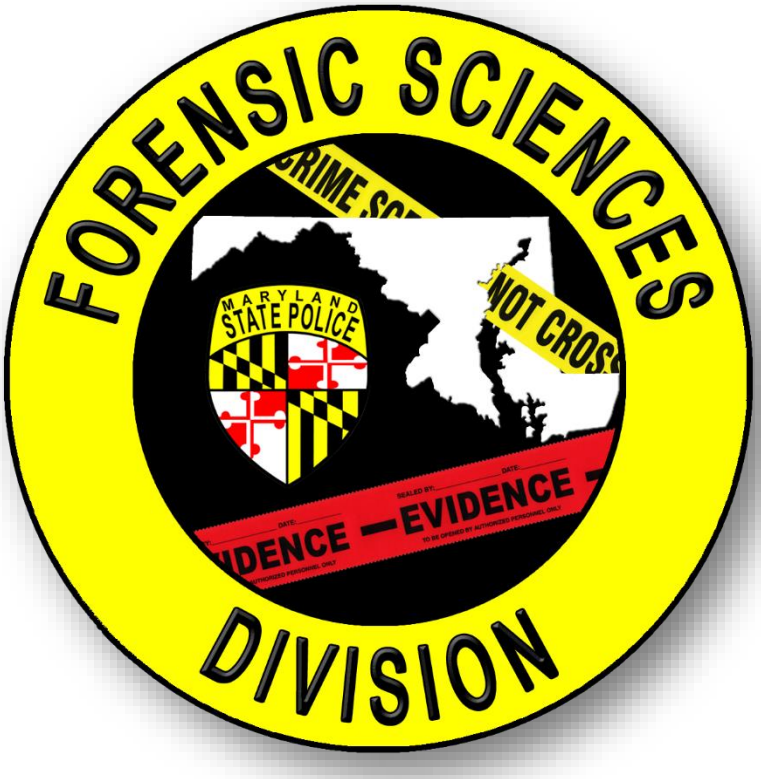

2020

ANNUAL REPORT

MARYLAND STATE POLICE

FORENSIC SCIENCES DIVISION

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FORENSIC SCIENCES DIVISION DESCRIPTION

The Maryland State Police Forensic Sciences Division (MSP-FSD) is an accredited, full-service forensic laboratory system offering analysis in the following disciplines: Latent Print/Impressions, Firearms/Toolmarks, Controlled Dangerous Substances (CDS), Toxicology, Biology, Trace Evidence, Questioned Documents and Crime Scene. Although the MSP-FSD operates under the administration of the Maryland State Police, the laboratory is available to provide service to all law enforcement agencies in Maryland. The MSP-FSD is accredited by ANSI National Accreditation Board (ANAB) and licensed by the Maryland Department of Health, Office of Health Care Quality. As such, the laboratory utilizes generally accepted practices and procedures and conforms to ISO/IEC 17025 - General requirements for the competence of testing and calibration laboratories.

The MSP-FSD employs approximately 100 scientific and support staff and operates out of three laboratories located in Pikesville, Hagerstown and Berlin, as well as 14 Crime Scene Offices located strategically throughout the state. The MSP-FSD is comprised of the Office of the Director, the Operational Services Branch, the Scientific Analysis Branch, and the Administrative Services Branch. The Office of the Director consists of the Director, Deputy Director, Assistant Commander and Quality Assurance/ Safety Manager. This administrative unit is responsible for the overall management of the Division. The Director oversees the management of the entire Division while the Assistant Commander oversees the Operational Services Branch, the Deputy Director oversees the Scientific Analysis Branch, and the Quality Assurance/ Safety Manager oversees the Administrative Services Branch. The Operational Services Branch consists of the Crime Scene Section and the Forensic Support Services Section. The Scientific Analysis Branch consists of the following Sections: Pattern Evidence, Chemistry, Biology and Trace Evidence. The Administrative Services Branch consists of the Administrative Support Staff Unit and Data Support Unit. The personnel within the Operational Services Branch and the Scientific Analysis Branch provide scientific support services to the criminal justice community.

The MSP-FSD operates under the following principles:

Core Values

Our dedication to integrity, fairness, and service ensures that our clients are always provided with reports and expert testimony that are informative, ethical, impartial, reliable and scientifically valid.

Mission Statement

The mission of the Forensic Sciences Division is to serve as the model laboratory for the analysis of forensic evidence in the State of Maryland by employing the following elements:

- Promotion of employee morale through a respectful, unified, and safe work environment.
- Meeting the forensic science needs of Maryland and its citizens.
- Maintaining ISO 17025 accreditation and compliance with all oversight requirements.
- Minimizing backlogs and turnaround time.
- Operating in a planned, prepared, and proactive manner.

Vision Statement

- To respect, acknowledge, value, challenge, and retain our employees.
- To collaborate with other laboratories and agencies and maximize the forensic services available to Maryland and its citizens.
- To promote state of the science operations through continuing education and the routine evaluation of current procedures.
- To eliminate backlogs and initiate cases upon submission.
- To maximize the public's return on investment by ensuring that sufficient resources are always available to the MSP-FSD and that those resources are always procured in the most fiscally responsible manner possible.

DIRECTOR'S SUMMARY
CORONAVIRUS UPDATE - ANNUAL REPORT EDITION

Daniel E. Katz

So, that was a weird year, huh?

It has been said ad nauseam… 2020 was unprecedented. While you may feel that you have heard everything there is to hear about the year that was, it is hard to write a Director's Summary about 2020 without alluding to what made it so unique. The COVID-19 pandemic completely turned our world upside down, personally and professionally. In addition, the economic crisis and uncertainty impacted near-term and long-term fiscal goals. Furthermore, the civil and political unrest divided our nation more than many of us had ever previously seen.

On March 12, 2020, Governor Hogan declared an Elevated Level II State of Emergency due to the emergence of COVID-19 in Maryland. Since this was uncharted territory, it was not abundantly clear what that meant for the Forensic Sciences Division staff as the "Pandemic Flu and Other Infectious Diseases Attendance and Leave" policy only spelled out Level I (Normal Operations), Level II (Flexible Operations), and Level III (Emergency Operations). An Elevated Level II status seemed the equivalent of double secret probation in Animal House. In an effort to provide clarity to the staff, on March 13, 2020, I issued my first Daily Coronavirus Update.

In total, I wrote 39 Coronavirus Updates throughout 2020. This included twenty Daily Coronavirus Updates between March 13, 2020 and April 9, 2020. While I originally intended simply to provide guidance, I found the updates to be an opportunity to freely express my personality in an effort to not only inform, but also to hopefully brighten everyone's day a little. Such frequent updates seemed necessary as the situation was so fluid that new information was coming out every day during the first month of the pandemic. After that, there was a significant amount of new information still regularly emerging, but a sense of routine had started to settle in, and I transitioned to providing ten Weekly Coronavirus Updates during the period of April 17, 2020 to June 19, 2020. At that point, the summer was upon us, and we started to see the COVID-19 metrics decrease in Maryland. Also, we had now implemented a more sustainable work schedule, developed with input from the staff, which was contributing to a more stable work environment. So as not to disrupt that increased sense of stability, I again reduced the frequency of my staff-wide emails resulting in four Bi-Weekly Coronavirus Updates from July 2, 2020 through August 13, 2020.

Then I took a vacation.

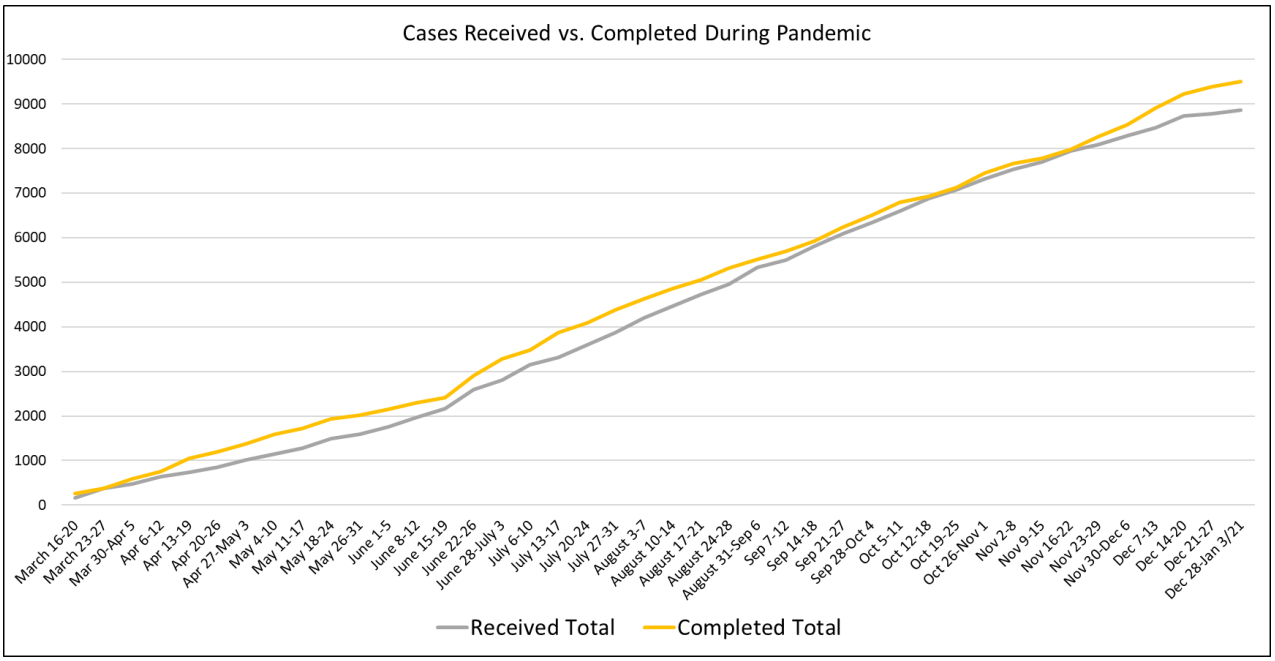
After recharging my batteries, which was essential for me and was encouraged for everyone, we began a period of time where the COVID-19 positivity rate and hospitalization rate fell to their lowest levels since the beginning of the pandemic. While I stressed to everyone the need to fight COVID fatigue and not become complacent with established precautions, I felt that the staff was in a good place and the Bi-Weekly Coronavirus Updates now transitioned into Monthly Coronavirus Updates for September, October, and November.

Unfortunately, the combination of the colder weather and the desire for family gatherings during the holidays soon saw the emergence of a "second wave" throughout Maryland and the nation. FSD was not completely spared as we had a total of four confirmed cases during this time. Thankfully all the cases were relatively mild, and because of the extensive precautions that we had put in place, there were no instances of the virus spreading within the workplace. Emails were sent promptly to the staff advising them when positive cases were reported and what steps had been taken to keep our staff safe, while also respecting the privacy of the positive individuals. Separate from those emails, there was not too much I could tell everyone that they had not already heard from me, so I focused on providing two holiday themed Coronavirus Updates for Thanksgiving and the Chanukah/Christmas/Kwanzaa season. It was a time for reflection on what we had been through and the need to remain positive.

What could easily get lost when we look back on all the challenges we faced in 2020, is the fact that because of the incredible dedication, innovation, resilience, and expertise of the entire FSD staff, the Division still had one of its most successful years ever. This will become evident as you review the contents of this annual report, but up front I would like to point out three facts that make me beam with pride.

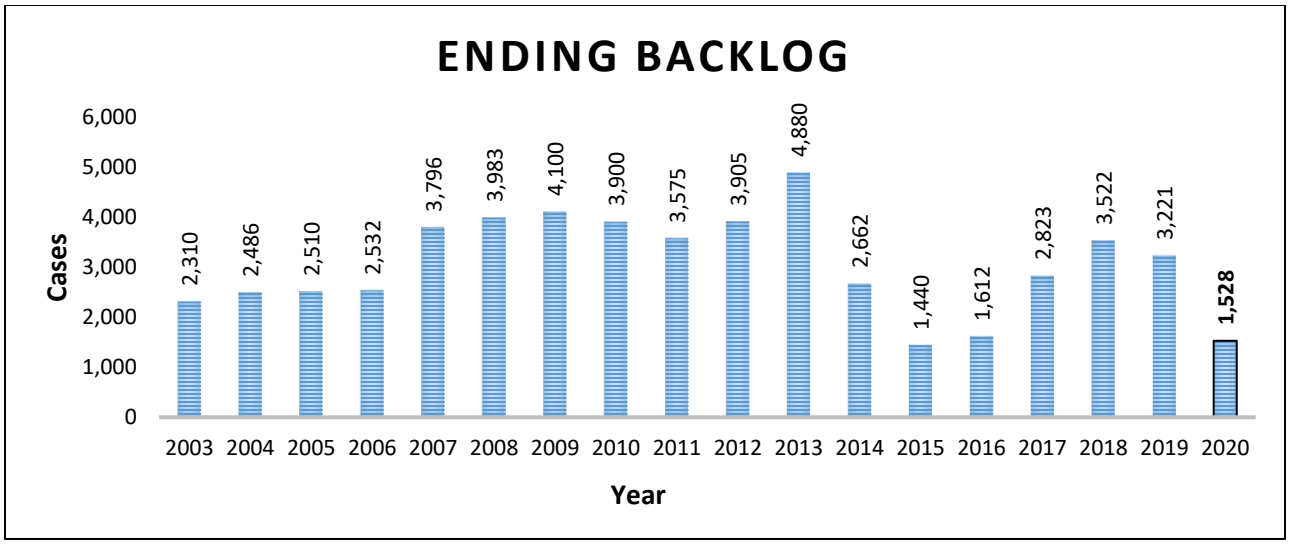
First, while the public has been very supportive of frontline workers during the pandemic, I am not sure if everyone out there realizes that this group of heroes includes the members of FSD. The forensic scientists and support staff were asked to report to the worksite when many other MSP civilians exclusively teleworked. Moreover, the Crime Scene Technicians have continued to respond to calls, despite the increased risk of exposure associated with field work.

Second, throughout the pandemic, the number of cases being completed by FSD never fell below the number of cases being received as you can see in the graph below.



This was quite a significant accomplishment taking into consideration that we had to reduce our on-site presence in order to keep the staff safe. We utilized a team-based approach that had staff in the lab 65% of the time and teleworking 35% of the time. There was a legitimate concern associated with the reduced lab time that casework backlogs would drastically increase; however, our staff were able to consistently keep completing more cases than we received.

This led to a third point of distinction in which the overall FSD case backlog decreased 52% in 2020 resulting in the lowest end-of-year backlog in five years. In fact, this is the second lowest ending backlog in the past eighteen years. Check out the numbers for yourself…



I am considering this my 40th and final Coronavirus Update. Over the course of the year, I received feedback from the staff that they appreciated these updates encouraging me to continue with my messages. I will continue to communicate regularly with the staff as we work our way back to normal and beyond, but I feel the Coronavirus Updates have served their purpose. What started out through necessity evolved into something more. A journey of sorts from a place of panic, despair, and confusion to a state of calm, empowerment, and confidence. It is my hope that over the course of the past year, the combination of information, support, humor, routine, and community associated with these Coronavirus Updates helped, to some degree, get us through this crisis and along the way prepared us to handle whatever the future may bring.

STATISTICAL SUMMARY

Activity Summary - Operational Services Branch				
	2017	2018	2019	2020
Crime Scene Section				
Crime Scenes Processed	620	653	674	625
Central Receiving Unit				
CDS cases submitted for destruction	7,296	8,382	11,129	8,100
Forensic Cases Received	14,061	14,023	13,952	11,871
Photography Unit				
Special Assignments	268	225	211	181
VeriPic/Color Film Rolls Processed	974	634	868	845
Color Prints	6,217	5,779	5,073	1,175
ID Cards	609	750	657	522

Activity Summary – Scientific Analysis Branch				
	2017	2018	2019	2020
Latent Prints/Impressions				
Cases Received	1,176	1,014	1,060	1,034
Cases Completed	988	1,019	1,348	1,043
MAFIS Latent Hits	323	324	540	418
Case Uploads to MAFIS	461	456	624	459
Latent Print Uploads to MAFIS	1,039	1,227	1,640	1,368
Firearms/Toolmarks				
Cases Received	678	780	811	925
Cases Completed	905	822	921	1,018
Number of Firearms for Handgun Roster Board	108	130	181	92
Exhibit Uploads to NIBIN	437	575	833	912
Number of NIBIN Leads Generated	69	32	81	185
Number of NIBIN Hits Confirmed	39	9	2	11
Operation Test Shot Samples Completed[1]	272	273	305	400
Walk-In Test Fires (# of Firearms)	253	198	75	26
CDS				
Cases Received in Pikesville	3,678	3,711	3,867	2,657
Cases Received in Berlin	2,672	2,779	2,387	1,489
Cases Received in Hagerstown	2,190	1,957	840	1,486
Subtotal Cases Received	8,540	8,447	7,094	5,632
Cases Received by Allied Forensic Scientists[2]	1,379	1,541	2,835	1,921
Total Cases Received	9,919	9,988	9,929	7,553
Cases Completed in Pikesville	3,214	3,238	3,867	3,152
Cases Completed in Berlin	2,594	2,826	2,207	1,806
Cases Completed in Hagerstown	1,551	1,804	800	1,665
Subtotal Cases Completed	7,359	7,868	6,874	6,623
Cases Completed by Allied Forensic Scientists[2]	1,371	1,431	3,103	2,475
Total Cases Completed	8,730	9,299	9,977	9,098
Toxicology				
Blood Alcohol Cases Received	692	683	789	607
Blood Drug Cases Received	388	481	660	290
Total Cases Received	1,080	1,164	1,449	897
Blood Alcohol Cases Completed	806	664	713	657
Blood Drug Cases Completed	519	435	458	333
Total Cases Completed	1,325	1,099	1,171	990
Biology				
Submitted Cases Received	673	639	648	607
Directly Outsourced Cases Received	363	265	298	290
Total Cases Received	1,036	904	946	897
Submitted Cases Completed	670	640	626	657
Directly Outsourced Cases Completed	319	266	266	333
Total Cases Completed	989	906	892	990
Maryland Case CODIS Hits	986	940	872	1,128
Arrested/Charged CODIS Hits	133	128	130	144
Convicted Offender Uploads to CODIS	4,246	3,828	3,787	2,285
Arrested/Charged Uploads to CODIS	3,629	2,608	2,884	2,741
Case Uploads to CODIS	1,149	1,057	958	1,568

Activity Summary – Scientific Analysis Branch				
	2017	2018	2019	2020
Trace Evidence				
Cases Received	151	138	133	125
Cases Completed	142	151	124	124
Question Documents				
Cases Received	21	35	23	18
Cases Completed	34	30	27	18

1 - Operation Test Shot Samples Completed for the year 2018 were estimated based on the proportion of the statistical Operation Test Shot samples completed for both 2017 and 2019.

2 - Allied Forensic Scientists = Forensic Scientists hired by allied agencies or other governmental entities who are authorized to perform CDS analysis in FSD facilities under the provisions provided for in a Memorandum of Understanding.

Scientific Analysis Branch Casework Summary								
Unit	**Cases Received**		**MSP Cases Received**		**Allied Agency Cases Received**		**Cases Completed**	
	2019	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**	**2020**
Latent Prints/Impressions	1,060	1,034	18%	16%	82%	84%	1,348	1,043
Firearms/Toolmarks	811	925	34%	29%	66%	71%	921	1,018
CDS-Pikesville	3,468	2,657	33%	39%	67%	61%	3,867	3,152
CDS-Berlin	2,387	1,489	29%	31%	71%	69%	2,207	1,806
CDS-Hagerstown	840	1,486	50%	40%	50%	61%	800	1,665
CDS-Allied[1]	2,835	1,921	22%	23%	78%	77%	3,103	2,475
Toxicology	1,449	1,319	36%	36%	64%	64%	1,171	1,325
Biology- Submitted	648	607	19%	19%	75%	81%	626	657
Biology- Direct Outsourcing	298	290	2%	4%	98%	96%	266	333
Trace Evidence	133	125	40%	44%	56%	60%	124	124
Questioned Documents	23	18	22%	39%	78%	61%	27	18
Totals	**13,952**[2]	**11,871**[2]	**29%**	**31%**	**71%**	**69%**	**14,460**	**13,616**

1- CDS-Allied = Forensic Scientists hired by allied agencies or other governmental entities who are authorized to perform CDS analysis in FSD facilities under the provisions provided for in a Memorandum of Understanding. In 2018, Frederick Co. cases were assigned to CDS-Hagerstown while a new Frederick Co. SAO Allied Forensic Scientist was in training. In 2019, the new Frederick Co. SAO Allied Forensic Scientist completed training and was assigned the Frederick Co. cases.

2- Cases that are routed to multiple units are counted as a unique case for each unit.

Laboratory Backlogs and Turn Around Times				
Casework Type	**Pending Caseload (Cases)[1]**	**Backlog (Cases pending >30 days)[1]**	**2020 Turn Around Time (Calendar Days)[2]**	**4th Quarter Turn Around Time (Calendar Days)[3]**
Latent Prints/Impressions	90	41	46	61
Firearms/Toolmarks	354	306	304	381
CDS-Pikesville	469	274	112	50
CDS-Berlin	200	133	100	87
CDS-Hagerstown	217	129	113	48
CDS-Allied	199	119	79	37
Toxicology	418	326	136	104
Biology-Submitted	157	126	124	102
Biology-Directly Outsourced	73	55	114	96
Trace Evidence	17	15	52	63
Question Documents	4	3	95	164
Totals	**2,198**	**1,528**	**116**	**94**

1- Number of cases as of last day of calendar year.
2- Average turnaround time for cases completed throughout the calendar year.
3- Average turnaround time for cases completed during the 4th quarter.

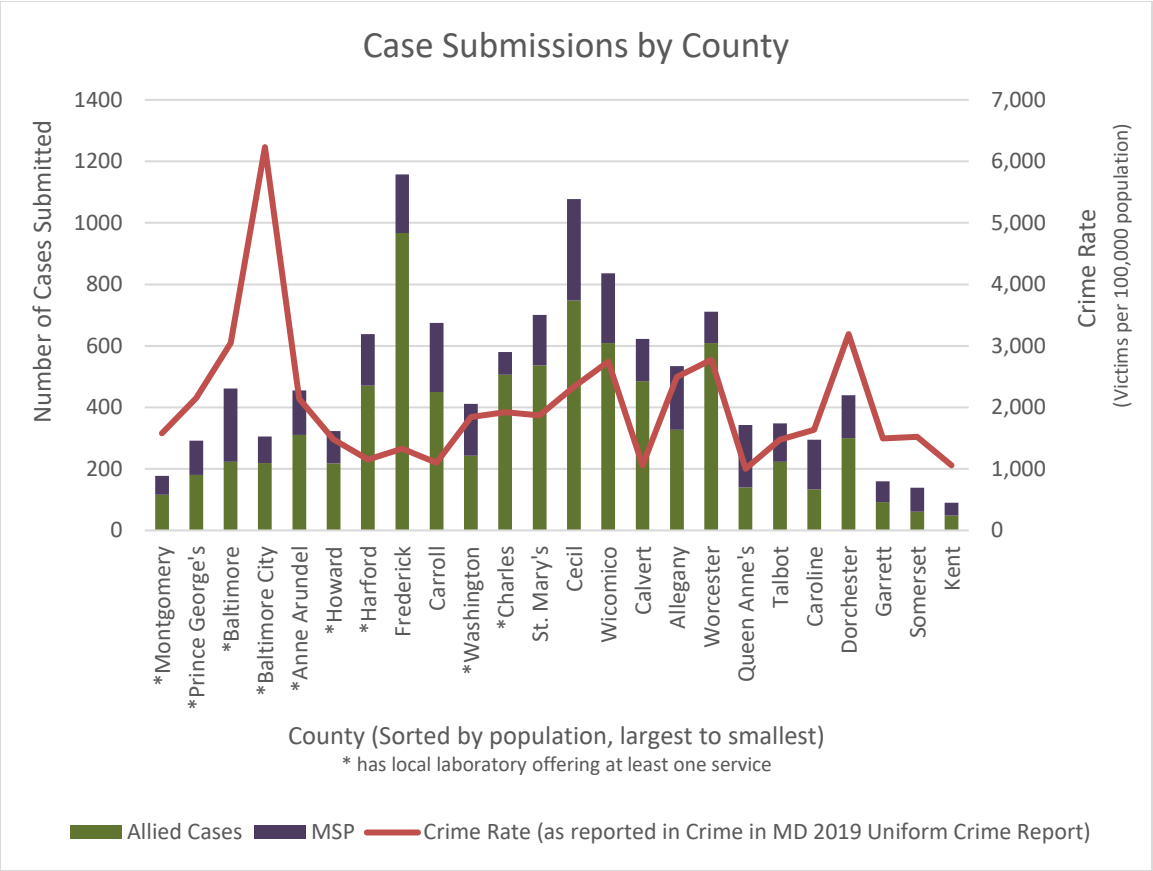
Quantity of FSD Requests by County						
County	2019			2020		
	Cases Submitted to Lab	Crime Scenes	Total	Cases Submitted to Lab	Crime Scenes	Total
Frederick	1,639	25	1,664	1,158	14	1,172
Cecil	1,208	69	1,277	1,077	75	1,152
Wicomico	939	59	998	836	65	901
Worcester	597	24	621	711	16	727
St. Mary's	742	11	753	702	20	722
Carroll	762	43	805	675	41	716
Harford	793	15	808	638	14	652
Calvert	669	8	677	623	9	632
Charles	854	3	857	580	3	583
Allegany	548	64	612	534	36	570
Baltimore	502	50	552	461	47	508
Anne Arundel	531	25	556	455	20	475
Dorchester	464	23	487	440	30	470
Washington	400	24	424	412	18	430
Talbot	404	34	438	348	27	375
Queen Anne's	334	20	354	343	13	356
Baltimore City	544	49	593	305	39	344
Howard	684	6	690	322	16	338
Prince George's	335	26	361	292	31	323
Caroline	321	20	341	295	23	318
Somerset	177	54	231	139	42	181
Montgomery	180	4	184	177	4	181
Garrett	145	10	155	160	17	177
Statewide/Not Determined*	33	1	34	97	1	98
Kent	144	7	151	90	4	94
Out of State	3	0	3	1	0	1
Totals	**13,952**	**674**	**14,626**	**11,871**	**625**	**12,496**

***County where offense occurred was not provided to FSD.

Quantity of Laboratory Submissions to FSD Ranked by MSP Installation			
2020 Rank	**2019 Rank**	**MSP Installation**	**Counties Served**
1	1	MSP-CID/CED	Statewide
2	2	MSP-Easton	Caroline, Dorchester, Talbot
3	3	MSP-Westminster	Carroll
4	7	MSP-Centerville	Kent, Queen Anne's
5	4	MSP-North East	Cecil
6	8	MSP-Golden Ring	Baltimore
7	5	MSP-Frederick	Frederick
8	6	MSP-Cumberland	Allegany
9	11	MSP-Hagerstown	Washington
10	9	MSP-Leonardtown	St. Mary's
11	13	MSP-Salisbury	Wicomico
12	10	MSP-Prince Frederick	Calvert
13	12	MSP-JFK Highway	Cecil, Harford, Baltimore
14	21	MSP-Berlin	Worcester
15	14	MSP-Waterloo	Howard
16	16	MSP-Bel Air	Harford
17	18	MSP-Glen Burnie	Anne Arundel
18	20	MSP-McHenry	Garrett
19	19	MSP-La Plata	Charles
20	15	MSP-Princess Anne	Somerset
21	24	Office of State Fire Marshal	Statewide
22	25	MSP-Rockville	Montgomery
23	17	MSP-College Park	Prince George's
24	23	MSP-Annapolis	Anne Arundel
25	22	MSP-Forestville	Prince George's
26	27	MSP-Homicide	Statewide
27	26	MSP-DED/C3I	Statewide
28	28	MSP-Crash Team	Statewide
29	29	MSP-CVED	Statewide

Quantity of Laboratory Submissions to FSD Ranked by Allied Agency County		
2020 Rank	**2019 Rank**	**County**
1	1	Frederick
2	2	Cecil
3	8	Worcester
4	4	Wicomico
5	6	St. Mary's
6	3	Charles
7	9	Calvert
8	5	Harford
9	10	Carroll
10	15	Allegany
11	12	Anne Arundel
12	13	Dorchester
13	17	Washington
14	14	Talbot
15	16	Baltimore
16	11	Baltimore City
17	7	Howard
18	19	Prince George's
19	18	Queen Anne's
20	20	Caroline
21	21	Montgomery
22	24	Garrett
23	23	Somerset
24	22	Kent
25	25	Statewide/Not Determined*
26	26	Out of State

*County where offense occurred was not provided to FSD.


Case Submissions by County
Number of Cases Submitted
1400
1200
1000
800
600
400
200
0
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
Crime Rate
(Victims per 100,000 population)
*Montgomery
*Prince George's
*Baltimore
*Baltimore City
*Anne Arundel
*Howard
*Harford
Frederick
Carroll
*Washington
*Charles
St. Mary's
Cecil
Wicomico
Calvert
Allegany
Worcester
Queen Anne's
Talbot
Caroline
Dorchester
Garrett
Somerset
Kent
County (Sorted by population, largest to smallest)
* has local laboratory offering at least one service
Allied Cases
MSP
Crime Rate (as reported in Crime in MD 2019 Uniform Crime Report)

CRIME SCENE SECTION

The Crime Scene Section (CSS) is responsible for processing crime scene evidence to include identifying, collecting, preserving, photographing, sketching, storing and transporting evidence to the laboratory facilities. Bloodstain pattern analysis, facial composite generation and bullet trajectory analysis are also available. Crime Scene Technicians (CSTs) work closely with criminal investigators, processing crime scenes and providing technical assistance, thereby allowing investigators the opportunity to conduct thorough investigations. Technicians are available to Maryland's law enforcement community twenty-four hours a day, seven days a week. The CSS also provides assistance to neighboring states upon request. The Section Manager oversees the overall operations of the Crime Scene Section. When fully staffed, there are three Regional Supervisors and five Crime Scene Technicians assigned to each of the three regions: Western, Central, and Eastern. The Crime Scene Section was nearly fully staffed in 2020.

Most of the evidence examined by the MSP-FSD is transported by CSTs. They not only transport evidence for the majority of the Department's installations, but also for many of the local police and sheriff's departments. These transports are to and from the Pikesville Laboratory as well as the two satellite laboratories located in Hagerstown and Berlin.

The CSS is involved in the MSP-FSD Disaster Identification Team (DIT), which is available to assist the Office of the Chief Medical Examiner in locating, marking, photographing, and identifying disaster victims.

