff at DFS.

Directorate and the Office of the Senior Deputy Director

The Directorate and the Office of the Senior Deputy Director (SDD) had 13 interns provide support for a range of projects, including conducting communications, performing research and studies, and uploading information into inFlow in FY21.



Crime Scene Sciences Division

CSS had 20 interns who worked on digitizing legacy MPD crime scene reports and assisting with the unit's massive filing project in FY21.

Forensic Science Laboratory

FSL employed five interns who performed routine laboratory duties, including decontaminating laboratory equipment and supplies, helping file prints, and conducting safety checks to ensure the proper functioning of eyewash and safety shower stations in FY21.

Public Health Laboratory

PHL had 15 interns providing support across the division in FY21. Of note were the number of university-level interns the agency attracted, as well as the complexity of the projects assigned.

Training

The Training team had one intern providing administrative support, which included scanning and archiving paper copy training records. The unit is also responsible for the coordination of DFS's overall internship program.





FUTURE PROJECTS

FUTURE

PROJECTS

FUTURE

PROJECTS



FY21 WAS A DIFFICULT YEAR

that brought a lot of change to DFS operations. The agency is poised to regain its accreditations while further affirming its commitment to solid, unbiased science.



Below is a sampling of our planned initiatives for FY22:

Operations

Streamline budget planning, formulation, and execution processes

Implement efficient contract performance methods to achieve greater fiscal discipline

Office of the Senior Deputy Director (SDD)

Forensic Intelligence Unit (FIU): Inclusion of the 6th District in the Crime Gun Intelligence initiative

Training: Expand racial equity discussions with a focus on diversity, equity, and inclusion

Quality: Development of the DFS Quality Assurance Manual

Human Resources: Build and strengthen agency recruitment program to lower overall vacancy rate

Cyber Operations Section: Development of photograph and video analysis capability

Crime Scene Sciences Division (CSS)

Continue digitizing and organizing old case files

Forensic Science Laboratory (FSL)

Latent Fingerprint Unit (LFU): Conduct Science Advisory Board review to strengthen and improve laboratory operations, procedures, and equipment

Forensic Biology Unit (FBU): Complete validation study on enhanced DNA extraction techniques for cartridge casings

Public Health Laboratory (PHL)

Forensic Chemistry Unit (FCU): Re-establish ISO 17025 testing

Clinical Toxicology Unit (CTU): Expand customer base for clinical toxicology services

Accessioning Unit (ASU): Upgrade HORIZON LIMS to version 13.2

Immunology/Virology Unit (IVU): Continue to support COVID-19 testing in the District

Microbiology Unit (MBU): Enhance informatic capabilities to include LIS/EMR integration

Molecular Diagnostic Unit (MDU): Expand Whole Genome Sequencing to other organisms



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DFS
DEPARTMENT OF
FORENSIC SCIENCES

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