The technical abilities and expertise of the CSTs are often utilized for training. They provide instruction at the Maryland State Police Academy, Natural Resources Police Academy, various in-service law enforcement agency programs, and provide lectures during training and seminars hosted by allied police departments.

Law enforcement personnel provided valuable feedback to the CSTs and their supervisors by submitting Technician Evaluation Forms in 2020. These evaluations were consistently highly rated and praised CSS personnel for their exemplary service and performance.

CRIME SCENE REGIONAL UNITS

Western Region Unit: Allegany, Frederick, Washington, Carroll, Howard, Montgomery, and Garrett Counties

Central Region Unit: Anne Arundel, Harford, Baltimore, Cecil, Prince George's, Calvert, Charles, St. Mary's Counties as well as Baltimore City (Maryland Port Authority, Maryland Transportation Authority, DOC)

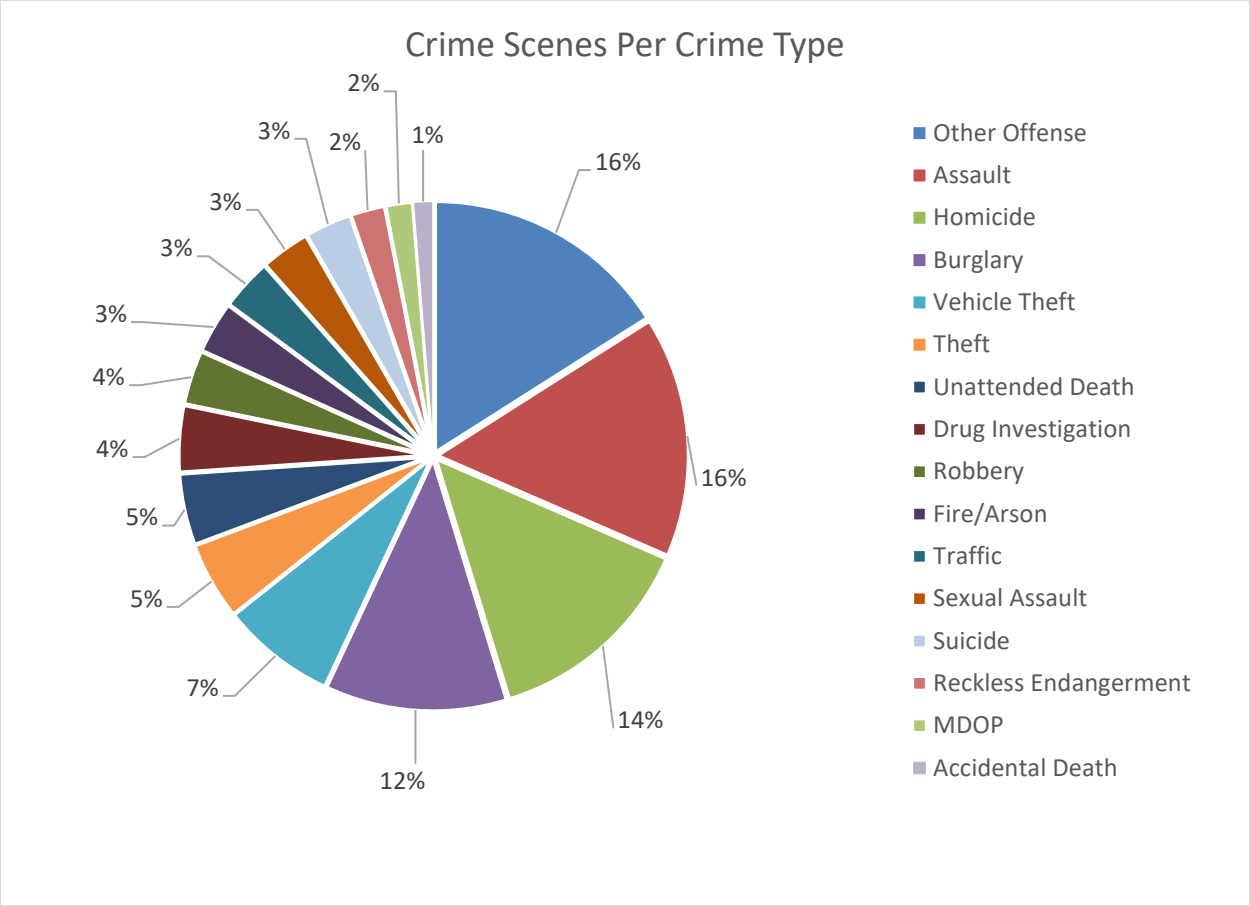
Eastern Region Unit: Kent, Queen Anne's, Talbot, Caroline, Dorchester, Wicomico, Somerset and Worcester Counties

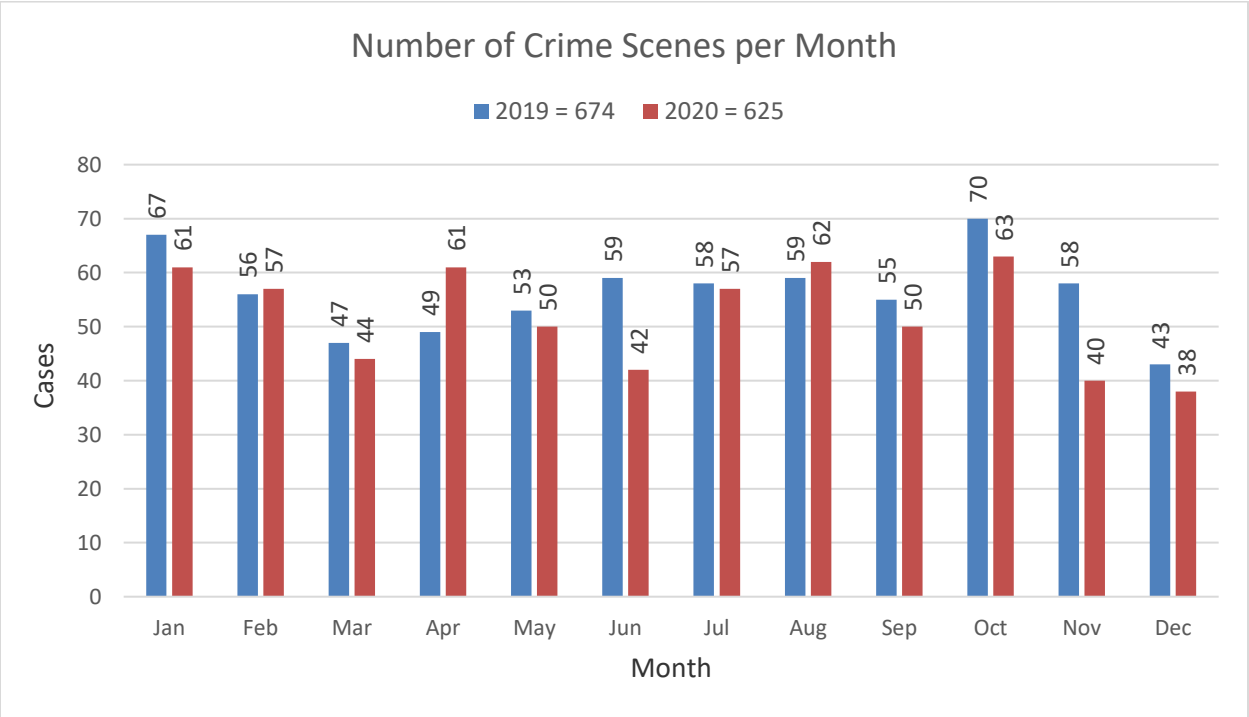
Crime Scene Summary								
Crime Scene Region	**Scenes Processed**		**MSP Scenes**		**Allied Agency**		**Scene Assists**	
	2019	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**	**2020**
Eastern	185	233	56%	60%	44%	40%	6	10
Western	195	147	62%	72%	38%	28%	29	31
Central	293	245	66%	70%	34%	30%	15	16
Totals	**673***	**625**	**61%**	**67%**	**39%**	**33%**	**50**	**57**

*This 2019 total does not include the single Statewide case processed in 2019

Total Number of Crime Scenes Processed per County	
County	**Total Crime Scenes**
Cecil	75
Wicomico	65
Baltimore	47
Somerset	42
Carroll	41
Baltimore City	39
Allegany	36
Prince George's	31
Dorchester	30
Talbot	27
Caroline	23
St. Mary's	20
Anne Arundel	20
Washington	18
Garrett	17
Worcester	16
Howard	16
Frederick	14
Harford	14
Queen Anne's	13
Calvert	9
Montgomery	4
Kent	4
Charles	3
Statewide/Not Determined*	1
TOTAL	**625**

*County where offense occurred was not provided to FSD.


Crime Scenes Per Crime Type
16%
16%
14%
12%
7%
5%
5%
4%
4%
3%
3%
3%
2%
2%
1%
Other Offense
Assault
Homicide
Burglary
Vehicle Theft
Theft
Unattended Death
Drug Investigation
Robbery
Fire/Arson
Traffic
Sexual Assault
Suicide
Reckless Endangerment
MDOP
Accidental Death


Number of Crime Scenes per Month
2019 = 674
2020 = 625
Cases
Month
Jan 67 61
Feb 56 57
Mar 47 44
Apr 49 61
May 53 50
Jun 59 42
Jul 58 57
Aug 59 62
Sep 55 50
Oct 70 63
Nov 58 40
Dec 43 38

NOTEWORTHY CASES

Western Region

In October, 2020, CST Anschuetz responded to Baltimore City to process a recovered stolen automobile. Located on the inside of the vehicle was a prescription bottle with a name and an address of an individual who was not the victim. CST Anschuetz noted that information and forwarded it to the investigating Trooper. That information coupled with latent print identifications from items processed in the vehicle led to pending charges of an individual for vehicle theft.

On June 24, 2020, CST Jeudy received an after-hours call advising a scalp had been found in a state park in Carroll County. Through continued phone calls, it was believed that a possible explosion had taken place. While en route, CST Jeudy was advised a Forensic Investigator had arrived on scene and confirmed the remains to be human and the search/investigation was being placed on hold until daylight hours. On June 25, 2020, CST Jeudy arrived at Patapsco State Park-The McKeldin Area and met with the Natural Resources Police investigator. CST Anschuetz arrived to assist as well. While doing a walk-thru, CST Jeudy was advised that a disturbed area around the scene was due to flooding damage. She noted that the surrounding area still had vegetation that would have also been destroyed with flooding, and this was most likely a result of the blast. Also during the walk-thru, CST Anschuetz noticed what appeared to be a handgun under a log. MSP Crash Team was requested to help assist with documentation of evidence as evidence was discovered in numerous places. Throughout the processing of the scene, several pieces of evidence, including explosive related material, were recovered as well as remains of the victim. The various remains recovered measured no larger than 6 inches. The handgun was registered to a man who had been reported missing on June 24th and whose vehicle was found at a trail head a short distance from the scene. Crash Team was able to determine a blast radius of at least 75 feet with over 65 points of evidence noted. CST Iman and CST Roher joined the recovery process as well.

Central Region

Just after Christmas in 2019, CST Idso responded to a parking lot at a gas station in St. Mary's County in reference to a homicide investigation. At the time of the incident an unknown male suspect shot and struck the victim during the altercation. The suspect's vehicle was found crashed and abandoned not far from the scene. CST Idso processed both the crime scene and the suspect's vehicle resulting in the collection of latent fingerprints that were developed on the vehicle. Submission of these prints to the Laboratory for latent prints lead to the identification of the suspect in January 2020, who is believed to have committed the murder.

In June 2020, CST Myer was requested to process a vehicle at the Annapolis Barracks that was seized related to a traffic stop and the recovery of two handguns. One of the guns inside of the vehicle was linked to a Montgomery County Police homicide investigation involving members of the MS-13 gang. CST Myer lifted a large volume of latent fingerprints from various locations

on the vehicle which resulted in the identification of two members of the MS-13 gang suspected to be involved in the homicide.

In June, 2020, CST Frantz responded to a homicide investigation in Perryville, that was being investigated by the Perryville Police Department and the Cecil County Sheriff's Office. CST Frantz processed the crime scene and collected a knife that was believed to be the murder weapon. CST Frantz processed the knife and submitted possible DNA samples to the Lab that resulted in the identification and arrest of the suspect.

In July, 2020, CST Iman responded to an armed robbery in Prince Frederick where the suspect threatened an employee with a tire iron. CST Iman was advised that the suspect had touched a Pepsi bottle and left it on the counter. Processing of this Pepsi bottle resulted in the development of latent fingerprints that lead to the identification and arrest of the suspect.

Eastern Region

In late 2019, a Maryland State Police employee's residence was broken into and burglarized. CST Stanley responded to and processed the scene. A short time later items belonging to the victim were recovered during a search of the suspect's home. These items were turned over to CST Stanley who processed them in January 2020 resulting in a DNA identification of one of the suspects.

In February, 2020, CST George responded to an armed robbery that occurred at a Stop N Shop in Delmar, MD, that was being investigated by the Delmar Police Department. The store was robbed by three suspects that reportedly had a gun and a knife and a victim had been assaulted by one of the suspects. CST George was informed that one of the three suspects had purchased an apple juice just prior to the store being robbed. The apple juice container was later found outside by Delmar PD and turned over to CST George who processed the container for possible DNA. The DNA sample was submitted to the Lab and one of the suspects was subsequently identified.

In May 2020, CST Stanley responded to the scene of a burglary in Stevensville, MD, in which someone broke into a vacant home that was up for sale. CST Stanley located and processed items found in an upstairs bedroom that were not the property of victim. The processing of these items resulted in the identification of the suspect who was arrested and has already plead guilty to the charges.

In October 2020, the Crime Scene Section responded to a scene where a Delaware man was shot and killed in a parking lot in Cambridge. FSD crime scene technicians processed the scene in order to assist in the determination of the unknown assailant and the firearm used. It was determined that the victim was in the area where he was found by police when he was shot. The evidence collected by CSTs was brought to the FSD laboratory for further analysis in hopes of providing a lead on the suspect.

FORENSIC SUPPORT SERVICES SECTION

This Section consists of the Photography Unit and the Central Receiving Unit. These units play an important role in allowing the FSD to function as efficiently and effectively as possible.

The Photography Unit is supervised by one Forensic Photographer Supervisor and is staffed by one Forensic Photographer II. The Central Receiving Unit is supervised by one Administrative Officer (CRU Supervisor) and is staffed by five MSP Forensic Inventory Control Officers (MSP-FICO's).

PHOTOGRAPHY UNIT

The Photography Unit provides photographic services to the Maryland State Police.

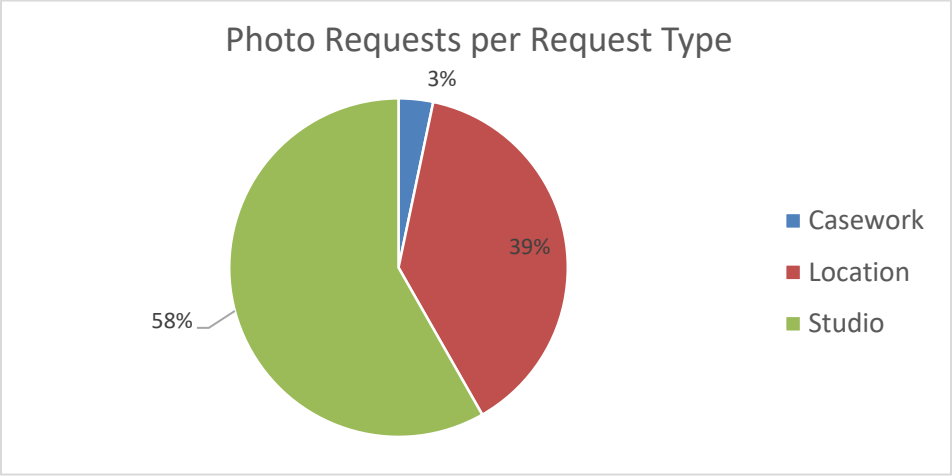
Duties within the unit include the development and printing of images related to crime scenes and motor vehicle accidents for the Maryland State Police and other agencies. This unit also serves as the VeriPic system administrator. Reprints or CDs are provided to various divisions and units throughout the Department upon request. Other duties include public relations photos, expungement requests relating to the digital Barrack Identification Photo System, ID card production, and the support of other units within the Department. The Photography Unit assisted in creating the 2021 MSP Safety Calendar. The calendar theme for the 100th Anniversary year was "Safer Through The Years." It showcased the Department history and changes in safety for the Department, but also is a free schedule planner that staff can use to organize their workdays.

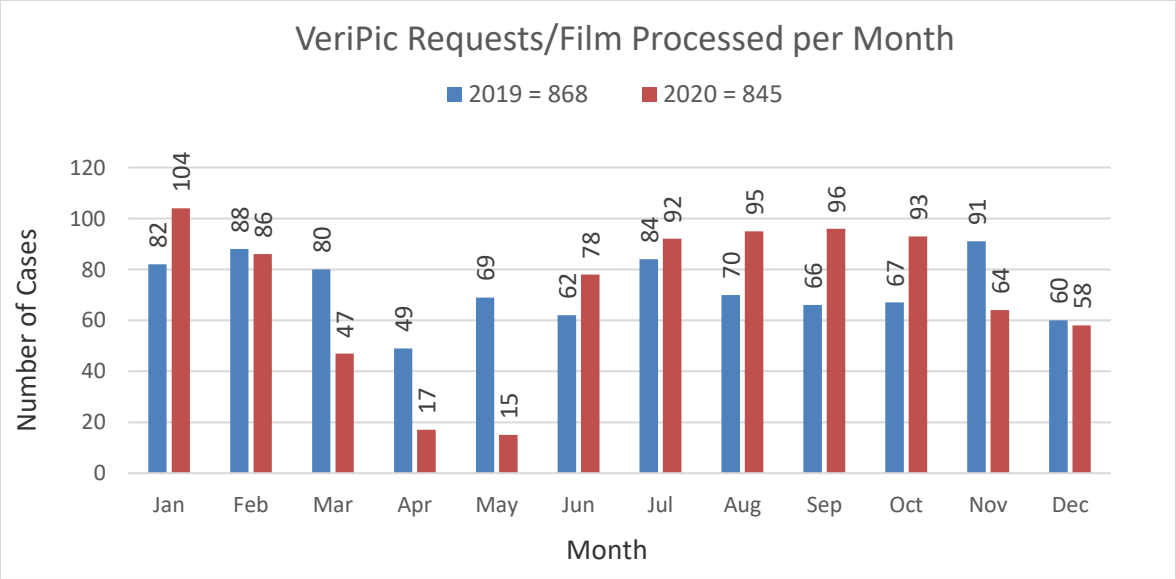
The Supervisor of the Photography Unit, with assistance from the other unit member, managed to navigate effective teleworking for over 17 weeks. After navigating how to remote into systems within the Unit from home, the Unit Supervisor was able to create essential ID cards when it was deemed necessary. The unit also created systems to organize and manage casework requests while staff was teleworking. This enabled a smooth transition from the lab to a telework location and then back to the lab as the unit re-transitioned to a new COVID-19 schedule of split shifts and partial teleworking.

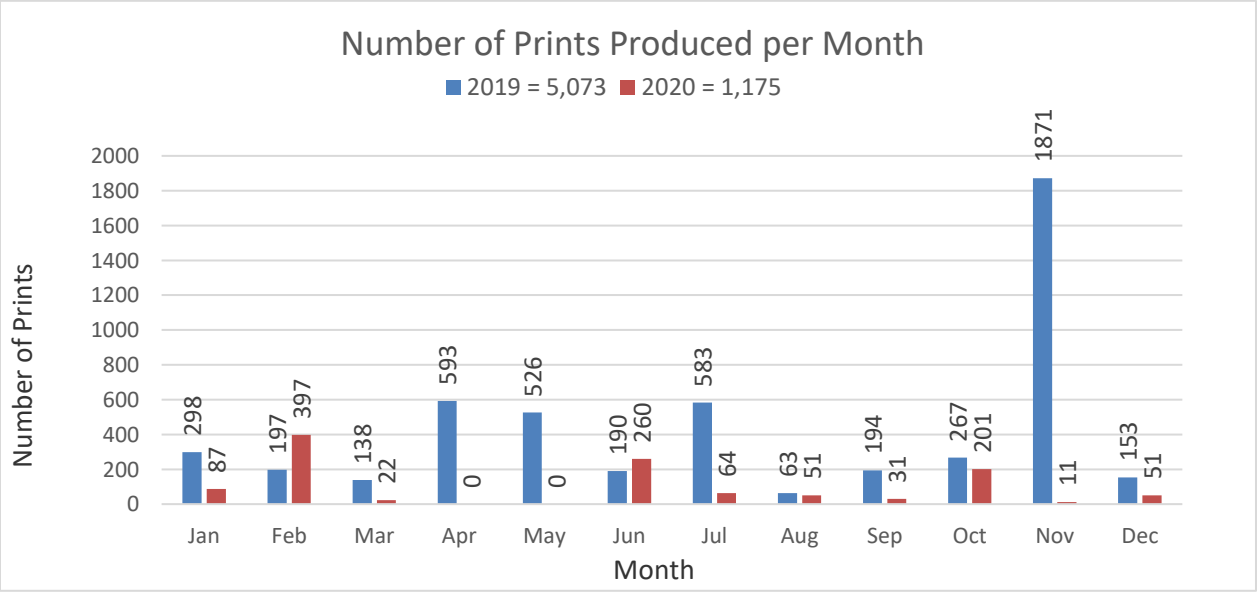
In 2021, the Photography Unit will pursue the possibility of adding VeriPic connectivity into the RMS system. The goal of this change is to make the system easier for personnel to use, have an integration with the RMS and to continue to safeguard the Department's images.

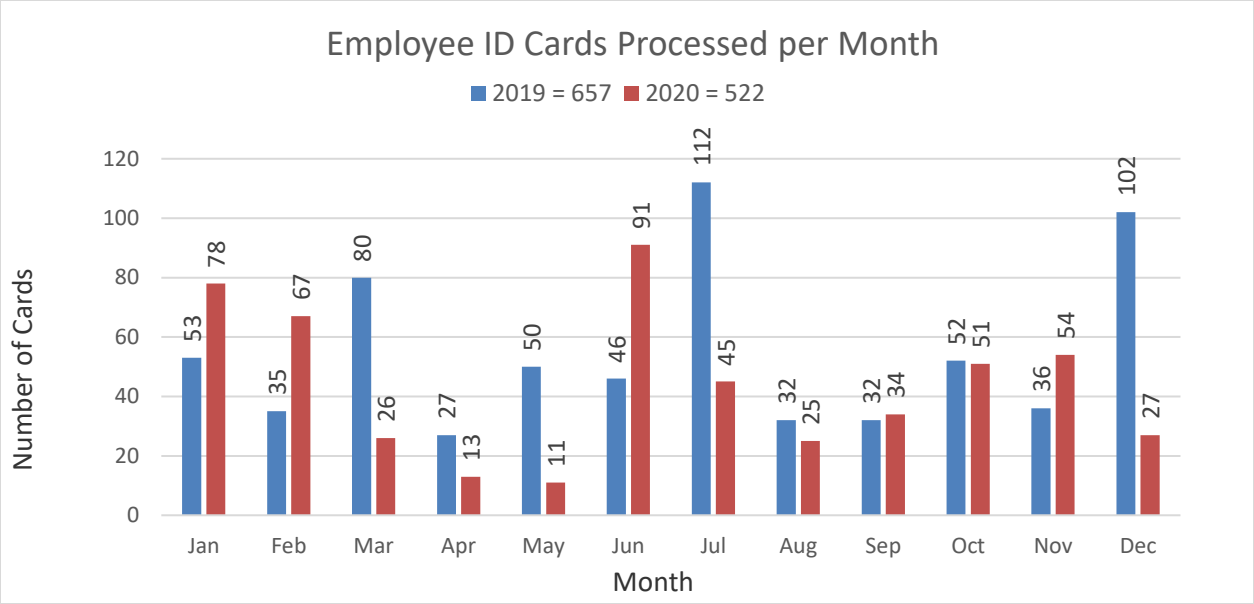
Photography Unit personnel serve as members of the Disaster Identification Team and provide technical training and equipment recommendations in photography.

Photography Requests	
MSP Requestors	**Requests**
Portraits *(by # of days, not requestors)*	105
Headquarters	12
SSB	28
CIB	15
FOB	15
Casework	6
TOTAL	**181**




VeriPic Requests/Film Processed per Month
2019 = 868
2020 = 845
Number of Cases
120
100
80
60
40
20
0
82
104
88
86
80
47
49
17
69
15
62
78
84
92
70
95
66
96
67
93
91
64
60
58
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month


Number of Prints Produced per Month
2019 = 5,073
2020 = 1,175
Number of Prints
2000
1800
1600
1400
1200
1000
800
600
400
200
0
298
87
197
397
138
22
593
0
526
0
190
260
583
64
63
51
194
31
267
201
1871
11
153
51
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month


Employee ID Cards Processed per Month
2019 = 657
2020 = 522
Number of Cards
120
100
80
60
40
20
0
53
78
35
67
80
26
27
13
50
11
46
91
112
45
32
25
32
34
52
51
36
54
102
27
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month

CENTRAL RECEIVING UNIT

The Central Receiving Unit (CRU) functions as the liaison between the MSP-FSD and agencies that submit evidence for scientific analysis and CDS destruction. All three laboratory sites have a Central Receiving Unit that controls the security of evidence while awaiting analysis and again while pending return to the submitting agency. Personnel assigned to the unit ensure the integrity and protection of each item of evidence while in their custody. Regularly scheduled inventories of the evidence within Central Receiving and the laboratory units are coordinated through the unit. The unit reports directly to the MSP-FSD Assistant Commander.

Berlin Satellite Location

This location has an MSP Forensic Inventory Control Officer (MSP-FICO) who manages the CDS evidence submitted for analysis. The MSP-FICO assigns casework to the forensic scientists, manages rush requests and faxes laboratory reports to the local State's Attorney's Offices. The MSP-FICO also performs administrative tasks for the site such as logging subpoenas, completing requisitions, scheduling evidence transfer appointments, and distributing mail.

Hagerstown Satellite Location

The Hagerstown site has one MSP-FICO that manages CDS and Latent Print evidence. In addition, the MSP-FICO manages rush requests, processes discovery requests and faxes laboratory reports to the local State's Attorney's Offices. The MSP-FICO also does administrative tasks for the laboratory, such as conducting the capital equipment inventory, maintaining the working fund and retaining analytical case files.

Pikesville Headquarters Location

This location has one Administrative Officer (CRU Supervisor) and three MSP-FICO's. The Pikesville location manages evidence submissions for the Chemistry, Trace Evidence, DNA, and Pattern Evidence sections. These Sections are comprised of 8 scientific disciplines. In addition to evidence handling responsibilities, the Pikesville CRU administers and carries out the Department's CDS destruction process. During this process, MSP-FICO's randomly select a number of cases to be re-tested for quality control. The CRU also coordinates with various MSP Divisions for the local destruction of marijuana plants and confiscated parcels. The CRU Supervisor is responsible for organizing disposal events for law enforcement agencies across the State.

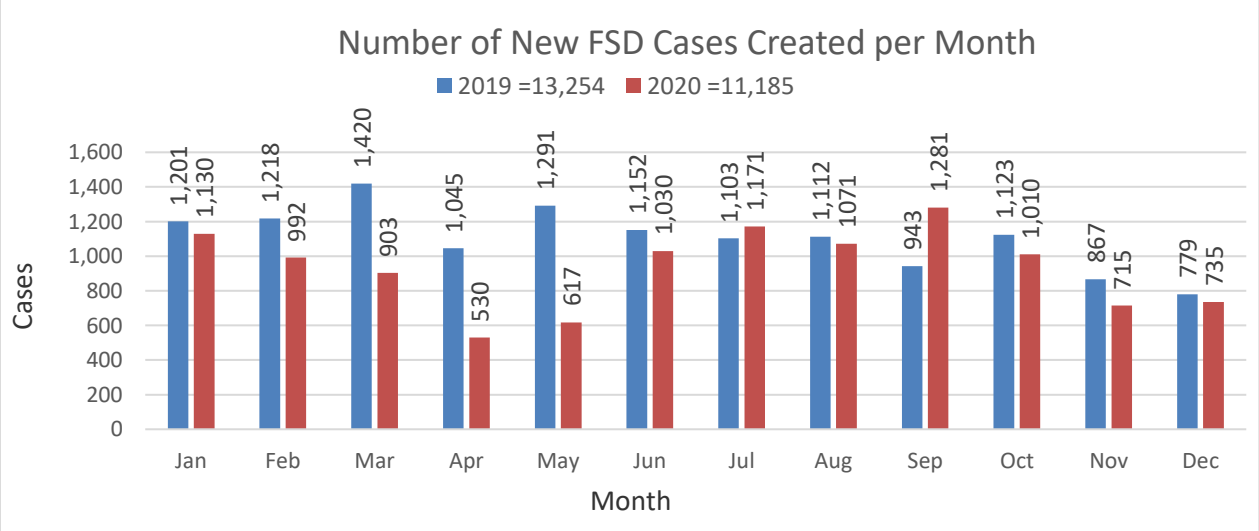
The Pikesville CRU is also responsible for archiving scientific analytical reports for all sections of the MSP-FSD and coordinates the transmittal of files to and from the State Records Management Center. The CRU maintains expunged records for the Division.

Additionally, the CRU plays an essential role in the use of StarLIMS, the laboratory information management system, utilized by MSP-FSD. The CRU supervisor functions as a StarLIMS Administrator and acts as the primary liaison between FSD end users and the project managers.

Implementation of the latest StarLIMS release was suspended due to staffing issues and the COVID-19 pandemic.

A new directive was issued in July of 2020 that requires all SAFE kits to be forwarded to the FSD within 30 days of MSP taking possession and when all associated standards have been collected. SAFE kits are forwarded to the Central Receiving Unit for storage and inventory until transferred to CED Headquarters for long-term storage.

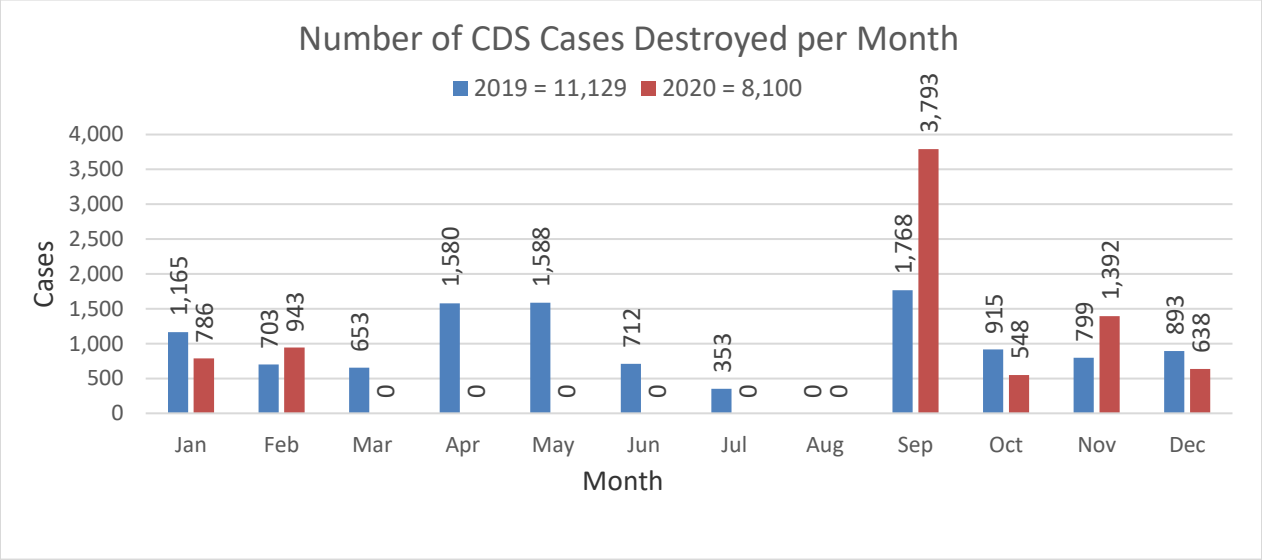
The Pikesville office continued through the year with two vacant MSP Forensic Inventory Control Specialist positions. This forced the Unit to operate with only half of its staff and the CRU Supervisor took on MSP-FICO duties in order to maintain the Unit's efficiency as much as possible. In December, the Maryland Department of Budget and Management granted approval to fill one of the MSP-FICO positions.



Note: Cases are counted only once, regardless of the number of units to which they are routed.

Number of Containers Received by Lab			
	Berlin	**Hagerstown**	**Pikesville**
Jan	186	335	1,092
Feb	191	281	899
Mar	131	305	813
Apr	82	55	681
May	70	166	639
Jun	215	219	1,035
Jul	238	324	1,067
Aug	125	362	967
Sep	98	325	1,308
Oct	107	369	995
Nov	69	226	751
Dec	77	209	865
Total	**1,589**	**3,176**	**11,112**

Note: 'Containers' refers to individual evidence packages. A case can consist of one or more containers, depending on the amount or type of evidence.



ADMINISTRATIVE SERVICES BRANCH

The Administrative Services Branch consists of the Administrative Support Staff Unit and the Data Support Unit, both, which provide support throughout the MSP-FSD. The Administrative Support Staff Unit provides office management functions including recruiting for civilian vacancies, processing working fund expenditures, ordering laboratory supplies, capital inventory, various administrative duties involving the laboratory budget, personnel inquiries, maintaining service agreement contracts, processing invoices, logging and maintaining all submitted court summonses, logging and processing training requests, and maintaining the Division's filing system. The Administrative Support Staff Unit is essential in providing the MSP-FSD staff with what they need to do their jobs in the field and in the laboratory.

MSP-FSD receives additional support through functions provided within the Data Support Unit consisting of a Research Statistician. The Research Statistician collects, analyzes, evaluates and disseminates data for this Annual Report as well as for MSP-FSD's Annual DNA Statewide Database Report, a Monthly Activity Report, a Weekly Statistical Report, and other laboratory statistical needs. The Research Statistician also provides ongoing statistical information for MSP-FSD grants.

In addition to the MSP-FSD administrative staff, a contractual employee that is sub-contracted through Falcon is assigned to provide security/receptionist coverage for the MSP-FSD front lobby security desk. This individual screens and logs all visitors, including personnel delivering evidence, and also monitors laboratory security cameras and communicates with the Headquarters Duty Officer and the Baltimore County Police Department regarding security issues. In addition, this contracted employee provides clerical assistance to various units when needed.

PATTERN EVIDENCE SECTION

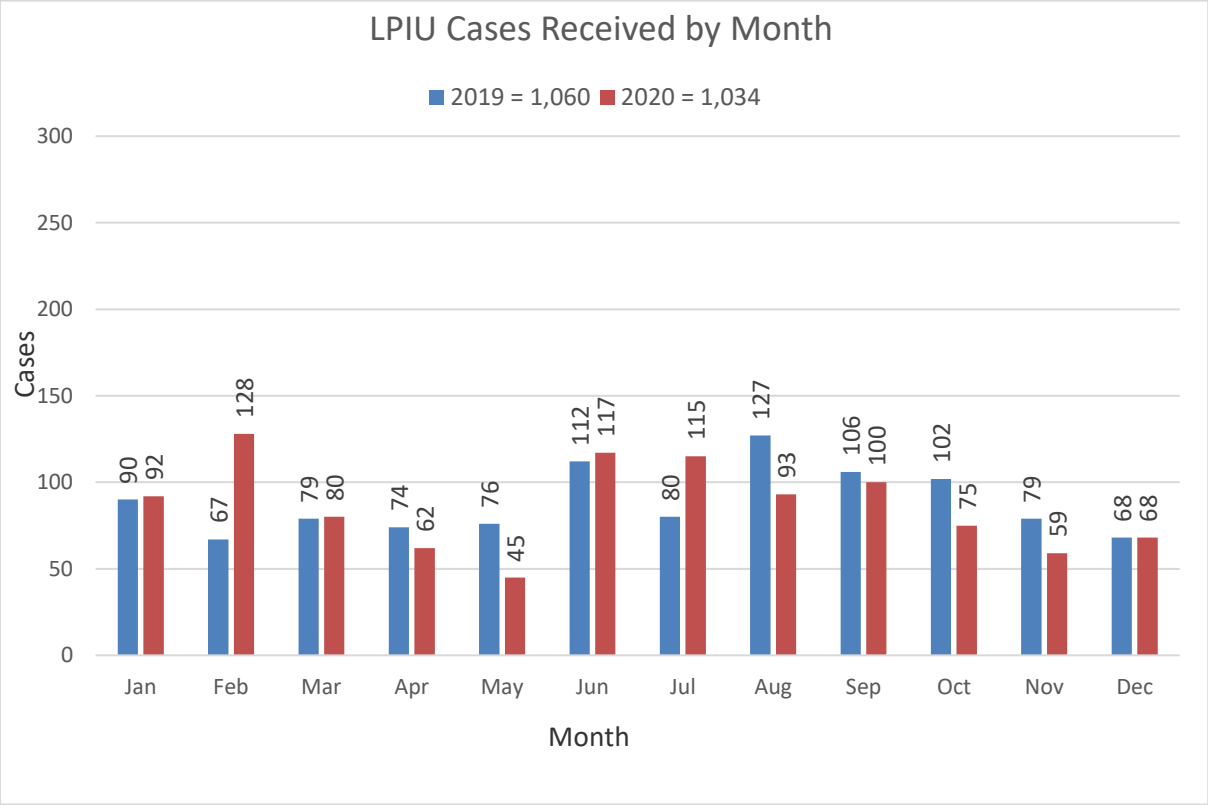
The Pattern Evidence Section is comprised of two units: the Latent Prints/Impressions Unit (LPIU) and the Firearms/Toolmarks Unit (FATMU). Both units operate out of the Pikesville laboratory and there is an additional LPIU in Hagerstown. The FATMU performs analysis on firearms and toolmarks using comparison microscopy and conducts serial number restoration. The LPIU performs analysis of latent friction ridge impression, footwear, and tire track related evidence. One Forensic Scientist Manager oversees both units. The LPIU consists of two supervisors (Pikesville/Hagerstown), two Forensic Scientist Advanced positions and five Forensic Scientist III's (one part-time contractual and four full time). The FATMU consists of one supervisor, two Forensic Scientist Advanced positions (one of these positions is vacant), three Forensic Scientist III's, two Laboratory Technicians, and one vacant Forensic Scientist I position.

LATENT PRINTS/IMPRESSIONS UNIT

The LPIU performs examination of latent friction ridge impressions. Various methods involving chemicals, powders and illumination techniques are used for the visualization of latent prints. The unit records developed friction ridge impressions using digital capture processes as well as gel and adhesive lifts. Comparisons between latent prints and known prints are conducted to determine if they originated from the same individual. In cases where an identification is made, a second examiner completes an independent verification. Any unidentified latent prints meeting the system requirements are searched through the Maryland Automated Fingerprint Identification System (MAFIS) and, when warranted, through the FBI database (NGI).

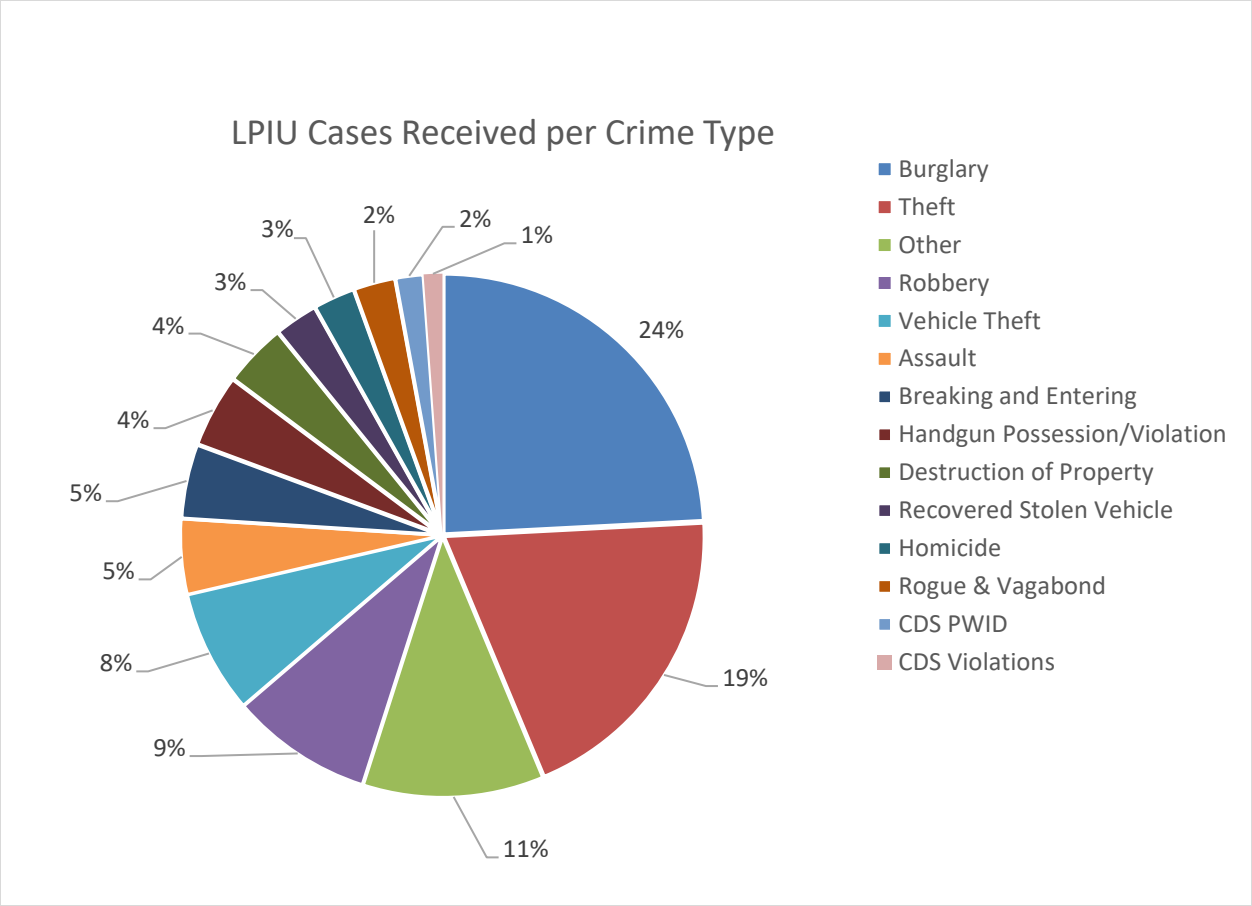
The LPIU is also responsible for the examination of footwear and tire track evidence. Various powders, chemicals and photography are used for the proper recovery of this impression evidence. Images are recorded with digital imaging devices. An analysis and comparison are performed as required for these sub-disciplines. Any footwear images that are suitable are entered and searched through the Shoe Print Image Capture and Retrieval database (SICAR) for brand recognition. Tire images can be searched through the Tread Design Guide for brand recognition. In cases where either an "identification" or "could have been made" conclusion is reached, a second examiner performs an independent verification.

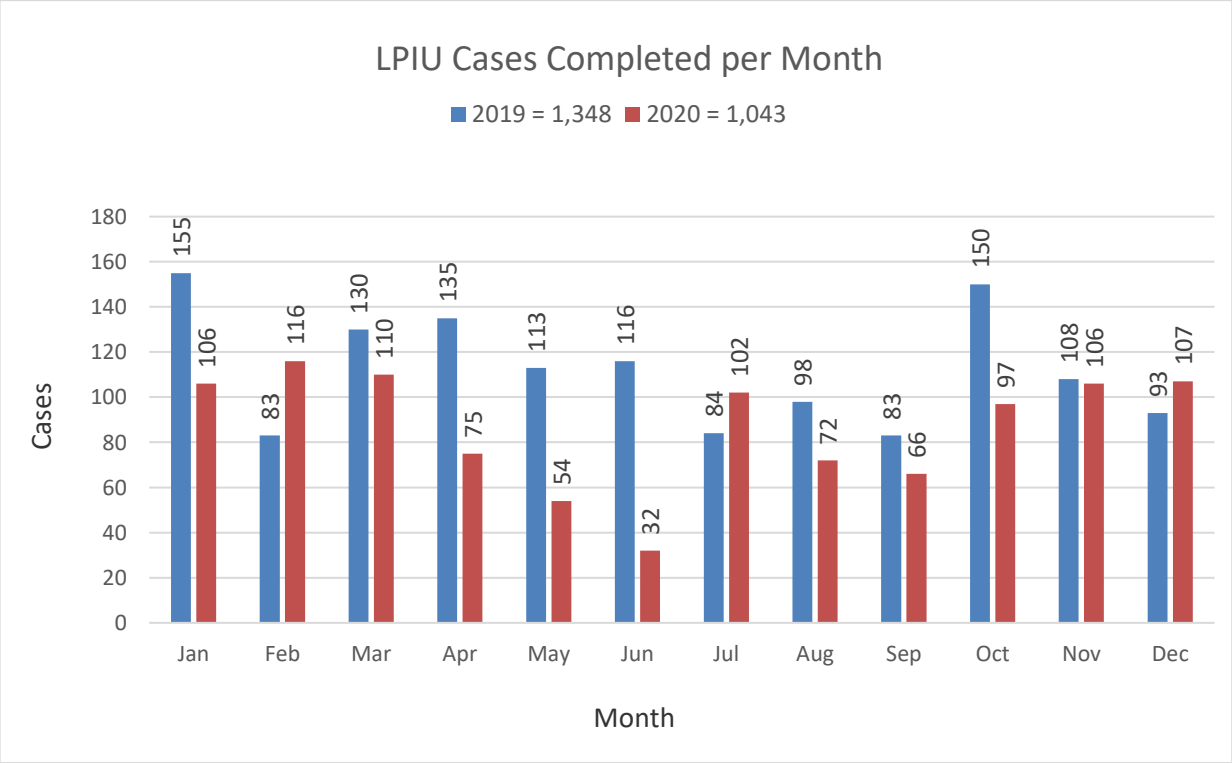
Latent Print/Impressions Casework Statistics

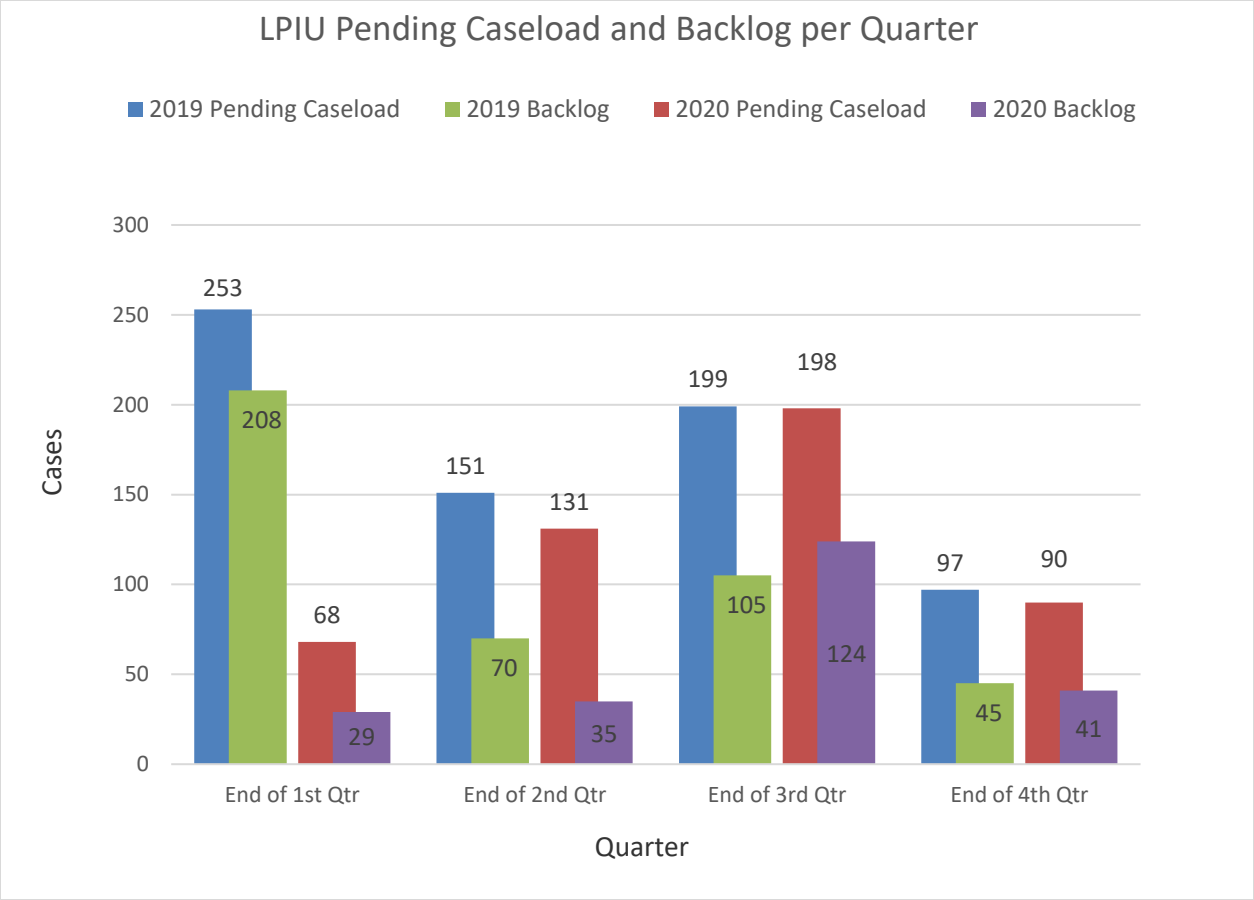


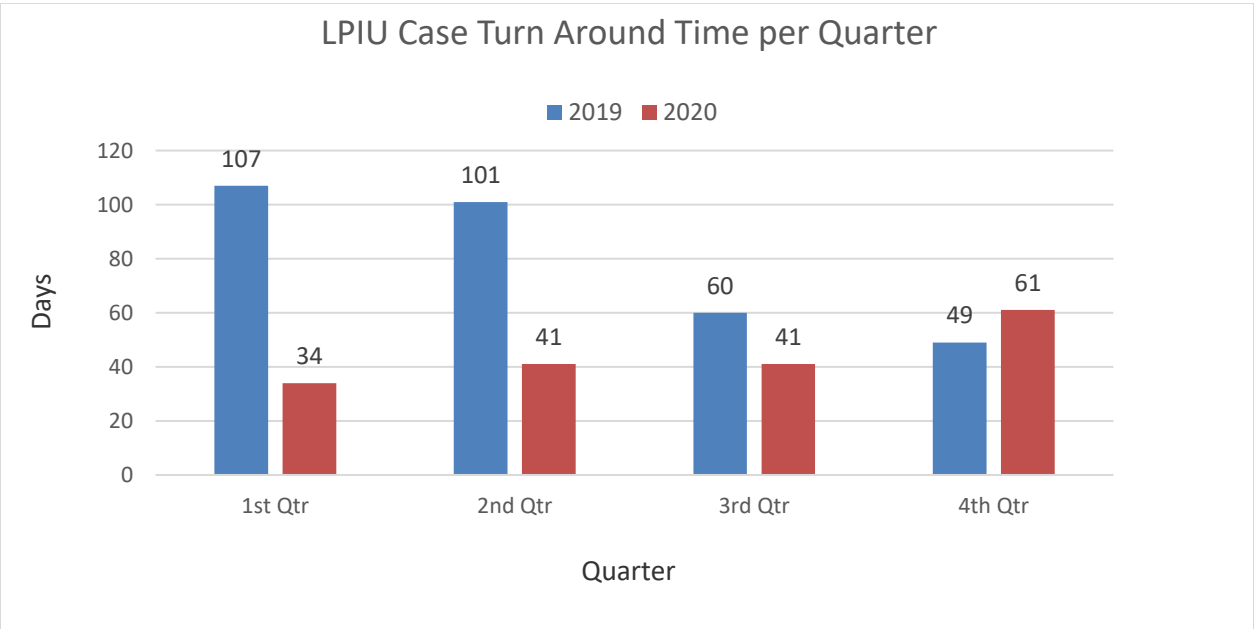
LPIU Cases Received per MSP Installation		
MSP Installation	**Counties Served**	**Submissions**
MSP-CID/CED	Statewide	25
MSP-North East	Cecil	24
MSP-Westminster	Carroll	15
MSP-Easton	Talbot, Caroline, Dorchester	11
MSP-Golden Ring	Baltimore	8
MSP-Salisbury	Wicomico	8
OSFM	Statewide	6
MSP-Berlin	Worcester	6
MSP-Crash Team	Statewide	6
MSP-Prince Frederick	Calvert	6
MSP-Bel Air	Harford	5
MSP-Homicide	Statewide	5
MSP-Princess Anne	Somerset	5
MSP-Cumberland	Allegany	4
MSP-Centerville	Kent, Queen Anne's	4
MSP-Frederick	Frederick	4
MSP-Leonardtown	St. Mary's	4
MSP-College Park	Prince George's	3
MSP-DED/C3I	Allegany	3
MSP-Hagerstown	Washington	3
MSP-Annapolis	Anne Arundel	2
MSP-Rockville	Montgomery	2
MSP-Glen Burnie	Anne Arundel	1
MSP-JFK Highway	Cecil, Harford, Baltimore	1
MSP-La Plata	Charles	1
MSP-McHenry	Garrett	1
MSP-Waterloo	Howard	1
	TOTAL	**164**

Allied Agency Cases Received by LPIU per County	
County	**Submissions**
St. Mary's	158
Worcester	142
Dorchester	109
Prince George's	107
Frederick	91
Wicomico	66
Carroll	39
Talbot	25
Washington	20
Anne Arundel	18
Garrett	14
Baltimore City	13
Cecil	13
Allegany	11
Calvert	11
Caroline	9
Baltimore	9
Queen Anne's	7
Harford	2
Montgomery	2
Charles	1
Out of State	1
Somerset	1
Howard	1
TOTAL	**870**

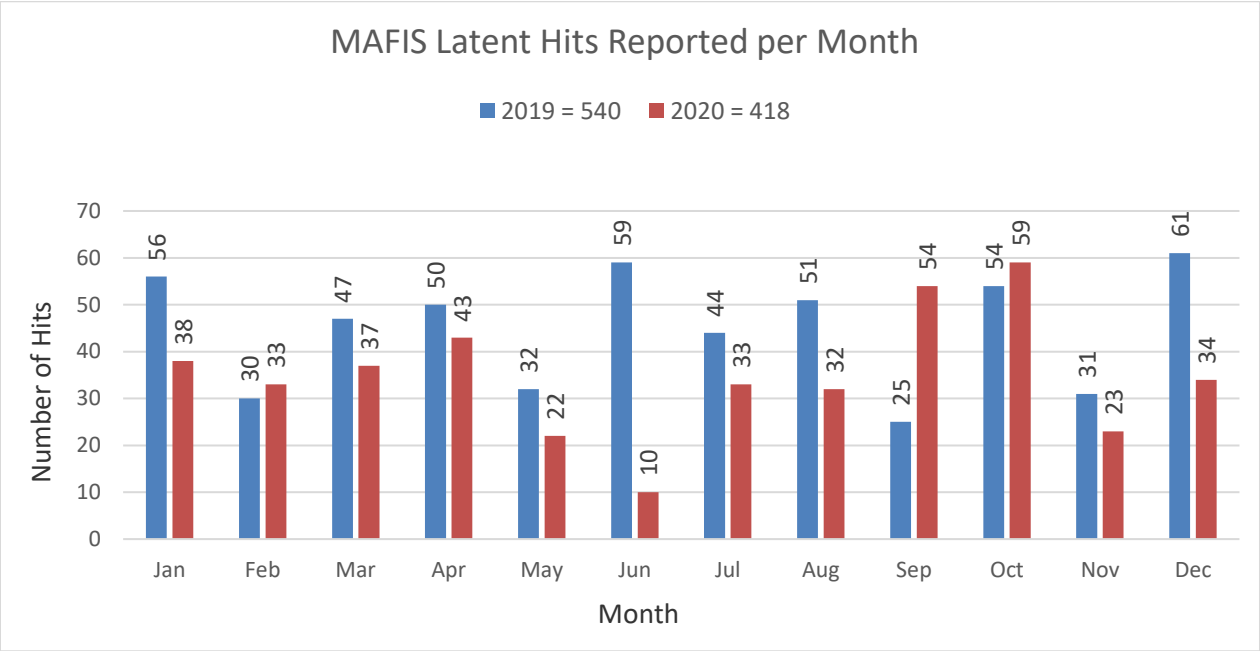

LPIU Cases Received per Crime Type
24%
19%
11%
9%
8%
5%
5%
4%
4%
3%
3%
2%
2%
1%
Burglary
Theft
Other
Robbery
Vehicle Theft
Assault
Breaking and Entering
Handgun Possession/Violation
Destruction of Property
Recovered Stolen Vehicle
Homicide
Rogue & Vagabond
CDS PWID
CDS Violations

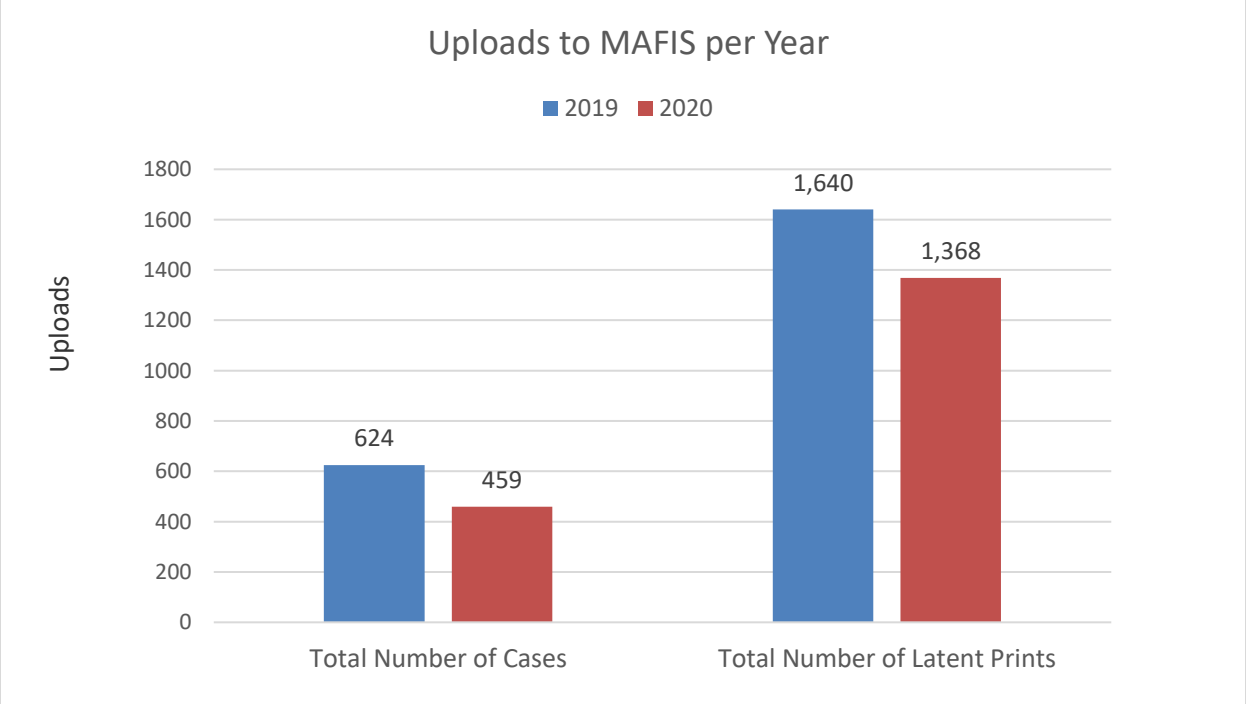

LPIU Cases Completed per Month
2019 = 1,348
2020 = 1,043
Cases
Month
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
155
106
83
116
130
110
135
75
113
54
116
32
84
102
98
72
83
66
150
97
108
106
93
107


LPIU Pending Caseload and Backlog per Quarter
2019 Pending Caseload
2019 Backlog
2020 Pending Caseload
2020 Backlog
Cases
300
250
200
150
100
50
0
253
208
68
29
151
70
131
35
199
105
198
124
97
45
90
41
End of 1st Qtr
End of 2nd Qtr
End of 3rd Qtr
End of 4th Qtr
Quarter


LPIU Case Turn Around Time per Quarter
2019
2020
Days
120
100
80
60
40
20
0
107
34
101
41
60
41
49
61
1st Qtr
2nd Qtr
3rd Qtr
4th Qtr
Quarter

Latent Print/Impressions Database Statistics





FIREARMS/TOOLMARKS UNIT

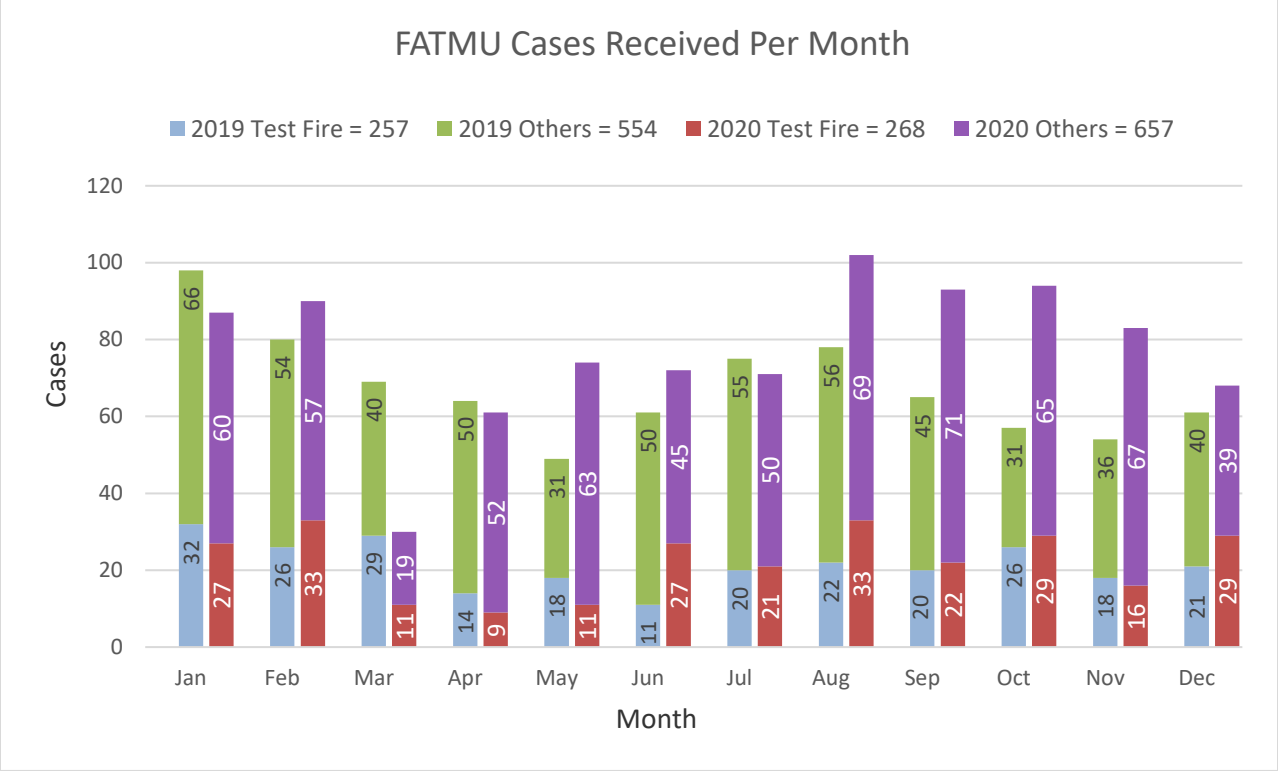
The Firearms/Toolmarks Unit (FATMU) provides microscopic and functional examination of firearms and firearm-related evidence. Examiners in this unit also perform serial number restoration and toolmark examinations. In addition, FATMU is responsible for test firing firearms for possible entry into the National Integrated Ballistic Information Network (NIBIN) BrassTrax system. Fired cartridge case data (digital images) are entered into the system to search against previously entered fired evidence cartridge cases from various scenes and against cartridge cases from test fired weapons.

The unit has two programs assisting with turnaround time for both firearms operability testing and NIBIN entries. These programs are the Walk-In Test Fire (WITF) and Operation Test Shot (OTS). The WITF program involves allied law enforcement agencies bringing firearms directly to the FATMU for functionality examinations. This program allows the agency representative to observe the test fire, and then serve as a witness in court in lieu of requiring the examiner to appear. OTS involves supplying law enforcement agencies with Forensic Buddy Systems (portable firearm canisters). The Forensic Buddy System enables the agencies to test fire handguns at their location and submit fired bullets/cartridge cases in pristine condition to the FATMU. These programs have been effective and instrumental in the unit's success with obtaining NIBIN Hits.

The COVID-19 pandemic had a significant impact on the Walk In Test Fire program. With closure of the courts, there was limited need for quick turnaround for test firing of firearms. Also, to protect personnel, visitors to the laboratory were restricted. In the first quarter of 2020, FATMU was able to process 75 firearms before the pandemic completely shut down the program. However, Operation Test Shot (OTS) was able to continue and had a successful year with 400 submissions of cartridge case and bullet samples.

The FATMU also provides a service to the Maryland Handgun Roster Board (HRB). The HRB is responsible for evaluating new firearms for compliance with Maryland regulations and determining if they should be approved for sale in the State. FATMU performs a non-forensic examination of the petitioned firearms specifically for the qualifying criteria established in COMAR.

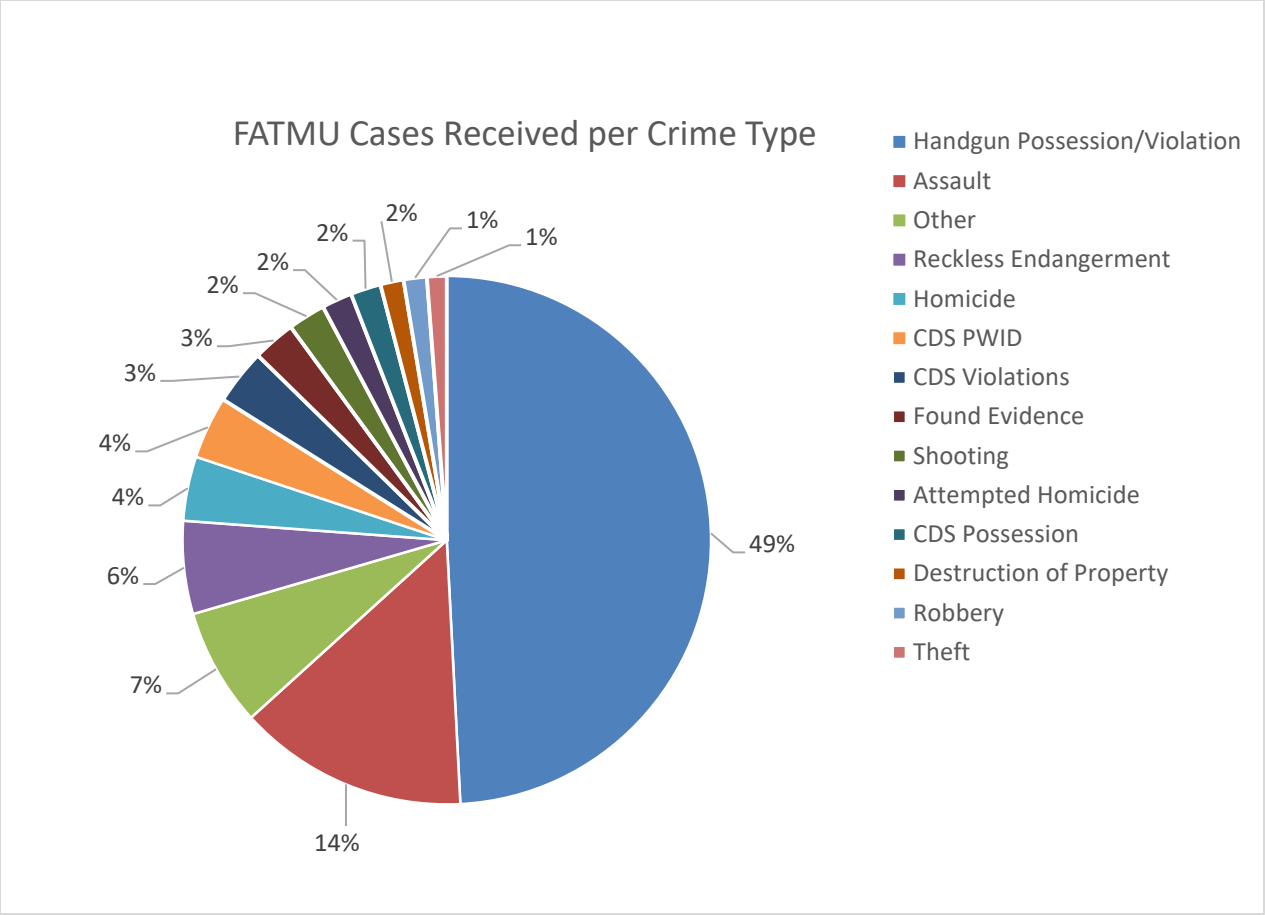
Firearms/Toolmarks Casework Statistics

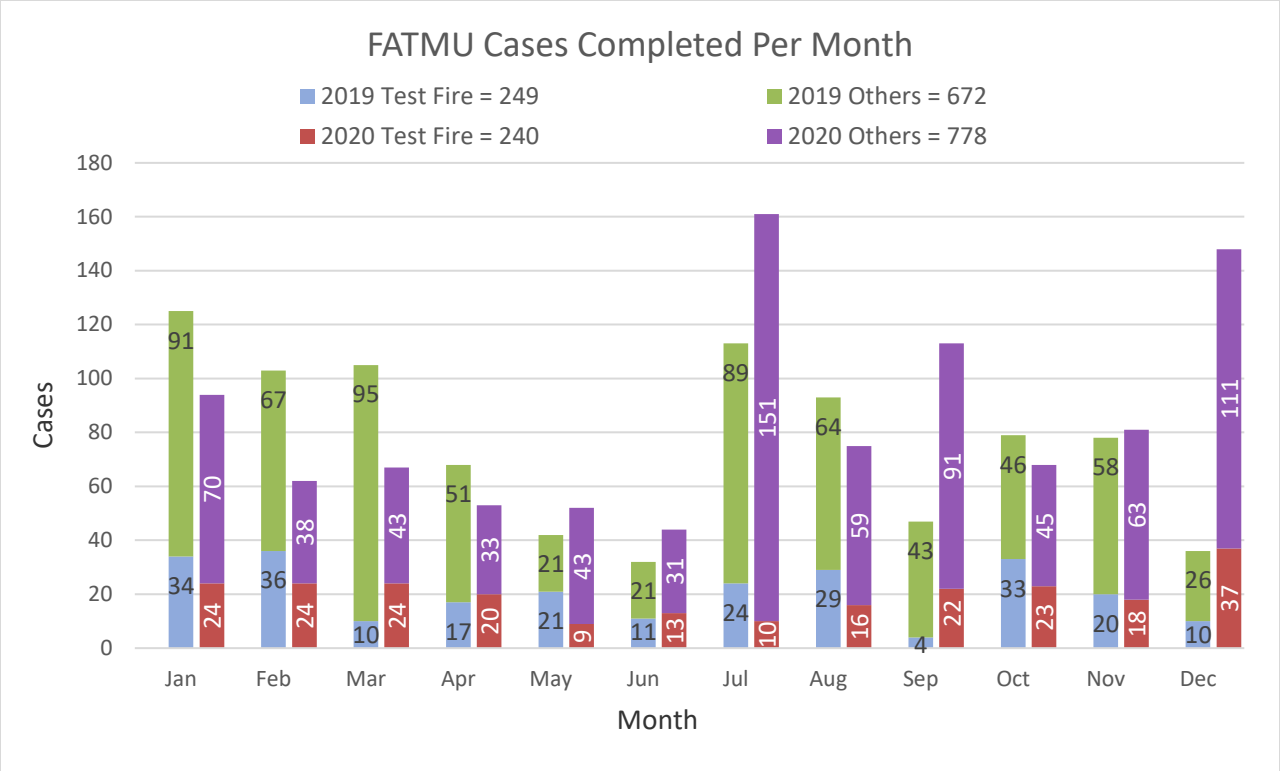


Note: Test fire = operability with and without serial number restoration. Others = all other types including OTS and microscopic comparisons.

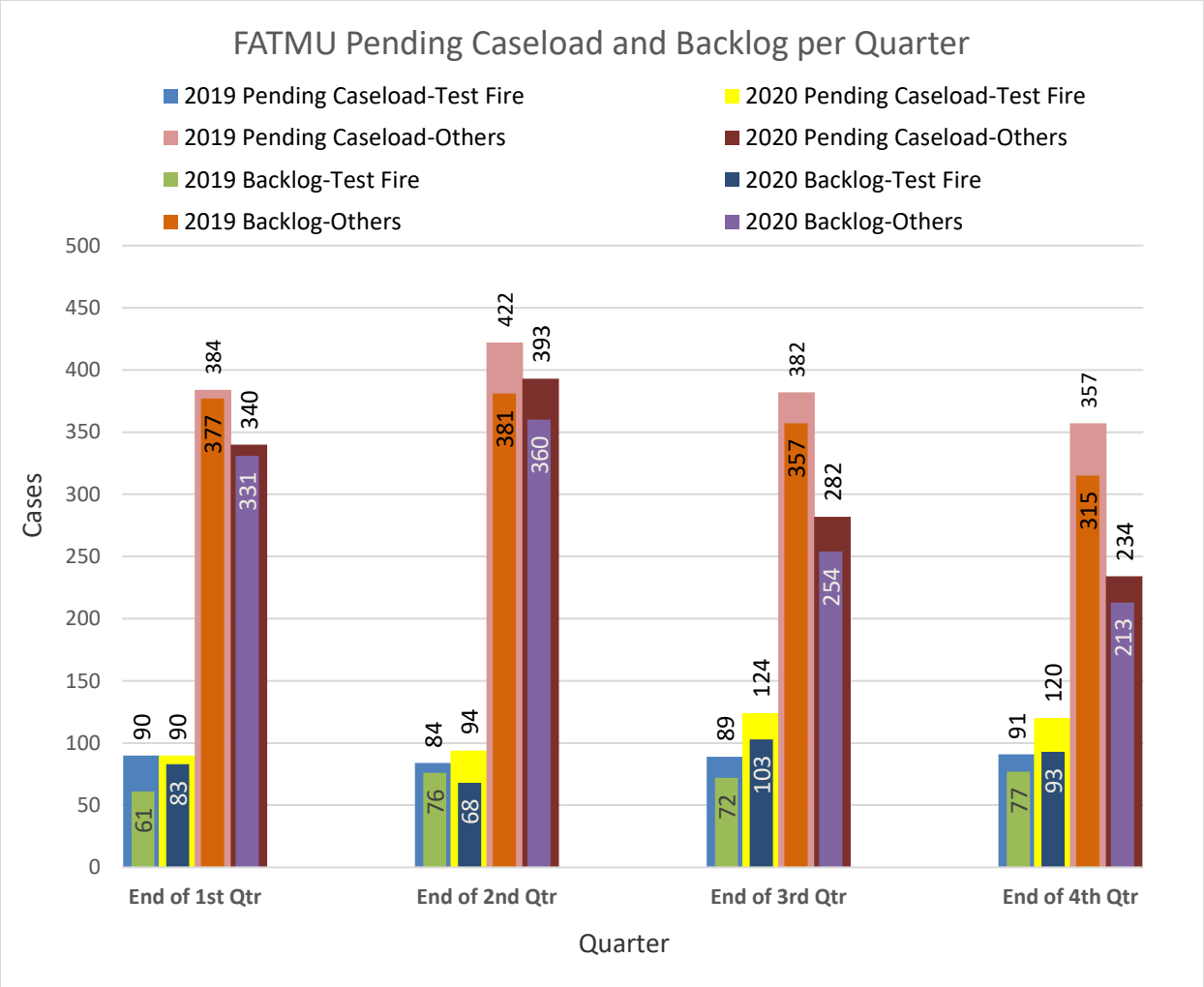
FATMU Cases Received per MSP Installation				
Installation	**Counties Served**	**Test Fire**	**Others**	**Total**
MSP-CID/CED	Statewide	20	65	85
MSP-Cumberland	Allegany	9	7	16
MSP-Leonardtown	St. Mary's	3	11	14
MSP-JFK Highway	Cecil, Harford, Baltimore	13	0	13
MSP-Centerville	Kent, Queen Anne's	9	3	12
MSP-Golden Ring	Baltimore	3	8	11
MSP-Homicide	Statewide	0	10	10
MSP-Bel Air	Harford	4	5	9
MSP-Berlin	Worcester	7	2	9
MSP-La Plata	Charles	2	7	9
MSP-Prince Frederick	Calvert	3	6	9
MSP-Glen Burnie	Anne Arundel	1	7	8
MSP-College Park	Prince George's	0	7	7
MSP-Easton	Talbot, Caroline, Dorchester	5	2	7
MSP-Frederick	Frederick	3	4	7
MSP-Princess Anne	Somerset	3	4	7
MSP-Waterloo	Howard	6	1	7
MSP-Forestville	Prince George's	1	4	5
MSP-Hagerstown	Washington	2	3	5
MSP-Salisbury	Wicomico	1	4	5
MSP-Westminster	Carroll	5	0	5
MSP-North East	Cecil	4	0	4
MSP-CVED	Statewide	1	1	2
MSP-DED/C3I	Allegany	0	2	2
MSP-McHenry	Garrett	1	1	2
MSP-Rockville	Montgomery	0	1	1
	TOTAL	**106**	**165**	**271**

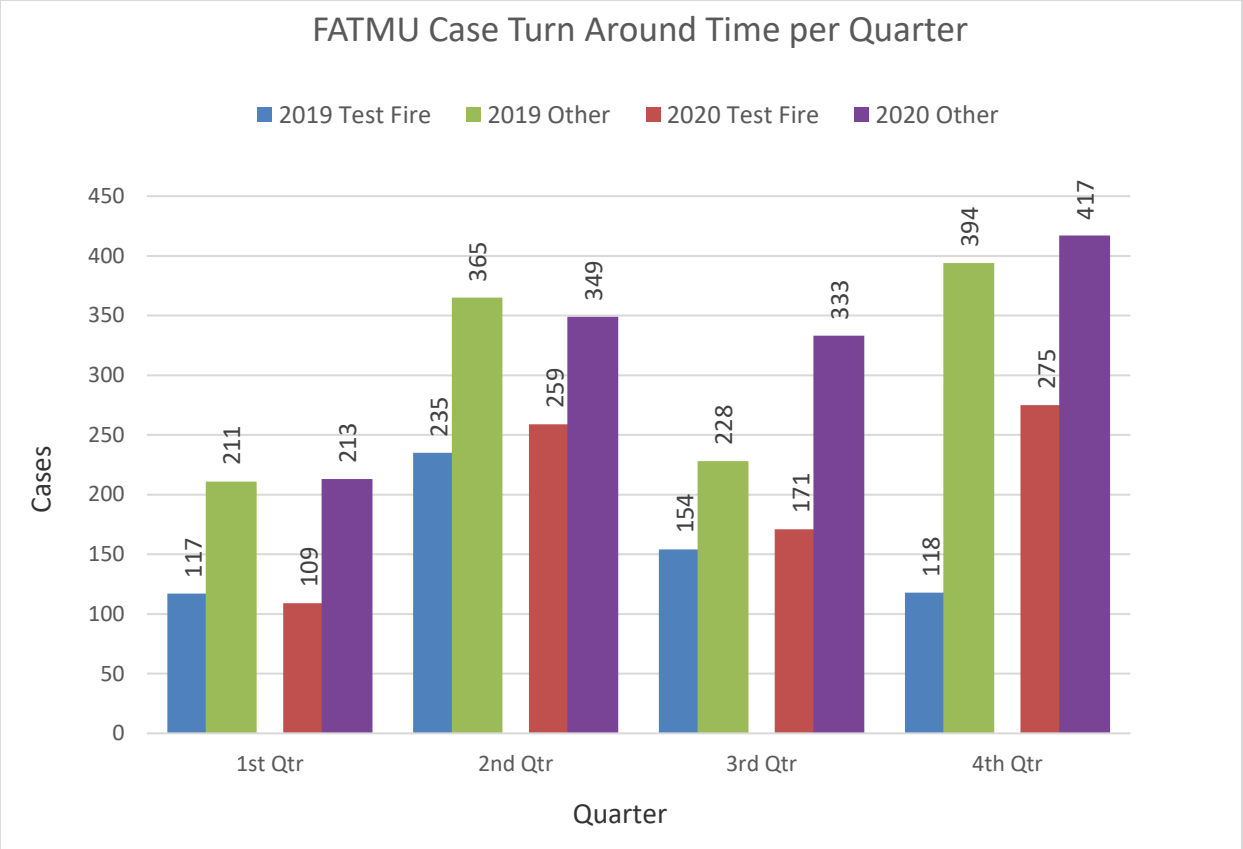
Allied Agency Cases Received by FATMU per County			
County	**Test Fire**	**Others**	**Total**
Washington	4	125	129
Charles	28	58	86
Cecil	38	39	77
Wicomico	6	58	64
Worcester	7	53	60
Baltimore City	17	27	44
Anne Arundel	14	28	42
St. Mary's	11	30	41
Calvert	1	27	28
Frederick	7	18	25
Prince George's	2	10	12
Baltimore	6	5	11
Carroll	10	0	10
Caroline	0	4	4
Dorchester	1	3	4
Harford	2	2	4
Howard	1	2	3
Queen Anne's	2	1	3
Talbot	2	1	3
Somerset	1	1	2
Kent	1	0	1
Montgomery	1	0	1
TOTAL	**162**	**492**	**654**


FATMU Cases Received per Crime Type
Handgun Possession/Violation
Assault
Other
Reckless Endangerment
Homicide
CDS PWID
CDS Violations
Found Evidence
Shooting
Attempted Homicide
CDS Possession
Destruction of Property
Robbery
Theft
49%
14%
7%
6%
4%
4%
3%
3%
2%
2%
2%
2%
1%
1%

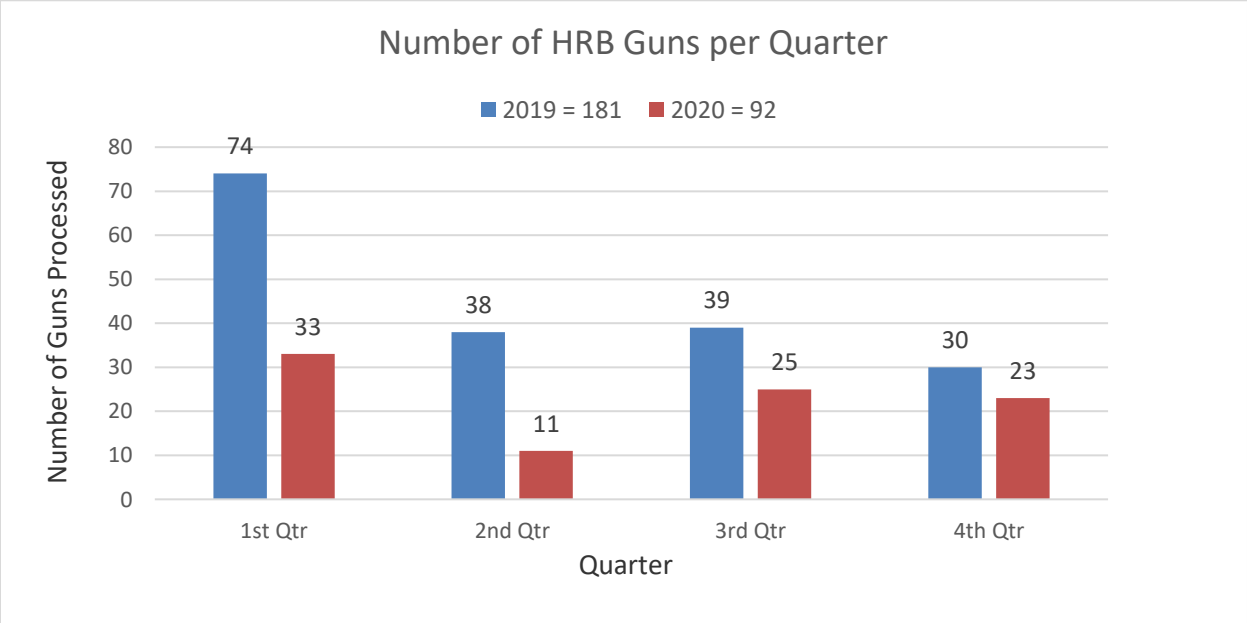


Note: Test fire = operability with and without serial number restoration. Others = all other types including OTS and microscopic comparisons.

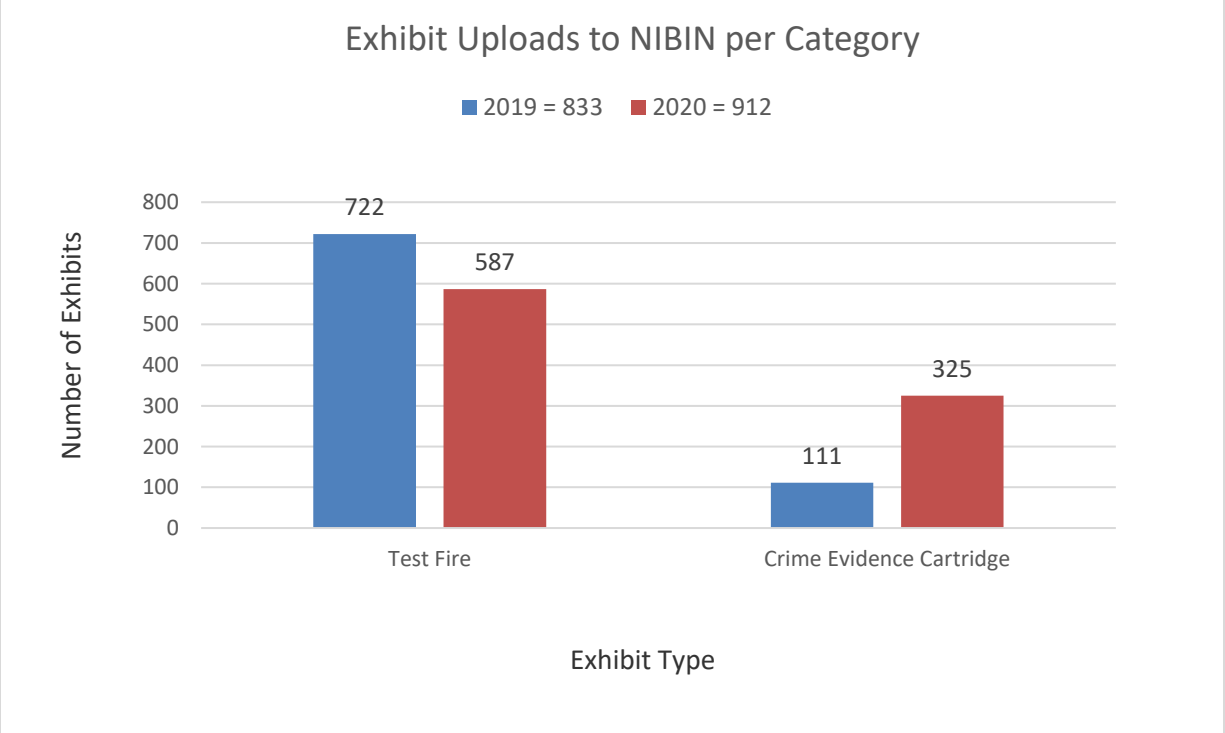

FATMU Pending Caseload and Backlog per Quarter
2019 Pending Caseload-Test Fire
2020 Pending Caseload-Test Fire
2019 Pending Caseload-Others
2020 Pending Caseload-Others
2019 Backlog-Test Fire
2020 Backlog-Test Fire
2019 Backlog-Others
2020 Backlog-Others
Cases
500
450
400
350
300
250
200
150
100
50
0
90
90
384
340
61
83
377
331
84
94
422
393
76
68
381
360
89
124
382
282
72
103
357
254
91
120
357
234
77
93
315
213
End of 1st Qtr
End of 2nd Qtr
End of 3rd Qtr
End of 4th Qtr
Quarter

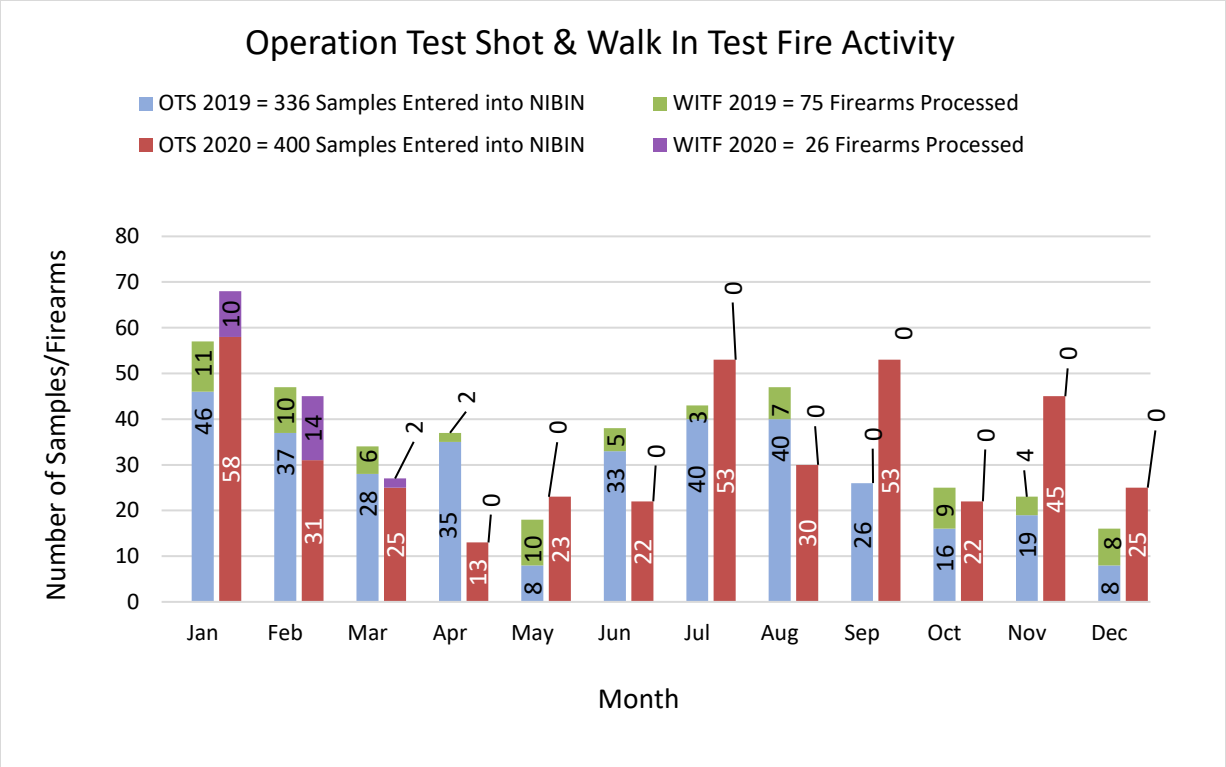


Note: Test fire = operability with and without serial number restoration. Others = all other types including OTS and microscopic comparisons.



Firearms/Toolmarks Database Statistics




Operation Test Shot & Walk In Test Fire Activity
OTS 2019 = 336 Samples Entered into NIBIN
WITF 2019 = 75 Firearms Processed
OTS 2020 = 400 Samples Entered into NIBIN
WITF 2020 = 26 Firearms Processed
Number of Samples/Firearms
Month
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

NIBIN Associations			
Associated Agencies		**Number of Leads**	**Number of Confirmed Hits**
Annapolis PD	Annapolis PD	5	0
Annapolis PD	Baltimore PD	2	0
Annapolis PD	MSP Glen Burnie	1	0
Annapolis PD	Prince George's County PD	1	0
Calvert Co SO	Charles Co SO	1	0
Calvert Co SO	DC Metro PD	8	0
Cambridge PD	MSP Salisbury	1	0
Cecil Co SO	DE - Delaware State PD	1	0
Cecil Co SO	DE - New Castle Co PD	2	0
Cecil Co SO	DE - Wilmington City PD	6	0
Cecil Co SO	Elkton PD	2	0
Cecil Co SO	MSP CED	1	0
Cecil Co SO	MSP North East	1	0
Cecil Co SO	VA - Richmond City PD	1	0
Charles County SO	Annapolis PD	4	0
Charles County SO	Charles Co SO	1	5
Cheverly PD	Prince George's County PD	2	0
Crisfield PD	MSP Princess Anne	1	0
Elkton PD	DE - New Castle Co PD	3	0
Elkton PD	DE - Wilmington City PD	11	0
Elkton PD	Elkton PD	2	0
Frederick Co SO	Frederick PD	0	1
Frederick PD	Frederick PD	0	1
Greenbelt PD	DC Metro PD	1	0
Greenbelt PD	Prince George's County PD	2	0
Hagerstown PD	Baltimore PD	1	0
Hagerstown PD	DC Metro PD	1	0
Hagerstown PD	Frederick Co SO	1	0
Hagerstown PD	Hagerstown PD	16	1
Hagerstown PD	Prince George's County PD	1	0
Howard County PD	Baltimore PD	1	0
Howard County SO	Howard County SO	0	3
Laurel PD	Prince George's County PD	2	0
Maryland Transportation Authority PD	Baltimore PD	7	0

NIBIN Associations			
Associated Agencies		**Number of Leads**	**Number of Confirmed Hits**
Maryland Transportation Authority PD	DC Metro PD	3	0
Maryland Transportation Authority PD	Prince George's County PD	1	0
MSP CED	Baltimore PD	3	0
MSP CED	DC Metro PD	9	0
MSP CED	DE - Wilmington City PD	7	0
MSP CED	Elkton PD	2	0
MSP CED	Prince George's County PD	1	0
MSP CED	VA - Accomack Co SO	1	0
MSP CED	Worchester Co SO	1	0
MSP Centreville	DC Metro PD	1	0
MSP Centreville	Prince George's County PD	1	0
MSP Frederick	Frederick PD	1	0
MSP Glen Burnie	Baltimore PD	2	0
MSP Hagerstown	Hagerstown PD	1	0
MSP Homicide	Baltimore PD	1	0
MSP Leonardtown	Calvert Co SO	1	0
MSP Leonardtown	DC Metro PD	2	0
MSP Leonardtown	MSP Leonardtown	1	0
MSP Princess Anne	MSP CED	2	0
MSP Salisbury	DC Metro PD	7	0
MSP Waterloo	NY - Suffolk Co PD	2	0
New Carrollton PD	DC Metro PD	1	0
New Carrollton PD	New Carrollton PD	1	0
New Carrollton PD	Prince George's County PD	1	0
Ocean City PD	Baltimore PD	1	0
Ocean City PD	DE - Dover (DSP)	2	0
Ocean City PD	Ocean City PD	2	0
Ocean City PD	PA- Coatesville City PD	1	0
Salisbury PD	MSP CED	2	0
Salisbury PD	MSP Salisbury	1	0
Salisbury PD	Ocean City PD	1	0
Salisbury PD	Salisbury PD	6	0
Salisbury PD	VA - Accomack Co SO	1	0

NIBIN Associations			
Associated Agencies		**Number of Leads**	**Number of Confirmed Hits**
Salisbury PD	Worcester County Bureau of Investigation (WCBI)	1	0
St. Mary's Co SO	Calvert Co SO	3	0
St. Mary's Co SO	DC Metro PD	4	0
St. Mary's Co SO	MSP Leonardtown	3	0
St. Mary's Co SO	St. Mary's Co SO	7	0
Washington Co SO	Hagerstown PD	2	0
Worcester County Bureau of Investigation (WCBI)	VA - Accomack Co SO	1	0
Wicomico County SO	DE - Dover (DSP)	1	0
Wicomico County SO	Salisbury PD	3	0
	TOTAL	**185**	**11**

Note: NIBIN leads are developed through a correlation review of NIBIN data. Confirmed hits have been verified microscopically by an examiner.

NOTEWORTHY CASES

In 2001, an examiner from the Latent Prints/Impression Units testified in a Talbot County homicide case with two defendants. In this original trial, the examiner testified that they could not identify either defendant due to the palm print evidence that could not be searched in AFIS at that time. In 2015, the procedure became available to search palm prints in the AFIS system. The palm print evidence from that 2001 homicide case was searched more recently and identified another suspect for that case; this suspect's identity was not either of the original two defendants. In April 2020, in a unanimous opinion by the Maryland Court of Appeals, both original defendants' petitions for writs of actual innocence were granted. This conviction reversal decision was based on the palm print evidence found at the crime scene matching the alternative suspect.

In September 2020, the Firearms/Toolmarks Unit received a rush request from Cecil County Sheriff's Office. This case was a homicide that occurred with a total of 48 items of evidence which included 18 cartridge cases and 30 projectiles/fragments. The case was received by FSD on a Thursday. The next day, a FATMU examiner entered into the National Integrated Ballistic Information Network (NIBIN). The examiner entered two different cartridge cases from two separate firearms into NIBIN. A Correlation search resulted in 7 different NIBIN leads with agencies in Delaware. These leads included six different cases from Wilmington City PD (3 assaults, 3 gunshot detections), and a homicide out of New Castle County PD.

CHEMISTRY SECTION

The Chemistry Section is responsible for performing Controlled Dangerous Substances (CDS) analysis on submitted evidence and Toxicology analysis of blood for alcohol and drugs. The Chemistry Section consists of the following four units: CDS-Pikesville, CDS-Berlin, CDS-Hagerstown and Toxicology. The CDS Units focus on identifying submitted evidence as being a specific type of drug while the Toxicology Unit focuses on identifying alcohol and drugs in blood taken from individuals suspected of driving while intoxicated/impaired. The Chemistry Section Manager oversees the work of all four units.

The CDS-Pikesville Unit consists of one Forensic Scientist Supervisor, and four Forensic Scientist III's. In addition, two Allied Forensic Scientists work in the CDS-Pikesville laboratory. One Allied Forensic Scientist is employed by the Cecil County State's Attorney's Office and the second is employed by both the St. Mary's and Calvert County State's Attorney's Offices. There is a third Allied Forensic Scientist position currently vacant, which will be employed by the Howard County Police Department.

The CDS-Berlin Unit consists of one Forensic Scientist Supervisor and one Forensic Scientist III. There is still a vacant Forensic Scientist I position, which was unable to be filled in 2020 due to a hard hiring freeze. The CDS-Berlin Unit operates out of the Berlin Regional Laboratory located at the MSP-Berlin Barrack.

The CDS-Hagerstown Unit consists of one Forensic Scientist Supervisor and two Forensic Scientist III's. In addition, one Allied Forensic Scientist is employed by the Frederick County State's Attorney's Office. The CDS-Hagerstown Unit operates out of the Hagerstown Regional Laboratory located at the MSP-Hagerstown Barrack.

The Toxicology Unit consists of one Forensic Scientist Supervisor, one Forensic Scientist Advanced, one Forensic Scientist II and one Laboratory Technician I. A second Forensic Scientist I position is vacant. The Toxicology Unit operates out of the main laboratory in Pikesville.

CDS UNITS

In order to confirm the presence of Controlled Dangerous Substances (CDS) in a sample, several different types of analyses are performed in the CDS Units, including microscopy, color tests, microcrystalline tests, gas chromatography (GC), gas chromatography/mass spectrometry (GC/MS), and Fourier transform infrared (FTIR) spectroscopy. Another important component of CDS analysis is obtaining accurate net and gross weights of the suspected CDS material through the use of analytical balances, precision balances, bench top balances, and bulk scales.

The CDS Units submit monthly reports to the National Forensic Laboratory Information System (NFLIS) that document the type and number of drugs detected in casework. These reports provide the DEA with current and accurate trends that can be used by law enforcement and policy makers to address the nation's drug problem. This data is also shared with the Washington/Baltimore High Intensity Drug Trafficking Area (HIDTA) program to track trends of which drugs are being identified in casework throughout the state and region.

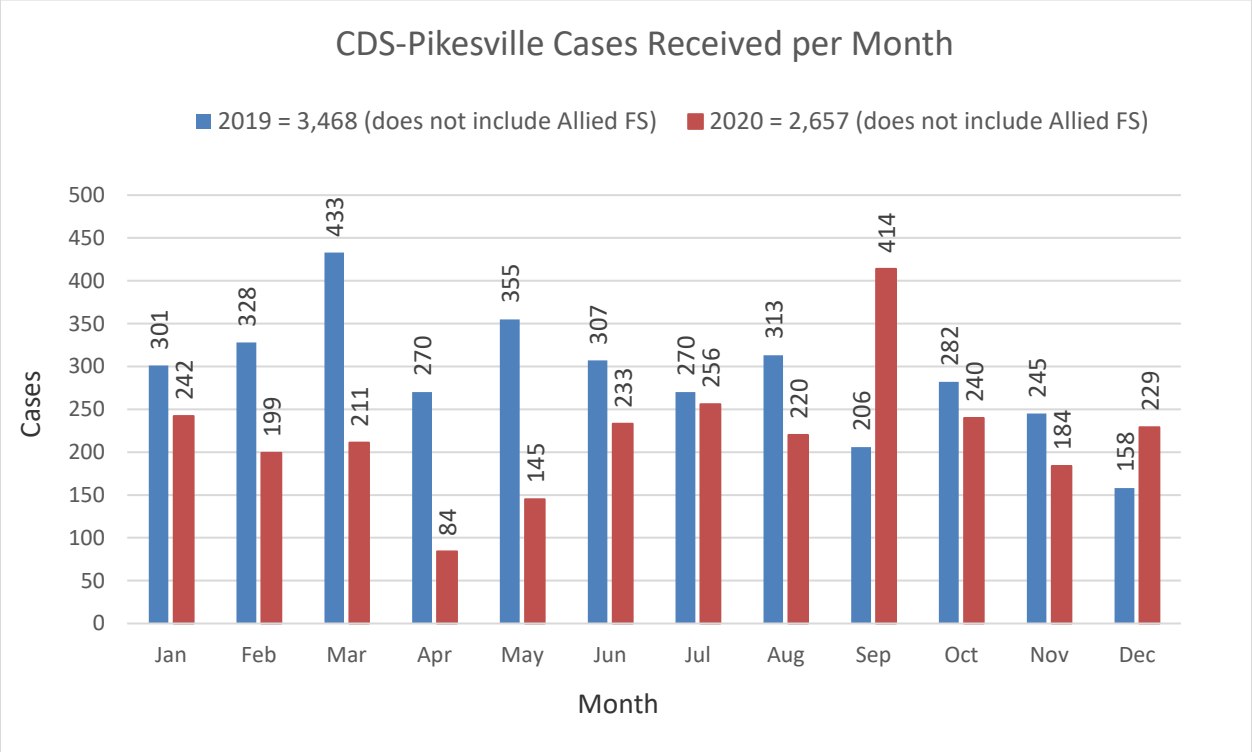
The CDS Units use an electronic CDS worksheet and report format in StarLIMS. The ultimate goal is to have a paperless case file, and to be able to transmit CDS reports to the customer through an internet portal.

The FSD has noted a significant increase in fentanyl submissions, as well as analogs of fentanyl. In fact, opiate pharmaceuticals are now encountered more often than heroin in casework. Fentanyl analogs are drugs that are similar in structure to fentanyl with similar effects in the body, but are new and novel drugs. It is a challenge for the lab to identify these new fentanyl analogs as they emerge in casework. To meet this challenge, the CDS Units are participating in a joint project with the National Institute of Standards and Technology (NIST) to evaluate the Direct Analysis in Real Time, coupled with Time-of-Flight Mass Spectrometer (DART-TOF MS) for screening of drug evidence, as well as design targeted GC/MS methods to improve the ability of the labs to confirm the presence of these dangerous fentanyl substances in casework. The validation of the DART-TOF MS is nearly complete and will be implemented in casework in 2021. The targeted method design is complete and will be validated for casework in 2021.

CDS-PIKESVILLE UNIT

The Pikesville CDS laboratory services primarily the Central Maryland counties including Baltimore City, Baltimore County, Cecil County, Anne Arundel County, Prince George's County, St. Mary's County, Calvert County, Charles County, Harford County and Howard County. In August of 2020 through December 2020, cases from Caroline County, Dorchester County, and Talbot County were also completed by the CDS-Pikesville Unit.

Where indicated, the data shown below does not include cases assigned to the Allied Forensic Scientists (Allied FS).



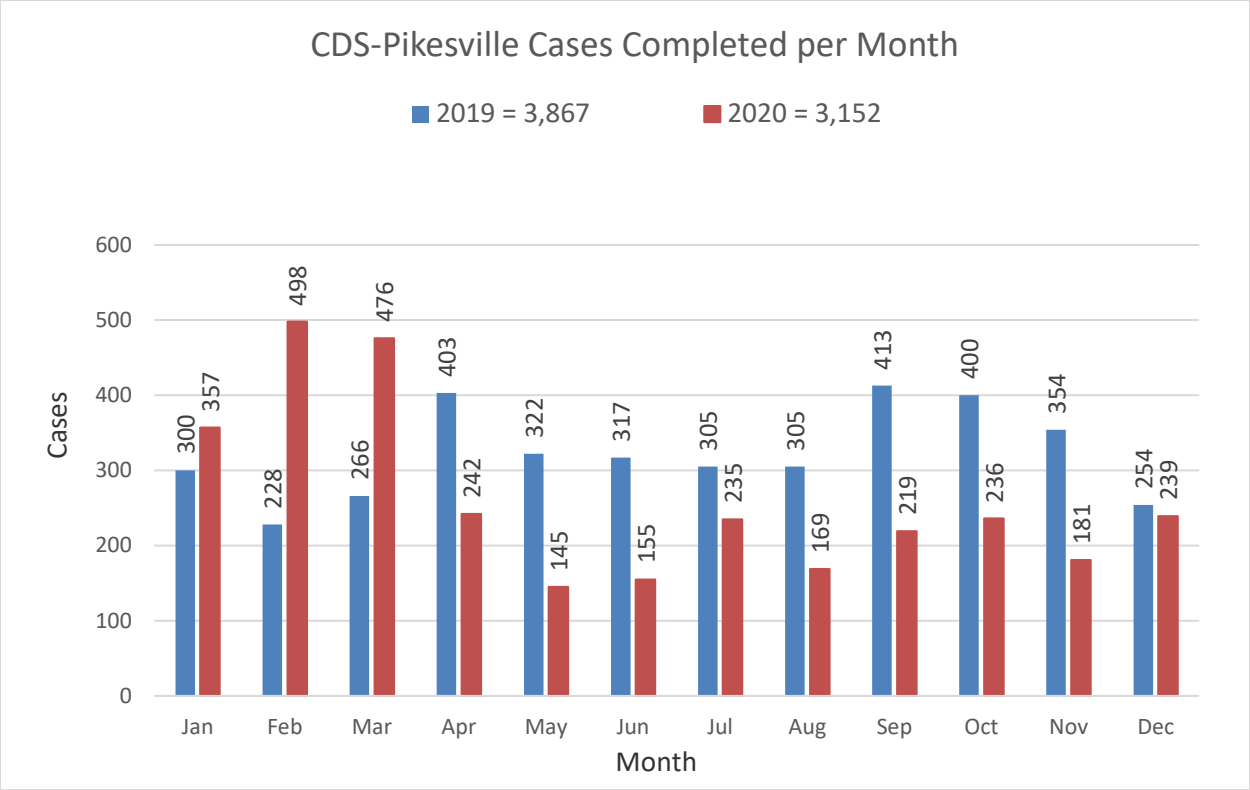
CDS-Pikesville Cases Received per MSP Installation*		
	Counties Served	**Submissions**
MSP-Centerville	Kent, Queen Anne's	184
MSP-CID/CED	Statewide	171
MSP-Easton	Talbot, Caroline, Dorchester	128
MSP-Leonardtown	St. Mary's	122
MSP-Prince Frederick	Calvert	100
MSP-Golden Ring	Baltimore	96
MSP-Glen Burnie	Anne Arundel	61
MSP-JFK Highway	Cecil, Harford, Baltimore	37
MSP-La Plata	Charles	36
MSP-Annapolis	Anne Arundel	34
MSP-Forestville	Prince George's	27
MSP-College Park	Prince George's	24
MSP-Bel Air	Harford	22
MSP-North East	Cecil	2
MSP-Homicide	Statewide	1
	TOTAL	**1,045**

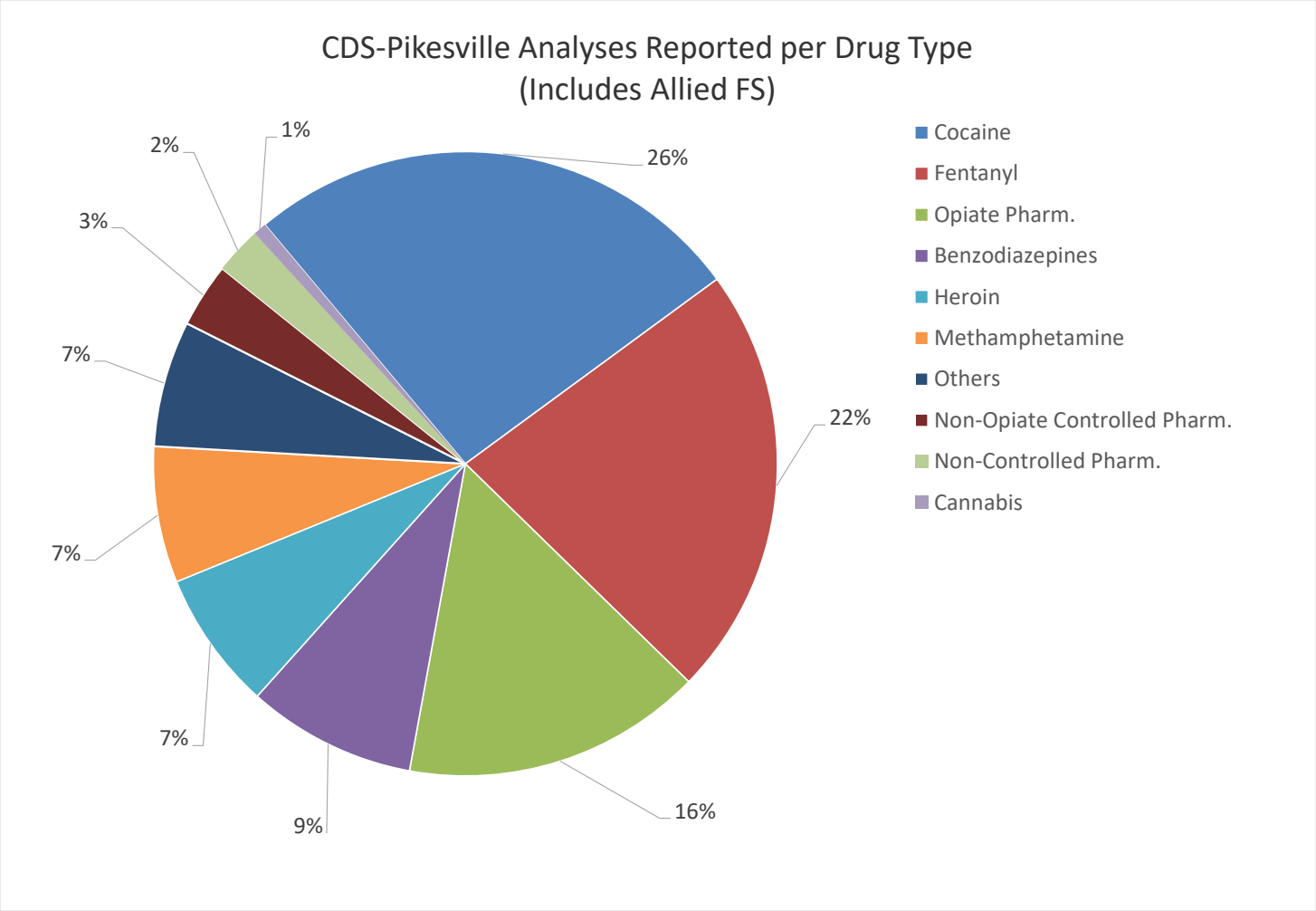
* Does not include Allied FS

Allied Agency Cases Received by CDS-Pikesville per County*	
County	**Submissions**
Calvert	403
Harford	225
St. Mary's	212
Charles	194
Baltimore City	121
Queen Anne's	119
Anne Arundel	70
Talbot	70
Dorchester	55
Caroline	50
Kent	44
Baltimore	32
Prince George's	9
Montgomery	4
Somerset	2
Carroll	1
Statewide/Not Determined**	1
TOTAL	**1,612**

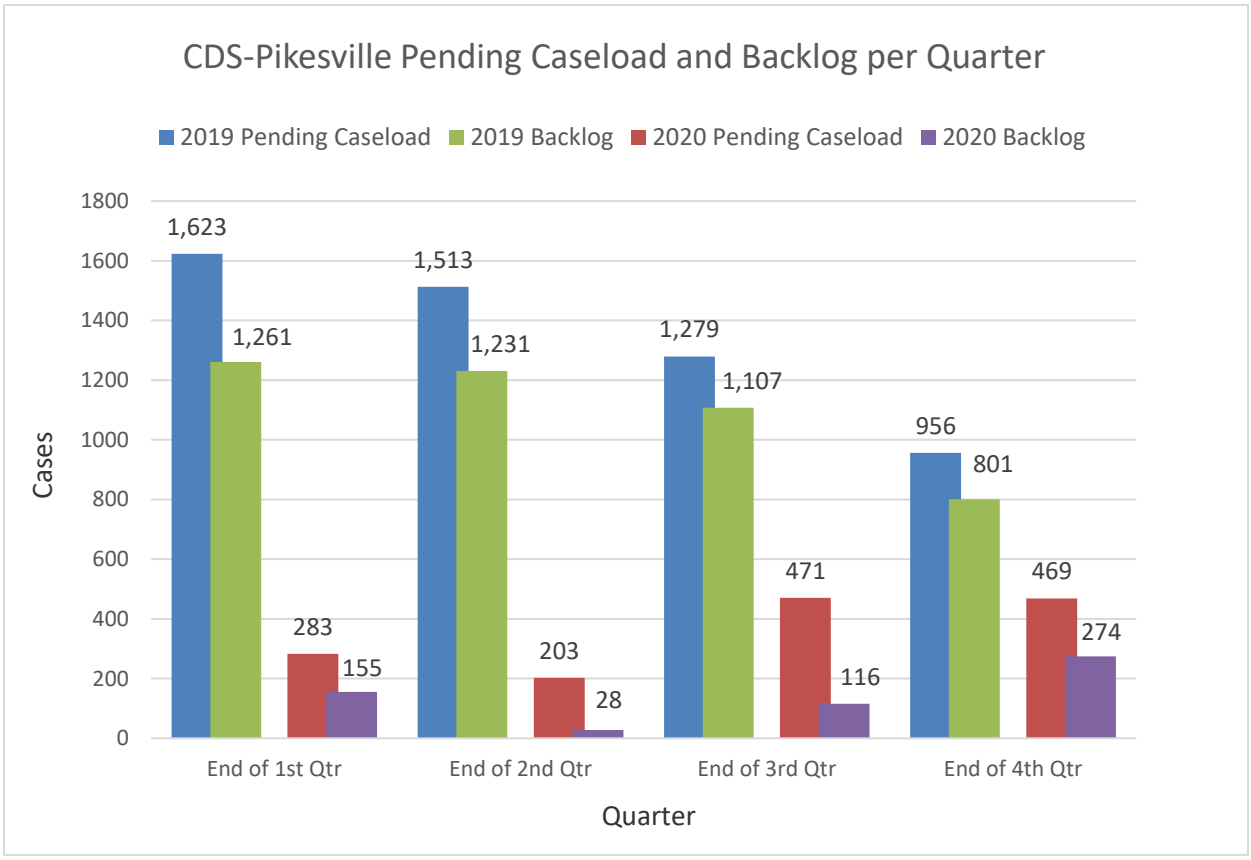
* Does not include Allied FS

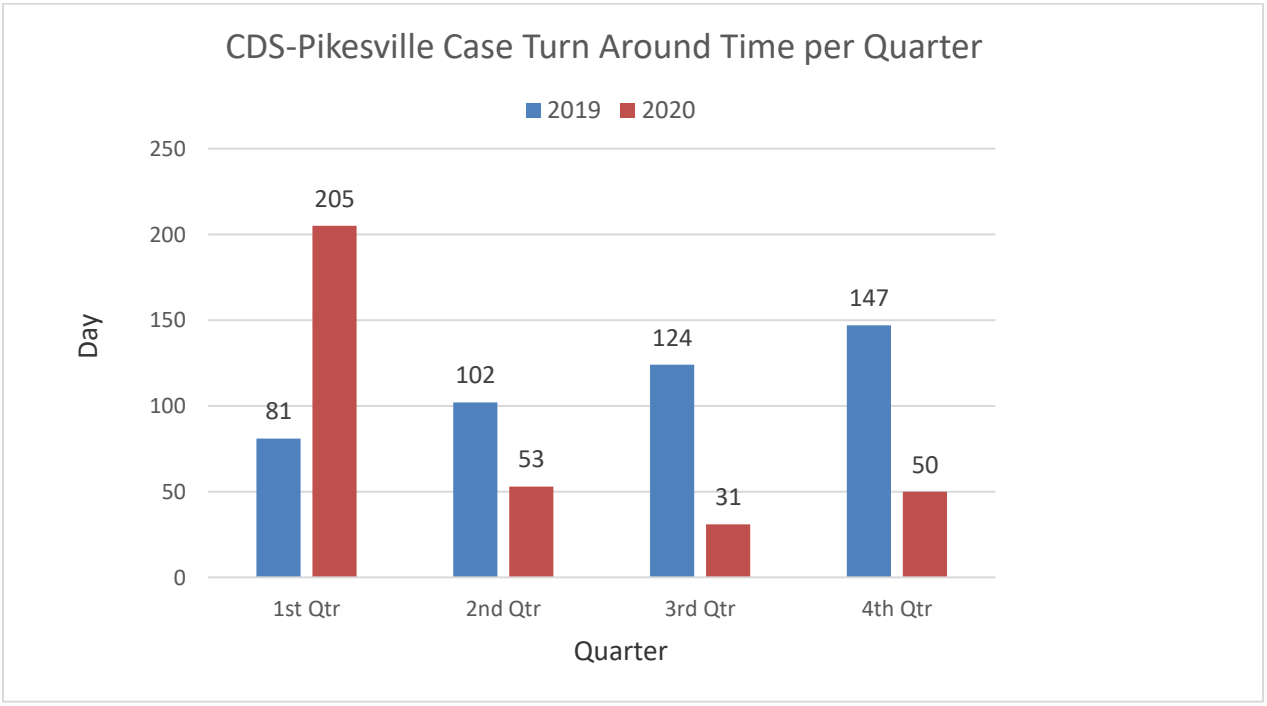
**County where offense occurred was not provided to FSD.


CDS-Pikesville Cases Completed per Month
2019 = 3,867
2020 = 3,152
Cases
600
500
400
300
200
100
0
300
357
228
498
266
476
403
242
322
145
317
155
305
235
305
169
413
219
400
236
354
181
254
239
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month


CDS-Pikesville Analyses Reported per Drug Type
(Includes Allied FS)
26%
22%
16%
9%
7%
7%
7%
3%
2%
1%
Cocaine
Fentanyl
Opiate Pharm.
Benzodiazepines
Heroin
Methamphetamine
Others
Non-Opiate Controlled Pharm.
Non-Controlled Pharm.
Cannabis

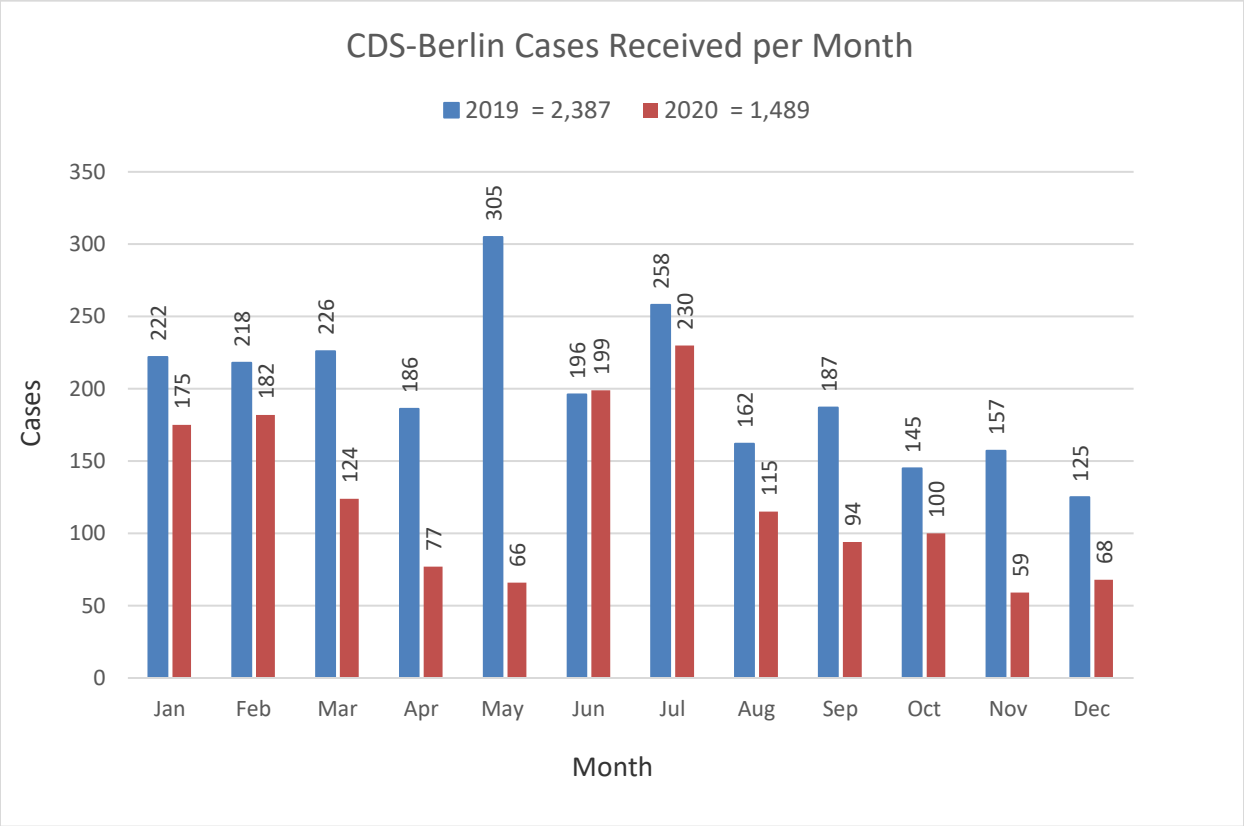
+


CDS-Pikesville Pending Caseload and Backlog per Quarter
2019 Pending Caseload
2019 Backlog
2020 Pending Caseload
2020 Backlog
Cases
1800
1600
1400
1200
1000
800
600
400
200
0
1,623
1,261
283
155
1,513
1,231
203
28
1,279
1,107
471
116
956
801
469
274
End of 1st Qtr
End of 2nd Qtr
End of 3rd Qtr
End of 4th Qtr
Quarter


CDS-Pikesville Case Turn Around Time per Quarter
2019
2020
Day
250
200
150
100
50
0
81
205
102
53
124
31
147
50
1st Qtr
2nd Qtr
3rd Qtr
4th Qtr
Quarter

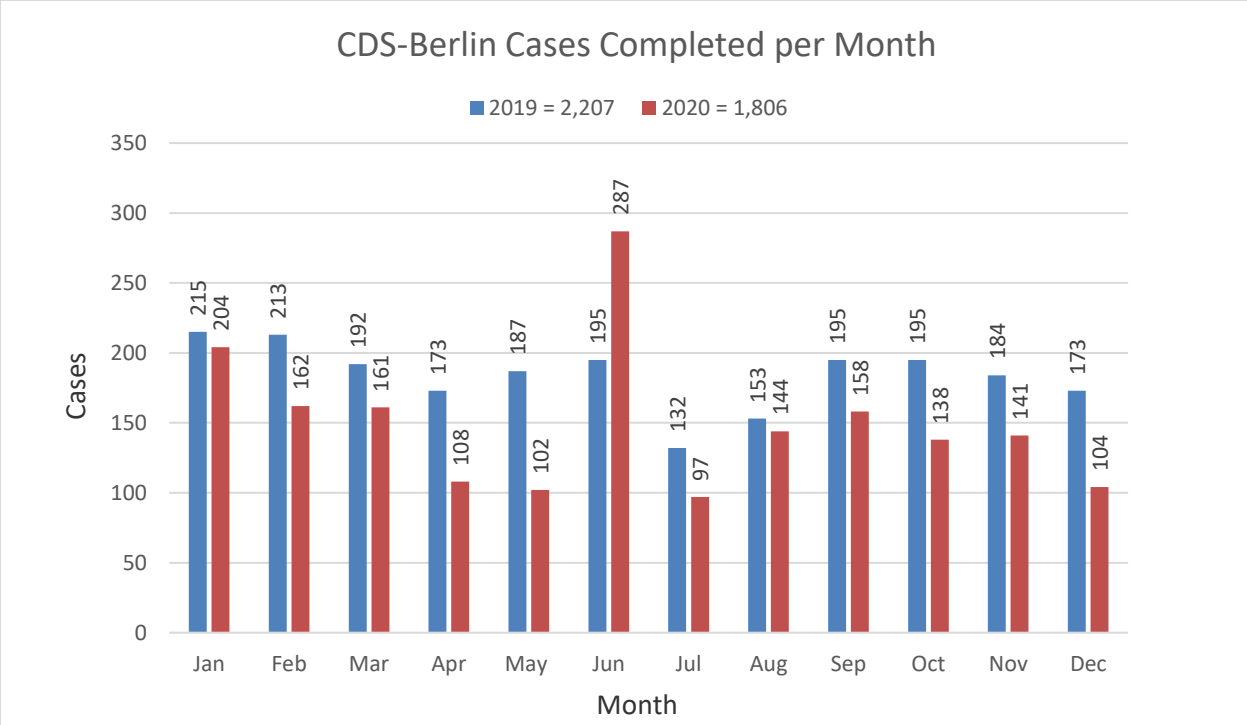
CDS-BERLIN UNIT

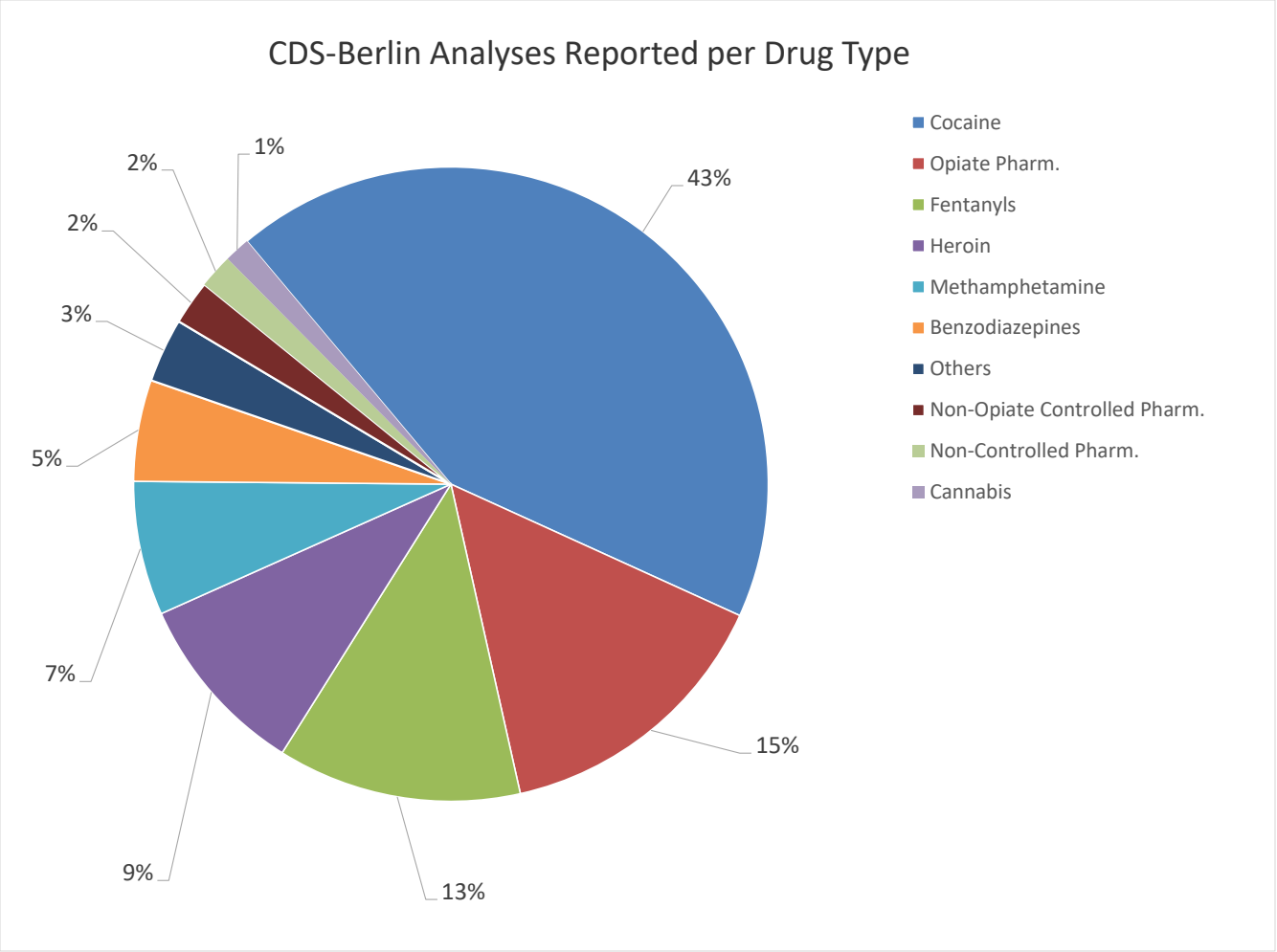
The CDS-Berlin laboratory services primarily the Eastern Maryland counties including Caroline County, Dorchester County, Kent County, Queen Anne's County, Somerset County, Talbot County, Wicomico County and Worcester County. In August 2020 through December 2020, cases from Caroline County, Dorchester County, and Talbot County were transferred to the CDS-Pikesville Unit for analysis.

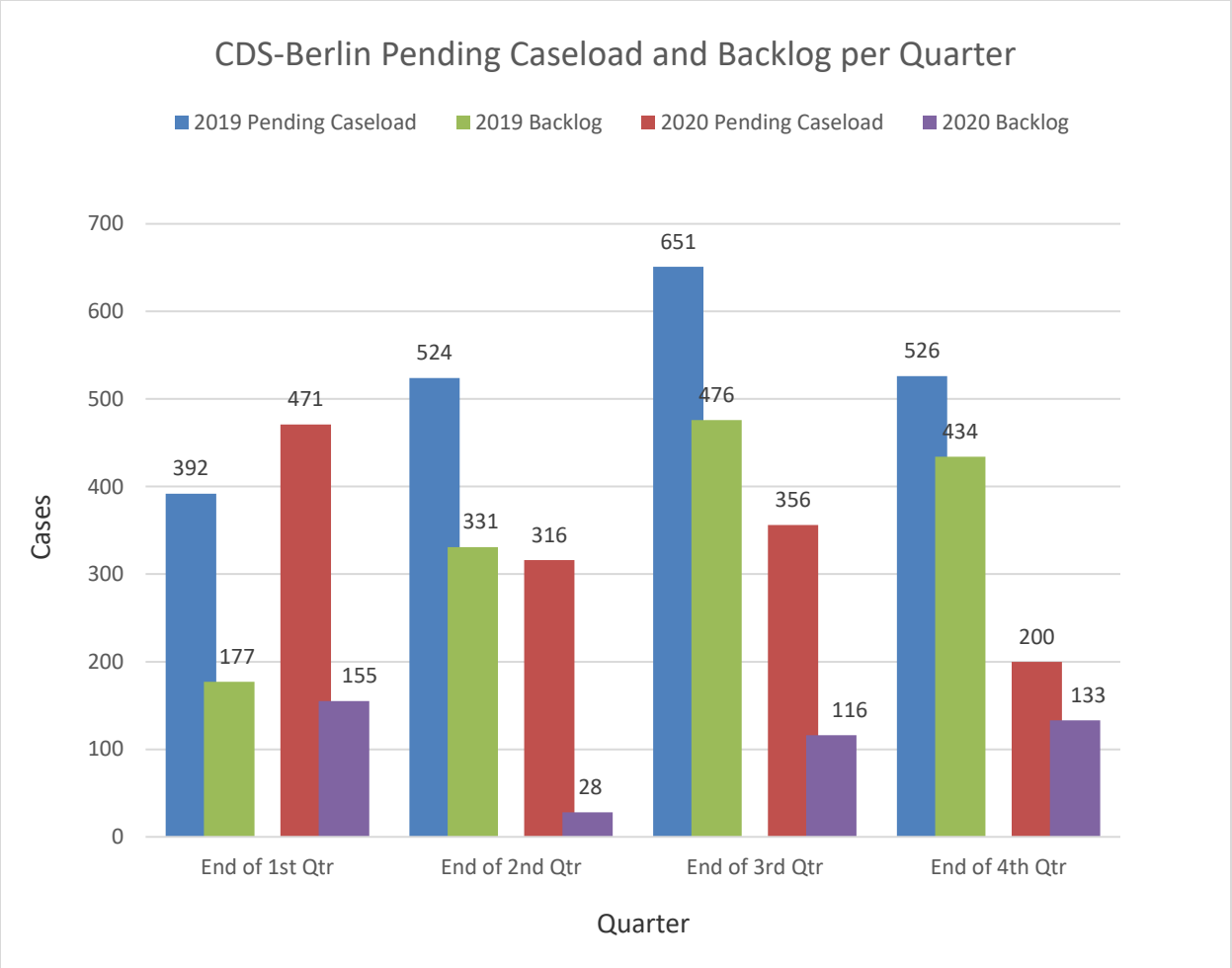


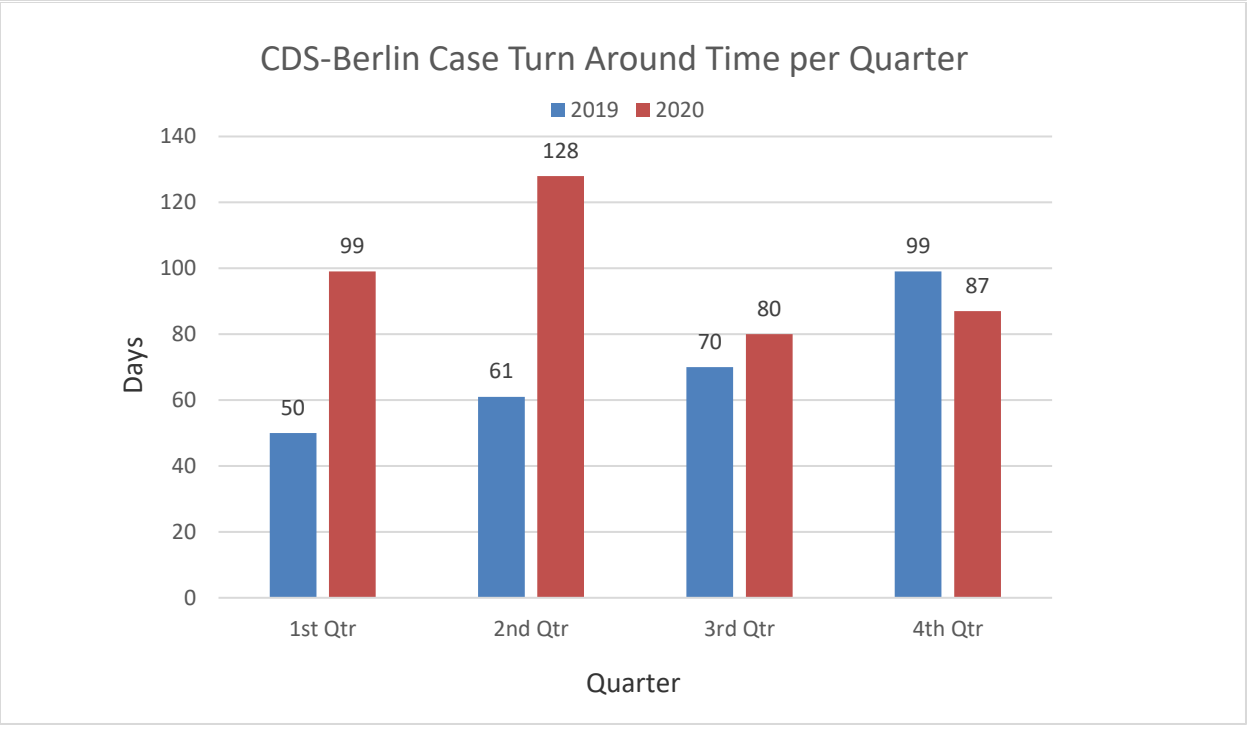
CDS-Berlin Cases Received per MSP Installation		
MSP Installation	**Counties Served**	**Submissions**
MSP-Easton	Talbot, Caroline, Dorchester	151
MSP-Salisbury	Wicomico	115
MSP-CID/CED	Statewide	87
MSP-Berlin	Worcester	65
MSP-Princess Anne	Somerset	43
	TOTAL	**461**

Allied Agency Cases Received by CDS-Berlin per County	
County	**Submissions**
Wicomico	407
Worcester	331
Talbot	95
Dorchester	94
Caroline	55
Somerset	45
Washington	1
TOTAL	**1,028**


CDS-Berlin Cases Completed per Month
2019 = 2,207
2020 = 1,806
Cases
Month
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
215
204
213
162
192
161
173
108
187
102
195
287
132
97
153
144
195
158
195
138
184
141
173
104


CDS-Berlin Analyses Reported per Drug Type
43%
15%
13%
9%
7%
5%
3%
2%
2%
1%
Cocaine
Opiate Pharm.
Fentanyls
Heroin
Methamphetamine
Benzodiazepines
Others
Non-Opiate Controlled Pharm.
Non-Controlled Pharm.
Cannabis

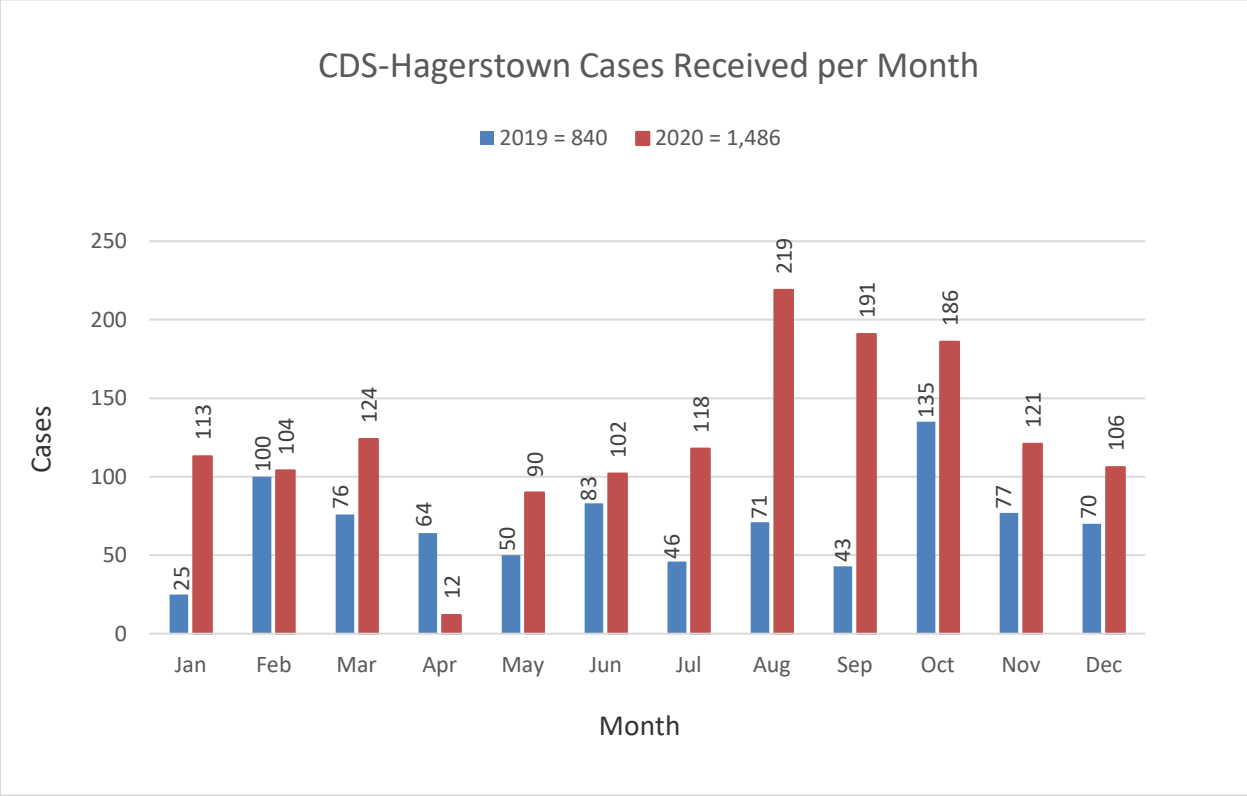

CDS-Berlin Pending Caseload and Backlog per Quarter
2019 Pending Caseload
2019 Backlog
2020 Pending Caseload
2020 Backlog
Cases
700
600
500
400
300
200
100
0
392
177
471
155
524
331
316
28
651
476
356
116
526
434
200
133
End of 1st Qtr
End of 2nd Qtr
End of 3rd Qtr
End of 4th Qtr
Quarter


CDS-Berlin Case Turn Around Time per Quarter
2019
2020
Days
140
120
100
80
60
40
20
0
50
99
61
128
70
80
99
87
1st Qtr
2nd Qtr
3rd Qtr
4th Qtr
Quarter

CDS-HAGERSTOWN UNIT

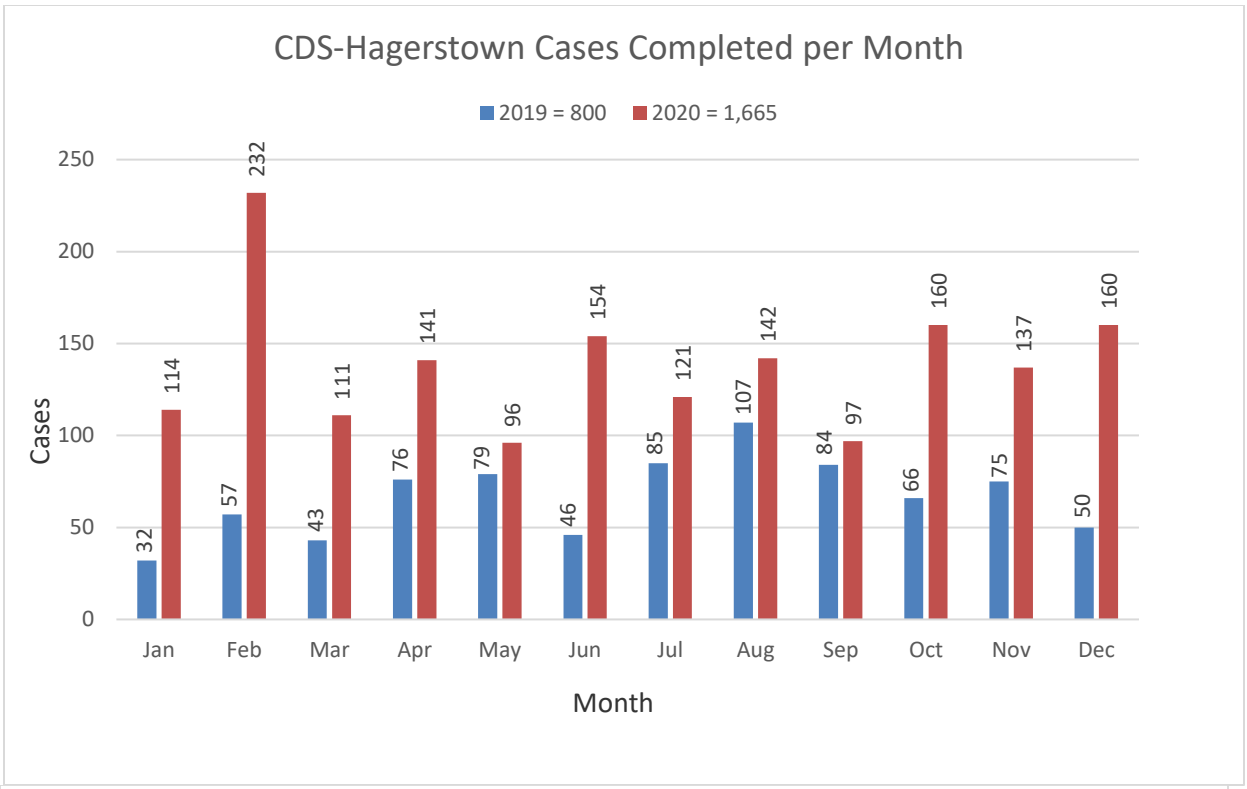
The Hagerstown CDS laboratory services primarily the Western Maryland counties including Washington County, Allegany County, Carroll County, Garrett County, Montgomery County and Frederick County.

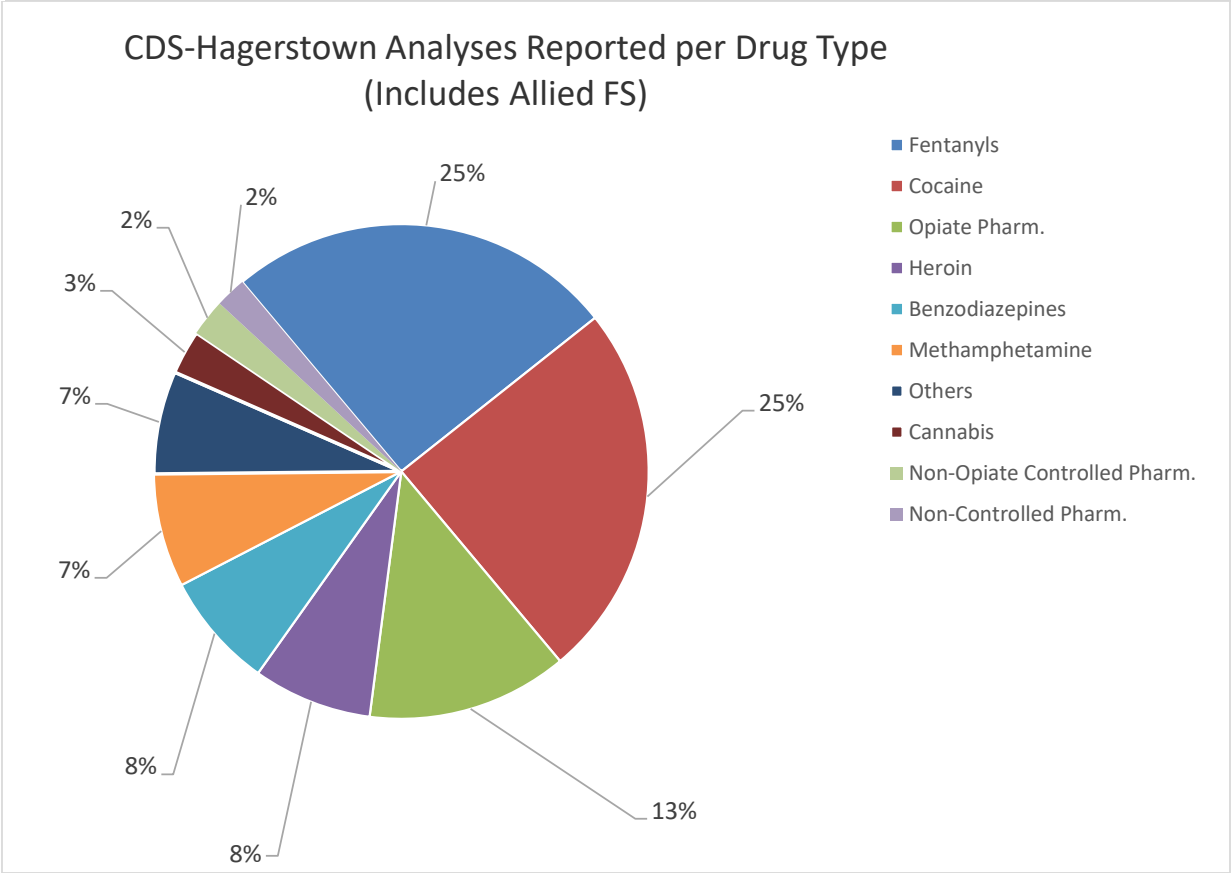
Where indicated, the data shown below does not include cases which were assigned to the Allied Forensic Scientist (Allied FS).

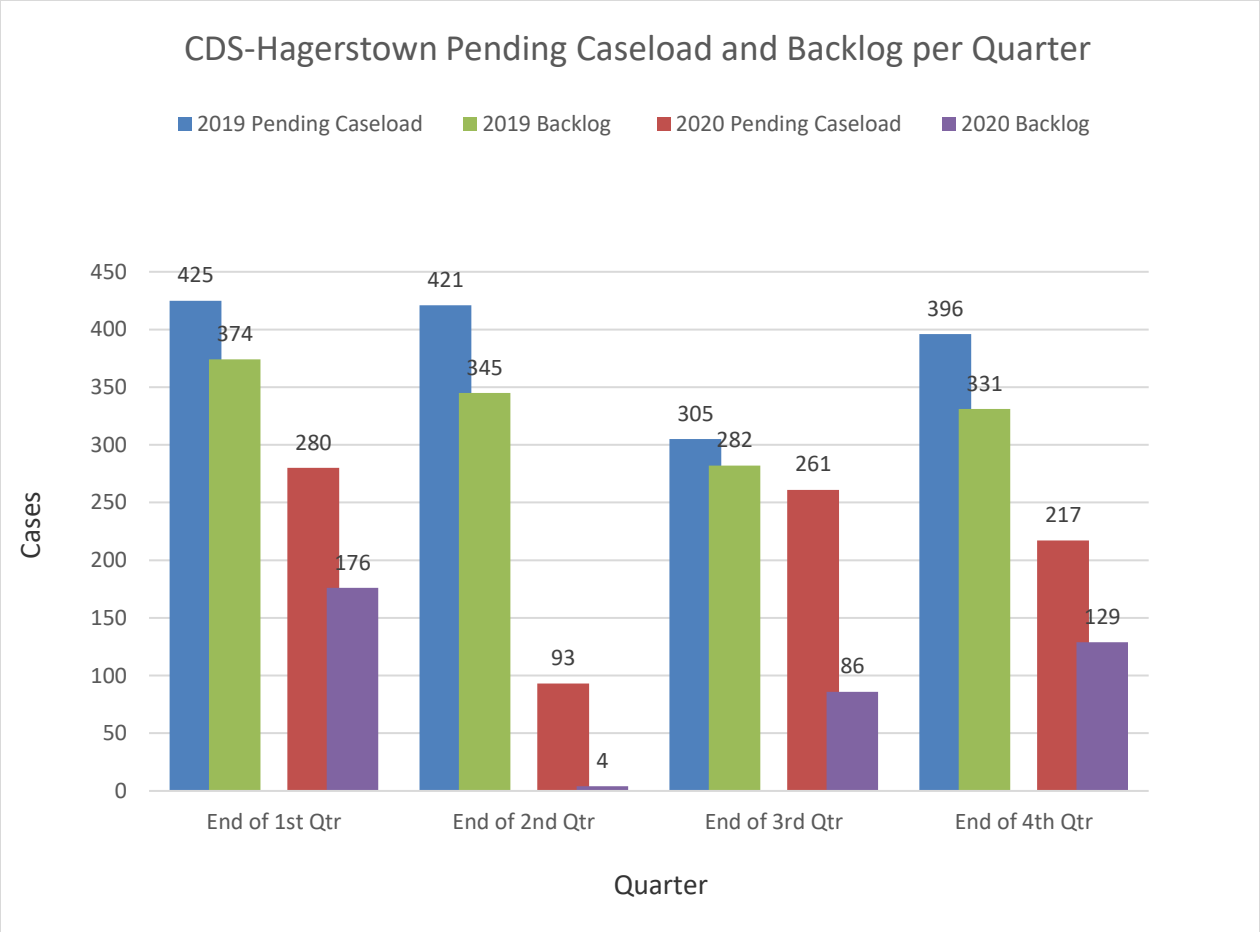


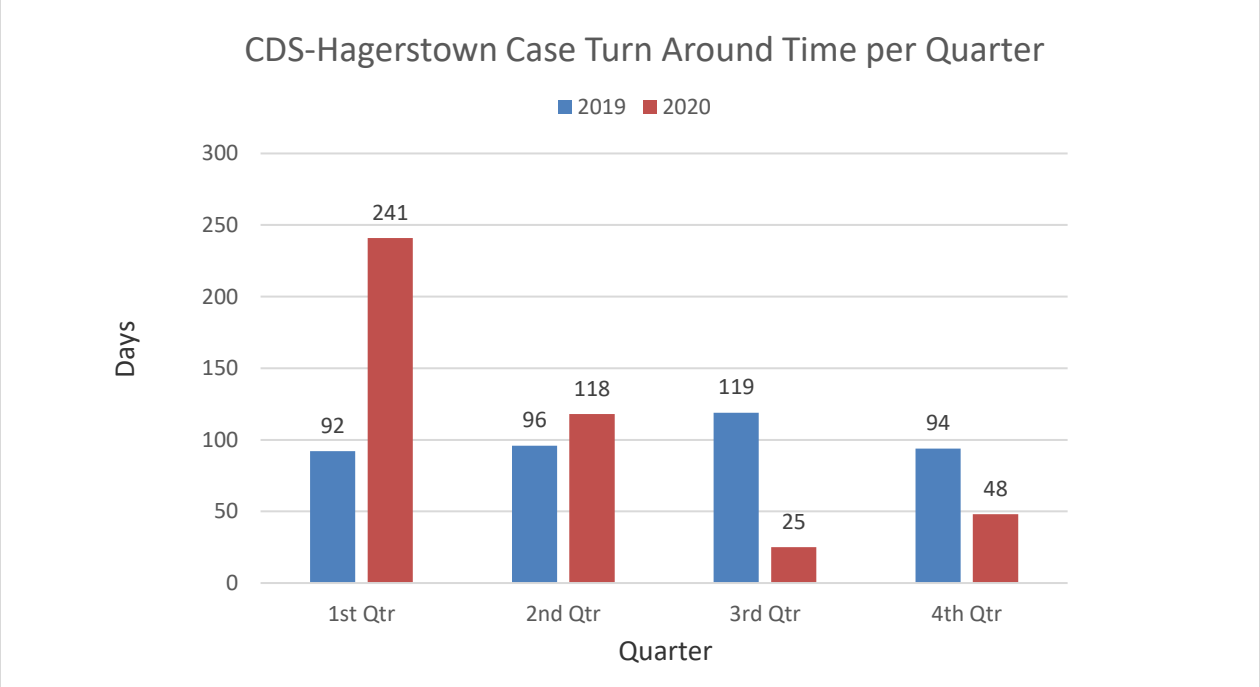
CDS-Hagerstown Cases Received per MSP Installation		
MSP Installation	**Counties Served**	**Submissions**
MSP-Westminster	Carroll	160
MSP-Cumberland	Allegany	138
MSP-Hagerstown	Washington	108
MSP-McHenry	Garrett	56
MSP-Waterloo	Howard	34
MSP-Bel Air	Harford	32
MSP-Rockville	Montgomery	30
MSP-JFK Highway	Cecil, Harford, Baltimore	15
MSP-CID/CED	Statewide	14
MSP-DED/C3I	Allegany	1
	TOTAL	**588**

Allied Agency Cases Received by CDS-Hagerstown per County	
County	**Submissions**
Carroll	339
Allegany	281
Harford	155
Garrett	72
Howard	37
Washington	9
Dorchester	3
Caroline	1
Frederick	1
TOTAL	**898**


CDS-Hagerstown Cases Completed per Month
2019 = 800
2020 = 1,665
Cases
Month
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
32
114
57
232
43
111
76
141
79
96
46
154
85
121
107
142
84
97
66
160
75
137
50
160


CDS-Hagerstown Analyses Reported per Drug Type
(Includes Allied FS)
Fentanyls
Cocaine
Opiate Pharm.
Heroin
Benzodiazepines
Methamphetamine
Others
Cannabis
Non-Opiate Controlled Pharm.
Non-Controlled Pharm.
25%
25%
13%
8%
8%
7%
7%
3%
2%
2%


CDS-Hagerstown Pending Caseload and Backlog per Quarter
2019 Pending Caseload
2019 Backlog
2020 Pending Caseload
2020 Backlog
Cases
450
400
350
300
250
200
150
100
50
0
425
374
280
176
421
345
93
4
305
282
261
86
396
331
217
129
End of 1st Qtr
End of 2nd Qtr
End of 3rd Qtr
End of 4th Qtr
Quarter

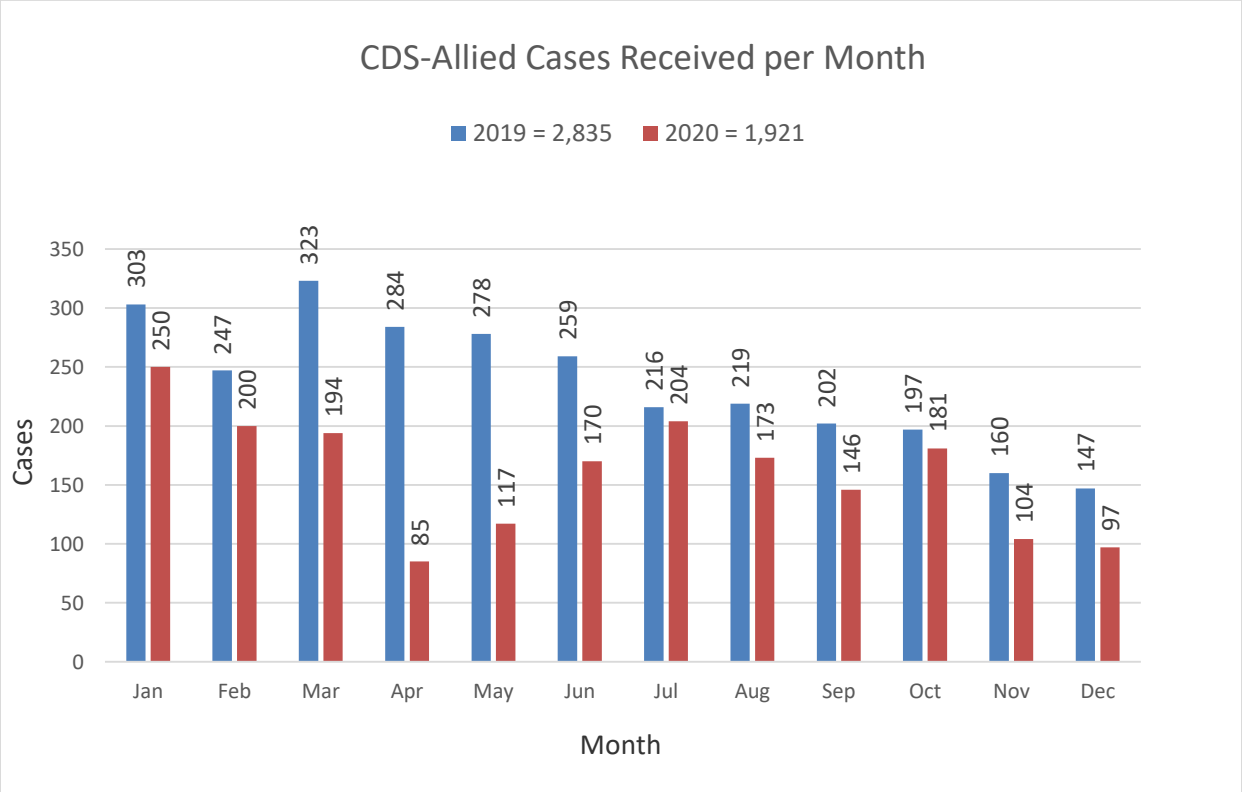

CDS-Hagerstown Case Turn Around Time per Quarter
2019
2020
Days
300
250
200
150
100
50
0
92
241
96
118
119
25
94
48
1st Qtr
2nd Qtr
3rd Qtr
4th Qtr
Quarter

CDS-ALLIED FORENSIC SCIENTIST PROGRAM

The Allied Forensic Scientists working in the CDS Units are employees of allied agencies or other governmental entities. These scientists are authorized to perform CDS analysis in MSP-FSD facilities under the provisions provided for in a Memorandum of Understanding. Even though these scientists are not MSP employees, they perform forensic testing in accordance with the MSP-FSD management system by complying with the MSP-FSD Quality Assurance Manual and following the MSP-FSD standard operating procedures.

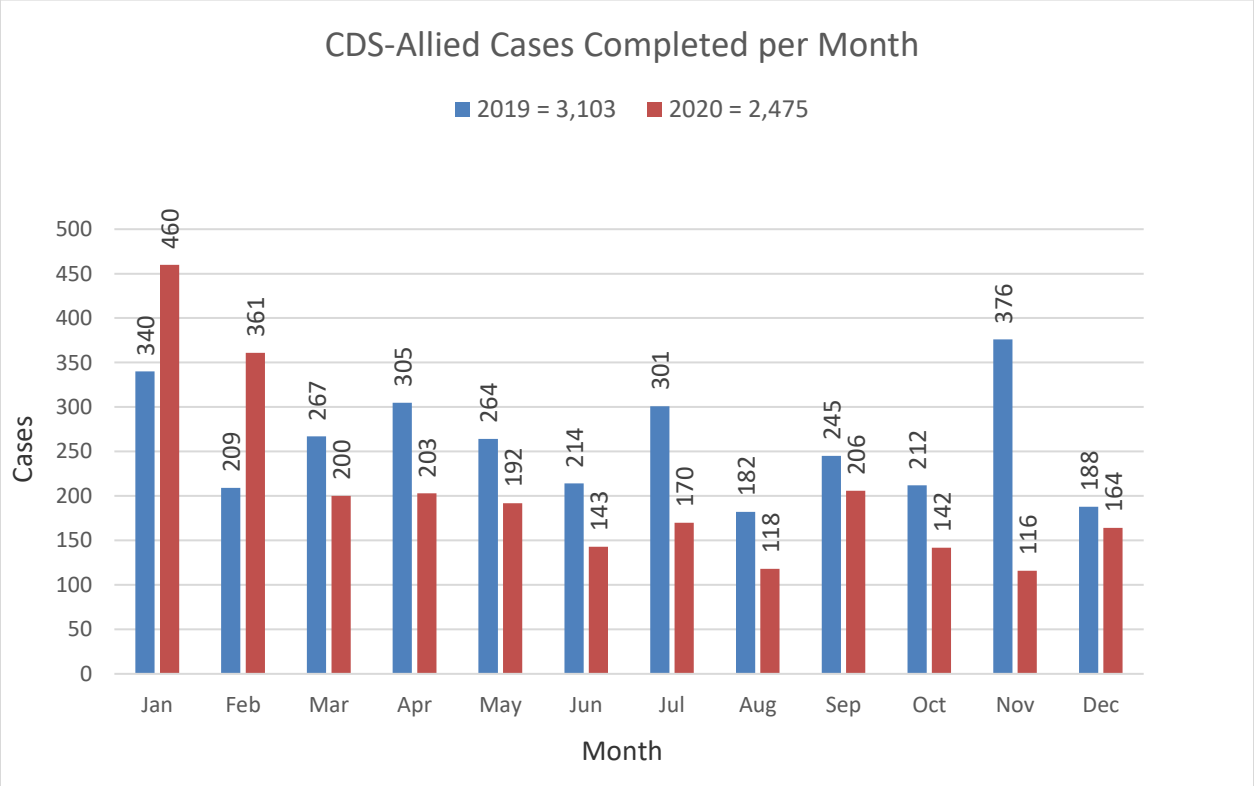
Four Allied Forensic Scientists, representing the following agencies, work in the CDS Units: Howard County Police Department, Cecil County State's Attorney's Office, Frederick County State's Attorney's Office, and St. Mary's County State's Attorney's Office in conjunction with Calvert County State's Attorney's Office.

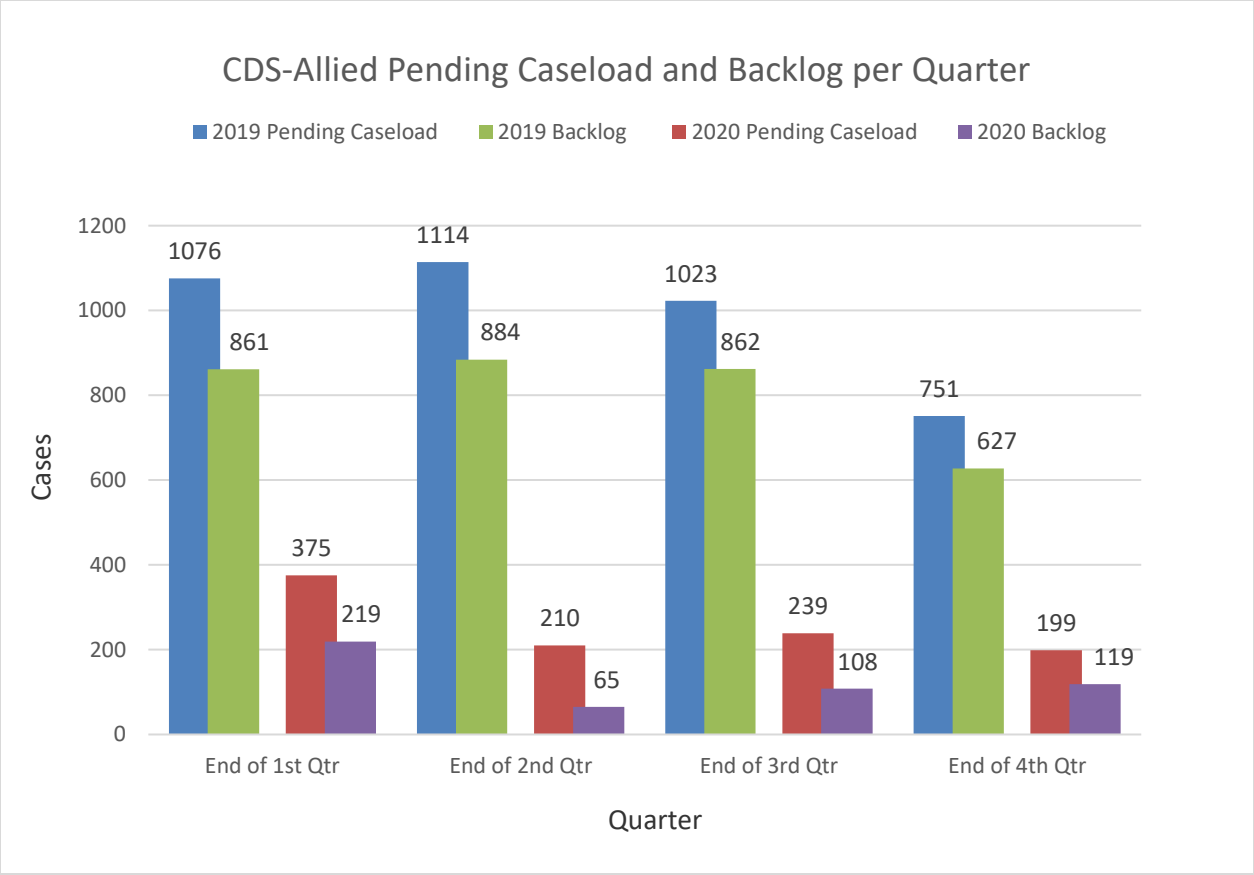
The Howard County Allied Chemist position became vacant in December 2019 and remained vacant for all of 2020. The Frederick County Allied Chemist completed training in 2019 and completed casework for Frederick County in 2020. The St. Mary's County/Calvert County Allied Chemist position was filled in November 2019, and the chemist is still in training. Until the training is completed, the CDS-Pikesville Unit will assume the casework responsibilities and case backlog of that Allied Forensic Scientist. In this report, the St. Mary's County/Calvert County casework statistics are included under the CDS-Pikesville Unit for 2019 and 2020.

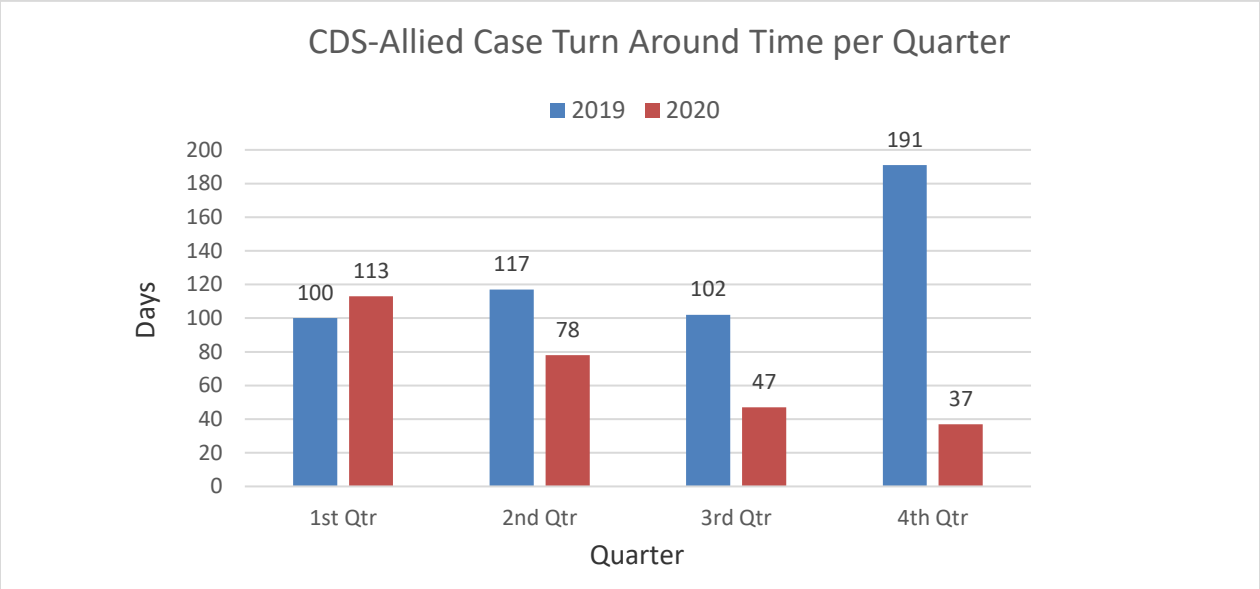


CDS Cases Received by Allied Forensic Scientists per MSP Installation		
MSP Installation	**Counties Served**	**Submissions**
MSP-North East	Cecil	168
MSP-Frederick	Frederick	143
MSP-CID/CED	Statewide	63
MSP-Waterloo	Howard	40
MSP-JFK Highway	Cecil, Harford, Baltimore	29
	TOTAL	**443**

CDS Cases Received by Allied Forensic Scientists from Allied Agencies per County	
County	**Submissions**
Frederick	734
Cecil	610
Howard	134
TOTAL	**1,478**




CDS-Allied Pending Caseload and Backlog per Quarter
2019 Pending Caseload
2019 Backlog
2020 Pending Caseload
2020 Backlog
Cases
1200
1000
800
600
400
200
0
1076
861
375
219
1114
884
210
65
1023
862
239
108
751
627
199
119
End of 1st Qtr
End of 2nd Qtr
End of 3rd Qtr
End of 4th Qtr
Quarter


CDS-Allied Case Turn Around Time per Quarter
2019
2020
Days
200
180
160
140
120
100
80
60
40
20
0
100
113
117
78
102
47
191
37
1st Qtr
2nd Qtr
3rd Qtr
4th Qtr
Quarter

CDS UNIT/ HIDTA DATA ANALYSIS*

Drug Categories Identified in 2020**

Quarter	Cocaine	Marihuana	Heroin	Fentanyl	Fentanyl Analogs	Other Opioids***	Methamphetamine	Phenethylamine****	Synthetic Cannabinoid	Controlled Rx	Rx	Over-the-Counter	PCP/Analogs	Psychedelic	Cathinones	Etizolam	Other	CDS Positive Total
Total 1Q	1019	41	265	607	11	269	234	100	70	473	75	9	25	12	35	-	29	3715
%	27.4	1.1	7.1	16.3	0.3	7.2	6.3	2.7	1.	12.7	2	0.2	0.7	0.3	0.9	-	9.8	
Total 2Q	564	16	165	396	4	153	114	44	62	268	31	5	21	8	27	-	33	2180
%	25.9	0.7	7.6	18.2	0.2	7	5.2	2	2.8	12.3	1.4	0.2	1	0.4	1.2	-	1.5	
Total 3Q	846	473	280	807	26	449	282	91	94	412	109	99	34	30	85	148	102	4367
%	19.4	10.8	6.4	18	0.6	10	6.5	2	2	9.4	2.5	2.2	0.8	0.7	1.9	3.4	2.3	
Total 4Q	743	352	233	822	22	470	295	110	65	403	96	63	34	45	87	157	94	4091
%	18	8.6	5.7	20	0.5	11.5	7.2	2.7	1.6	9.9	2.3	1.5	0.8	1.1	2.1	3.8	2.3	

*This data was provided by the Washington/Baltimore High Intensity Drug Trafficking Area (HIDTA) program in their 2020 report.

**This is an overview of samples submitted to the MSP-FSD labs only and does not represent all drugs seized in the State of Maryland.

***The Other Opioids group includes Oxycodone, Tramadol, Methadone, Hydrocodone, Morphine, Oxymorphone, Codeine mixtures, Tarpentadol, a Fentanyl precursor 4-Anilino-N-phenethyl-4-piperidine (ANPP) and other less common opioids.

****The Phenethylamine group includes Amphetamine and MDMA.

TOXICOLOGY UNIT

The Toxicology Unit is responsible for the analysis of alcohol and drugs contained in blood specimens submitted to the MSP-FSD. Testing is performed in conjunction with the Driving While Impaired (DWI) program of the Maryland State Police and the State Toxicologist's Office. Testing for alcohol and drugs is performed for both the Maryland State Police and allied law enforcement agencies requiring laboratory support for impaired driving programs.

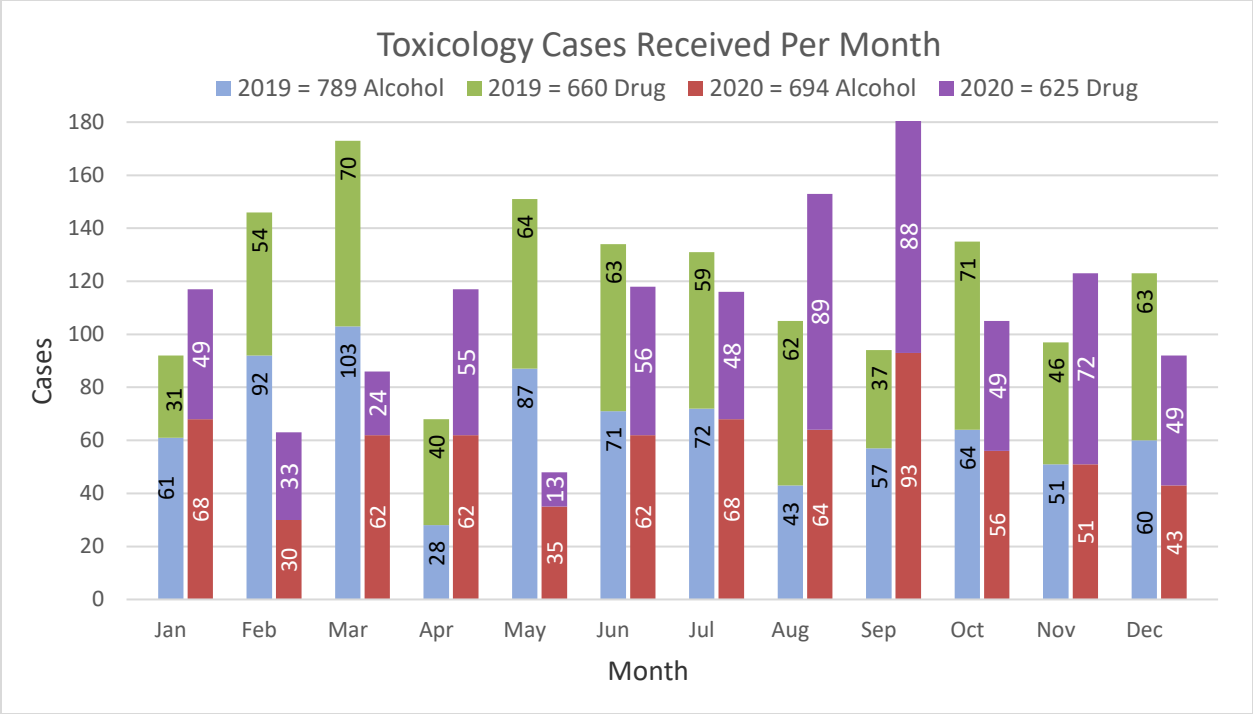
The Toxicology Unit is the only laboratory within the state approved by the State of Maryland, Office of the Chief Medical Examiner to analyze blood samples for alcohol and drugs in cases related to DWI arrests. Blood specimens submitted to the Toxicology Unit for testing are collected by qualified medical personnel when requested by police. Blood is collected from suspected impaired drivers after being taken to hospital for injury, or at the request of a Drug Recognition Expert Officer when drug impairment is suspected. Many cases, therefore, involve serious personal injury and manslaughter/vehicle homicide charges that require the Forensic Scientist's expert testimony at trial.

The Toxicology Unit has continued to deal with staffing issues. A Forensic Scientist I position was vacant for 2020. Another Forensic Scientist began training for Blood Alcohol analysis in the last quarter of 2019, and completed training in March 2020. In the summer of 2020, this same Forensic Scientist started training for Blood Drug analysis and is still in training. In the first half of 2020, the unit benefited from a contractual employee who assisted with casework review. The recruitment to fill the vacant Forensic Scientist position was initiated in 2020 after receiving special approval despite the hard hiring freeze. At the end of 2020, the Unit was able to obtain another contractual employee who will assist with validating a new GC-MS instrument.

The unit continued to use LC/MS/MS confirmation testing to include fentanyl in the opiate panel in 2020. The opiate panel consists of morphine, codeine, oxycodone, oxymorphone, hydrocodone, hydromorphone, methadone, buprenorphine and fentanyl confirmation testing.

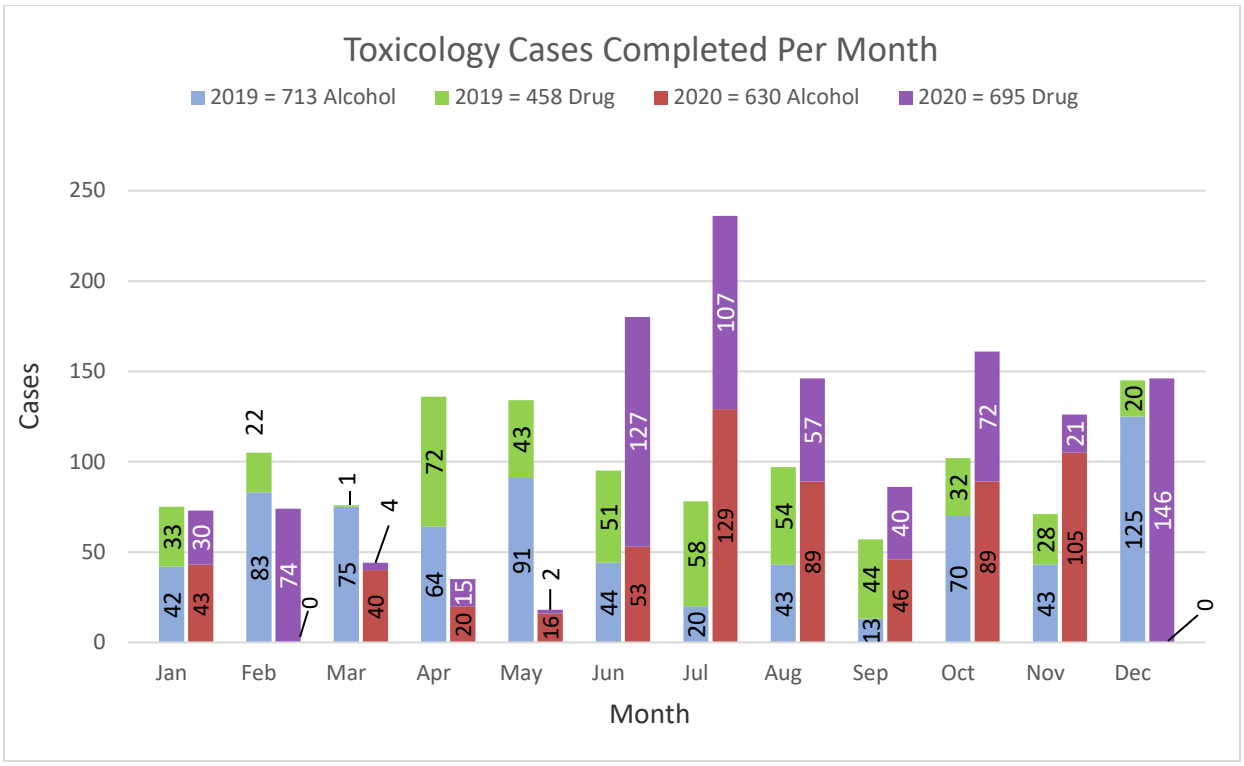
The Toxicology Unit also saw a slight decrease in cases received in 2020. There were 6% less blood drug cases and 13% less blood alcohol received by the unit. This could be due to the COVID-19 pandemic.

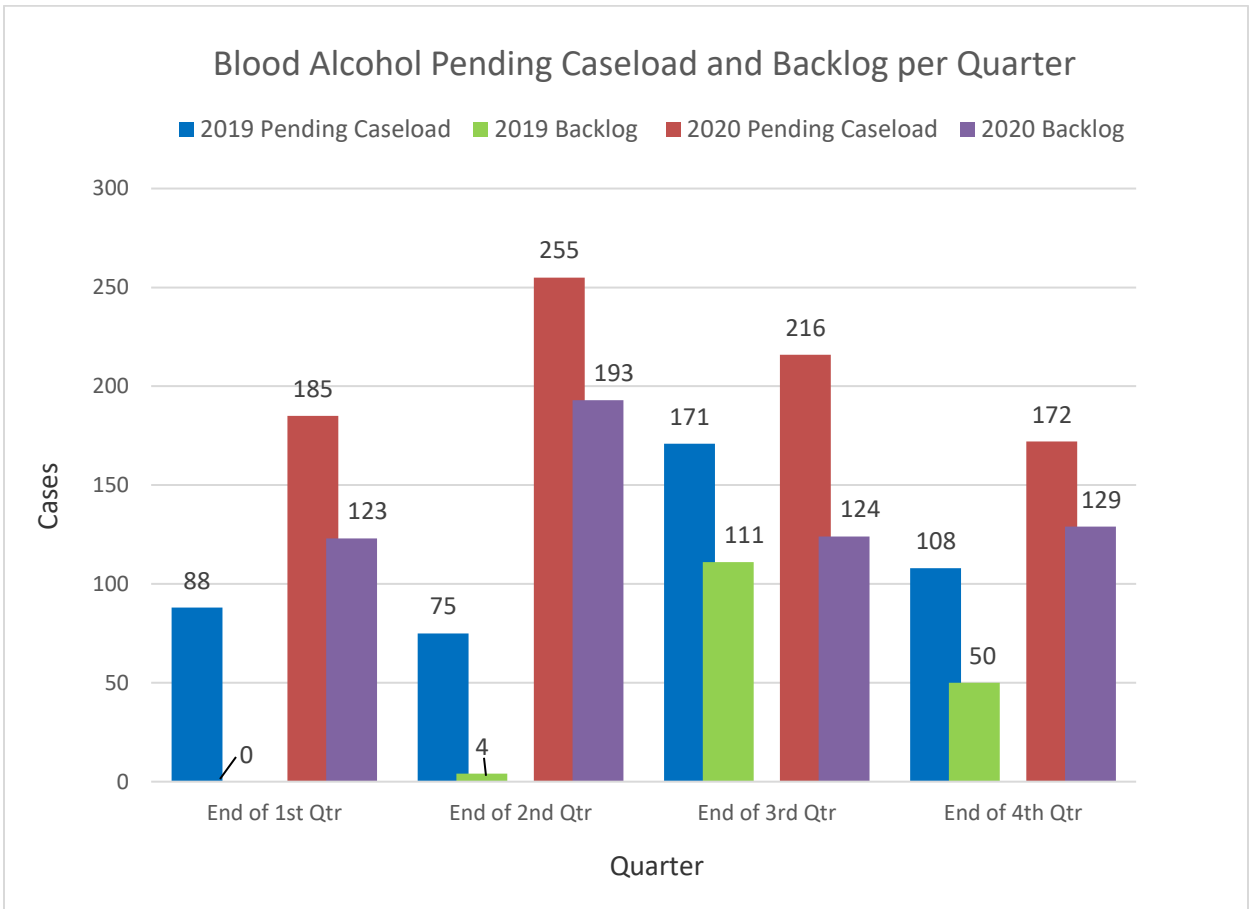
Due to the staffing issues and the COVID-19 pandemic, the Toxicology Unit experienced a significant casework backlog increase in 2020. Funding for outsourcing was utilized in 2020 to help address the blood drug case backlog, allowing the unit to focus their attention on blood alcohol casework and training staff.

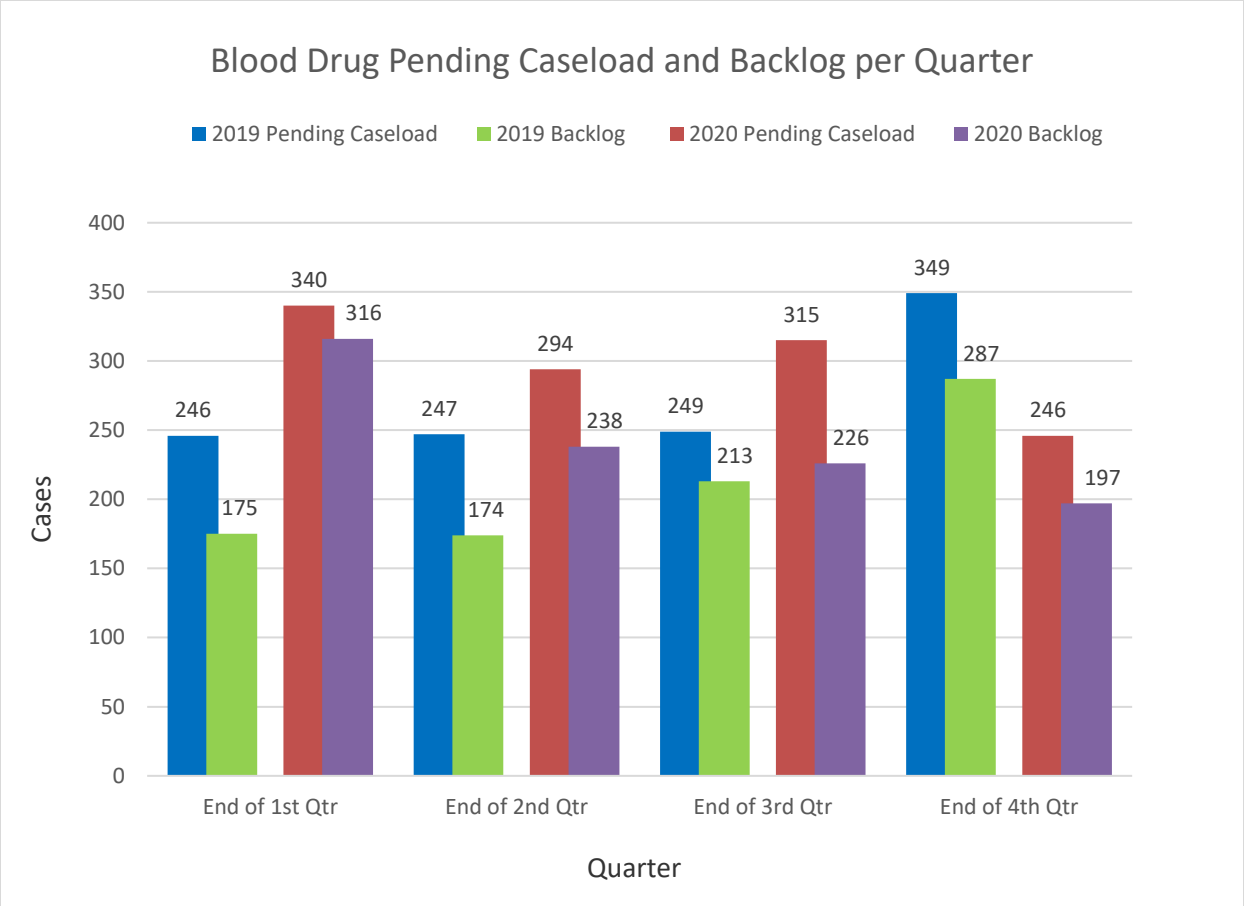

Toxicology Cases Received Per Month
2019 = 789 Alcohol
2019 = 660 Drug
2020 = 694 Alcohol
2020 = 625 Drug
Cases
Month
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
61
31
68
49
92
54
30
33
103
70
62
24
28
40
62
55
87
64
35
13
71
63
62
56
72
59
68
48
43
62
64
89
57
37
93
88
64
71
56
49
51
46
51
72
60
63
43
49

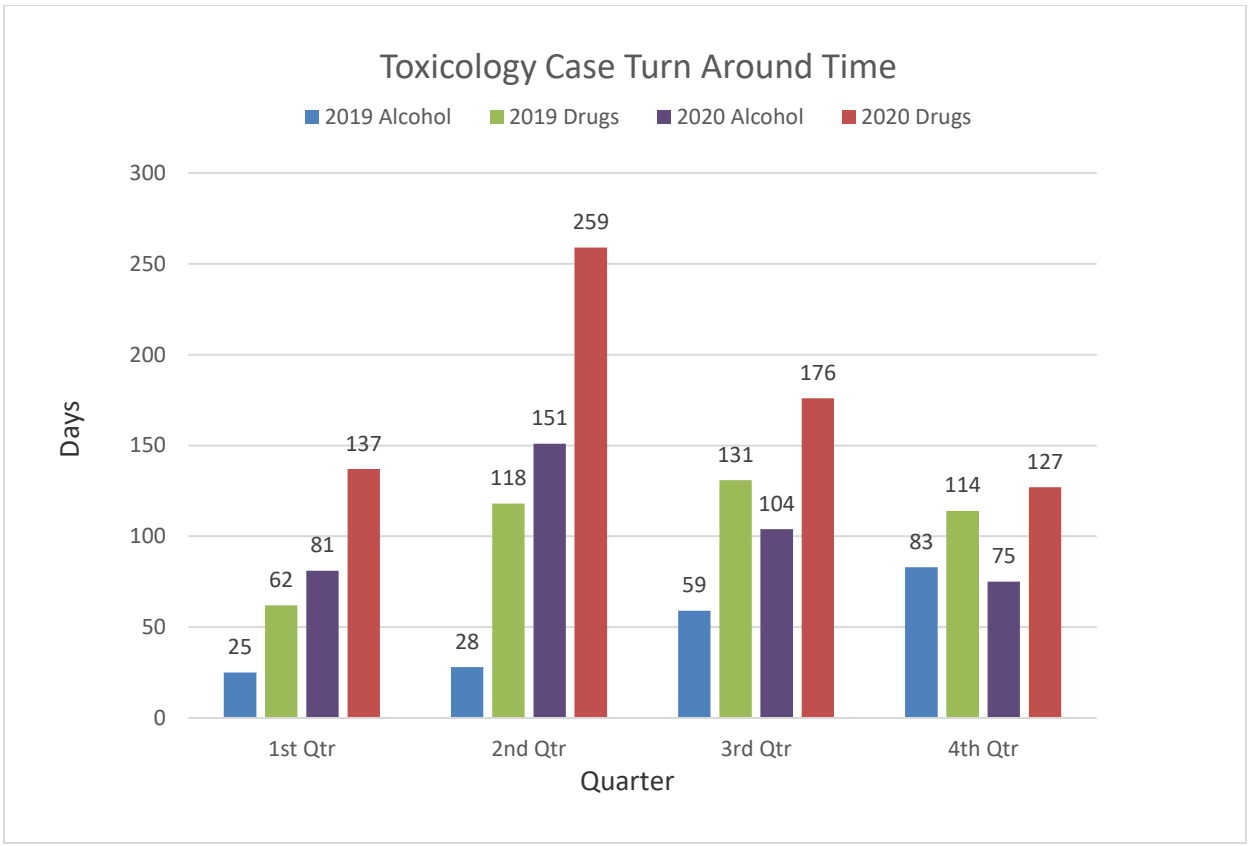
Toxicology Cases Received per MSP Installation		
MSP Installation	**Counties Served**	**Submissions**
MSP-Golden Ring	Baltimore	75
MSP-Easton	Talbot, Caroline, Dorchester	50
MSP-Westminster	Carroll	38
MSP-Hagerstown	Washington	37
MSP-Frederick	Frederick	30
MSP-Rockville	Montgomery	23
MSP-Bel Air	Harford	22
MSP-JFK Highway	Cecil, Harford, Baltimore	22
MSP-Salisbury	Wicomico	20
MSP-Centerville	Kent, Queen Anne's	19
MSP-College Park	Prince George's	18
MSP-La Plata	Charles	17
MSP-Prince Frederick	Calvert	17
MSP-Annapolis	Anne Arundel	13
MSP-Berlin	Worcester	13
MSP-Waterloo	Howard	12
MSP-Leonardtown	St. Mary's	10
MSP-North East	Cecil	9
MSP-McHenry	Garrett	8
MSP-Cumberland	Allegany	7
MSP-Forestville	Prince George's	7
MSP-Glen Burnie	Anne Arundel	6
MSP-Princess Anne	Somerset	4
MSP-CID/CED	Statewide	1
	TOTAL	**478**

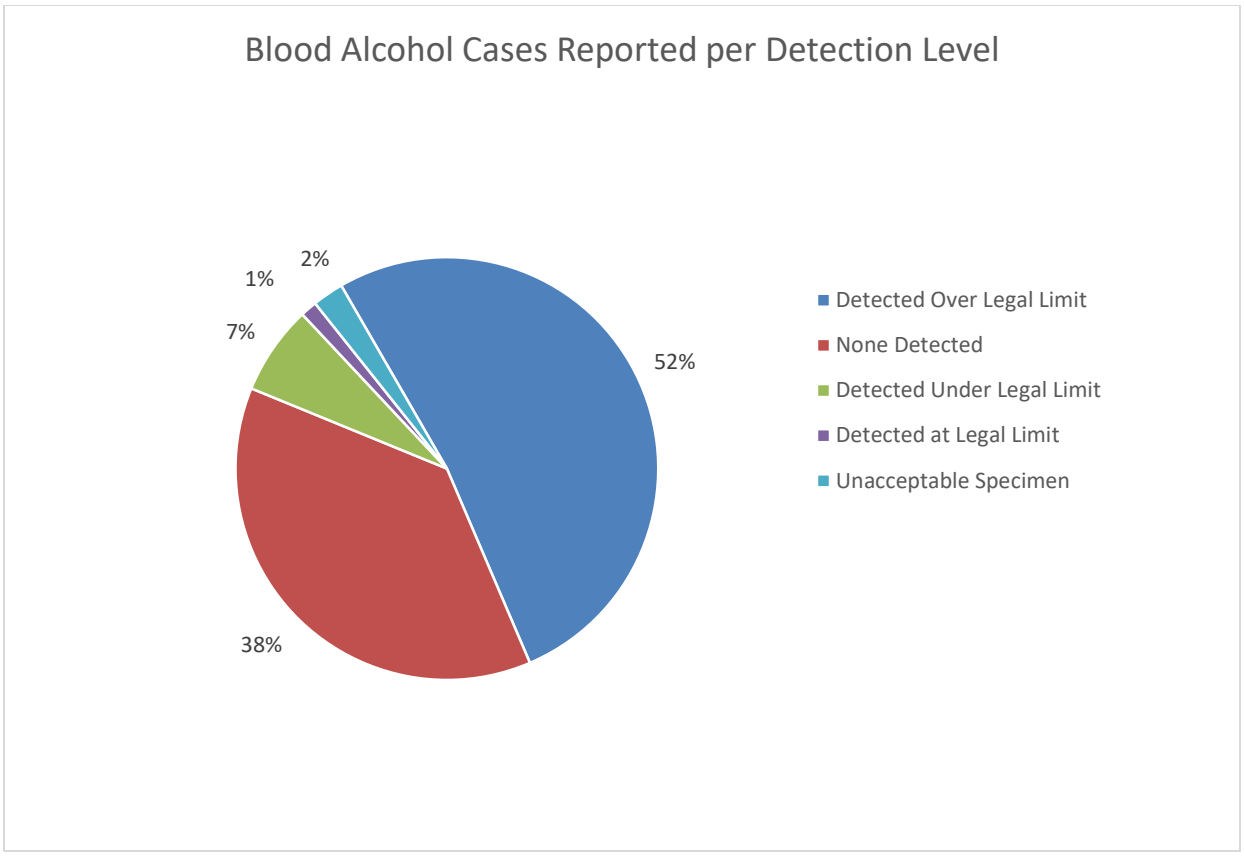
Toxicology Cases Received from Allied Agencies by County	
County	**Submissions**
Baltimore	159
Anne Arundel	132
Montgomery	88
Washington	46
Harford	41
Baltimore City	40
Frederick	40
Carroll	39
Howard	37
Allegany	34
Prince George's	33
Calvert	32
St. Mary's	29
Charles	15
Statewide/Not Determined*	11
Worcester	11
Talbot	10
Dorchester	8
Caroline	7
Cecil	7
Wicomico	7
Queen Anne's	6
Somerset	5
Garrett	3
Kent	1
TOTAL	**841**

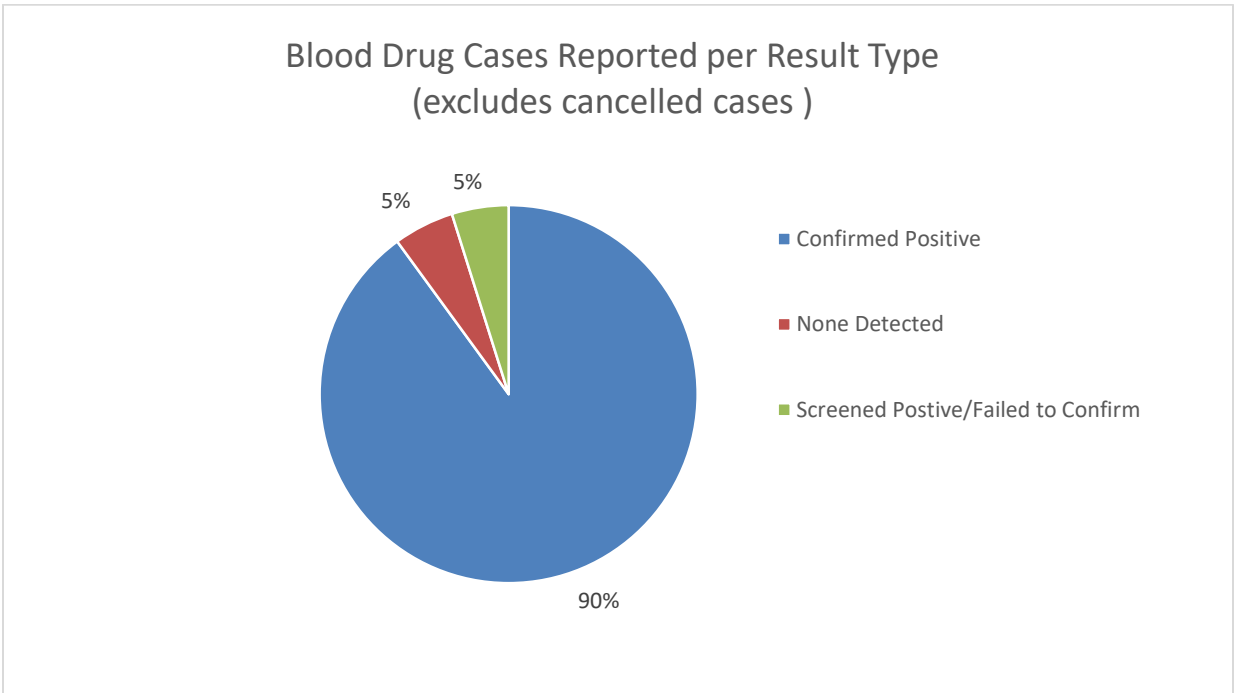

Toxicology Cases Completed Per Month
2019 = 713 Alcohol
2019 = 458 Drug
2020 = 630 Alcohol
2020 = 695 Drug
Cases
Month
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
42
33
43
30
83
22
74
0
75
1
40
4
64
72
20
15
91
43
16
2
44
51
53
127
20
58
129
107
43
54
89
57
13
44
46
40
70
32
89
72
43
28
105
21
125
20
146
0

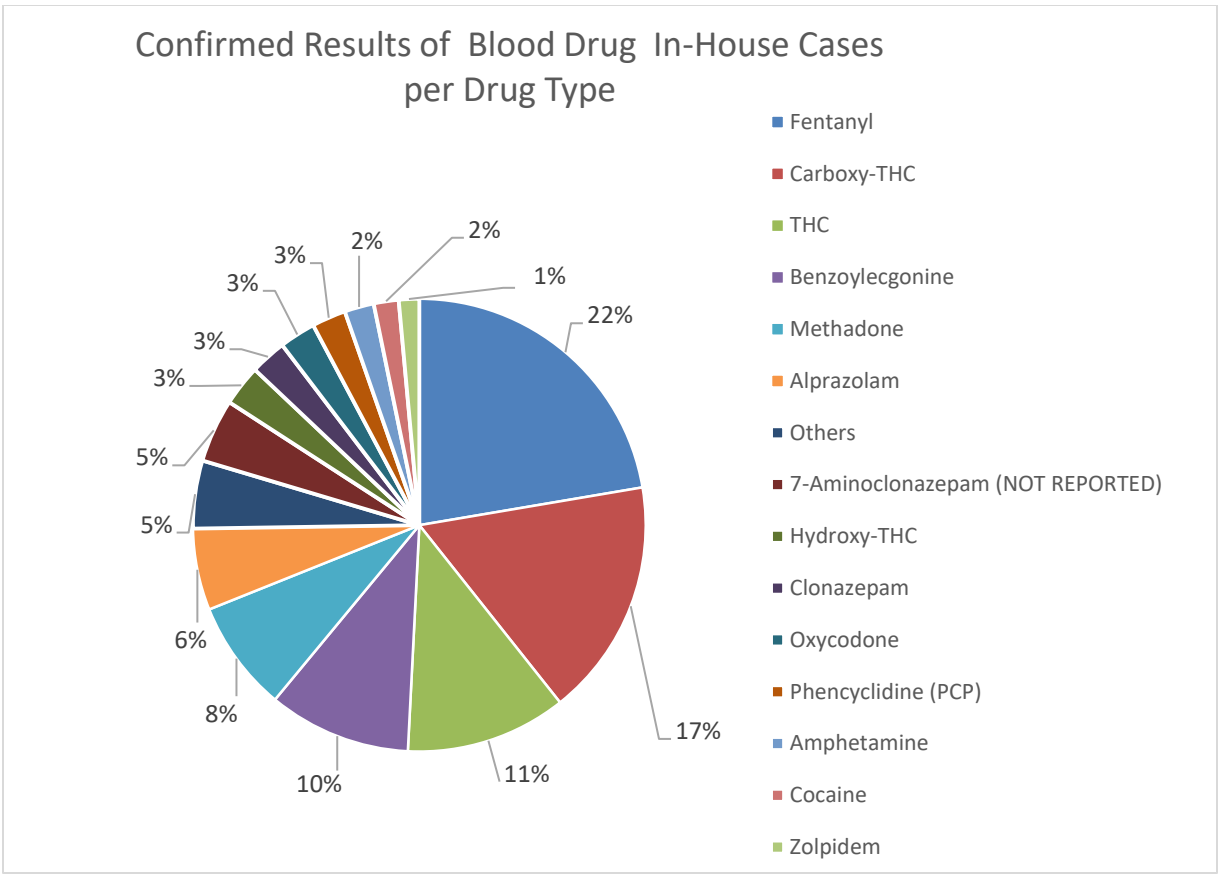

Blood Alcohol Pending Caseload and Backlog per Quarter
2019 Pending Caseload
2019 Backlog
2020 Pending Caseload
2020 Backlog
Cases
Quarter
End of 1st Qtr
End of 2nd Qtr
End of 3rd Qtr
End of 4th Qtr
88
0
185
123
75
4
255
193
171
111
216
124
108
50
172
129


Blood Drug Pending Caseload and Backlog per Quarter
2019 Pending Caseload
2019 Backlog
2020 Pending Caseload
2020 Backlog
Cases
400
350
300
250
200
150
100
50
0
246
175
340
316
247
174
294
238
249
213
315
226
349
287
246
197
End of 1st Qtr
End of 2nd Qtr
End of 3rd Qtr
End of 4th Qtr
Quarter


Toxicology Case Turn Around Time
2019 Alcohol
2019 Drugs
2020 Alcohol
2020 Drugs
Days
300
250
200
150
100
50
0
25
62
81
137
28
118
151
259
59
131
104
176
83
114
75
127
1st Qtr
2nd Qtr
3rd Qtr
4th Qtr
Quarter

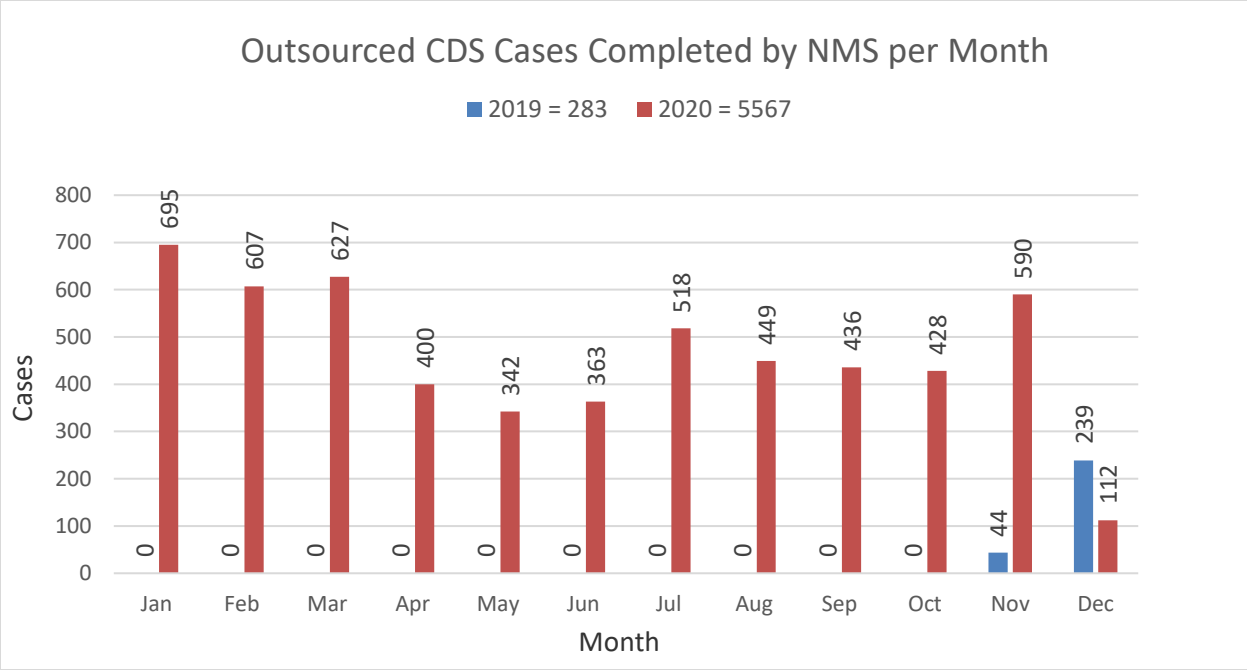

Blood Alcohol Cases Reported per Detection Level
2%
1%
7%
52%
38%
Detected Over Legal Limit
None Detected
Detected Under Legal Limit
Detected at Legal Limit
Unacceptable Specimen

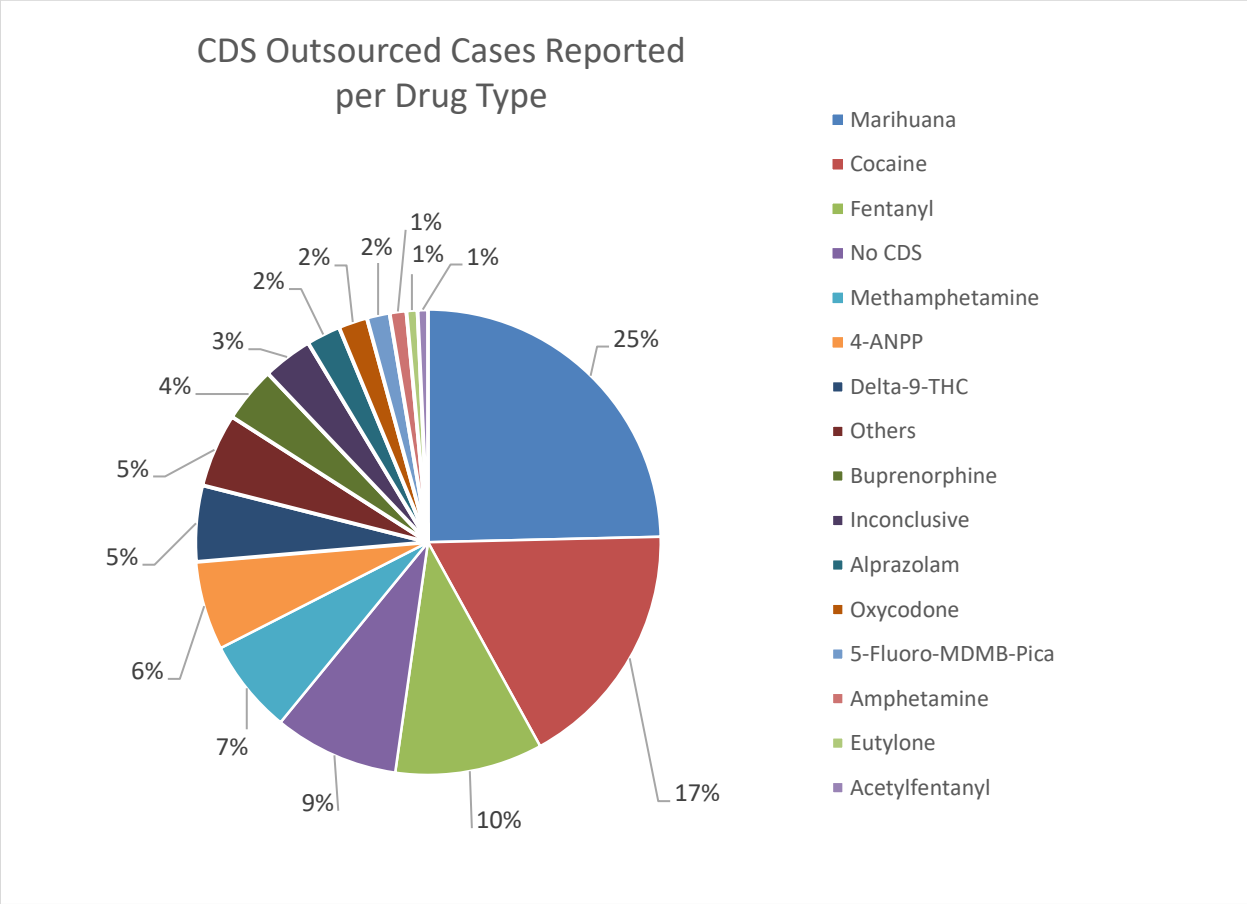

Blood Drug Cases Reported per Result Type
(excludes cancelled cases)
5%
5%
90%
Confirmed Positive
None Detected
Screened Postive/Failed to Confirm

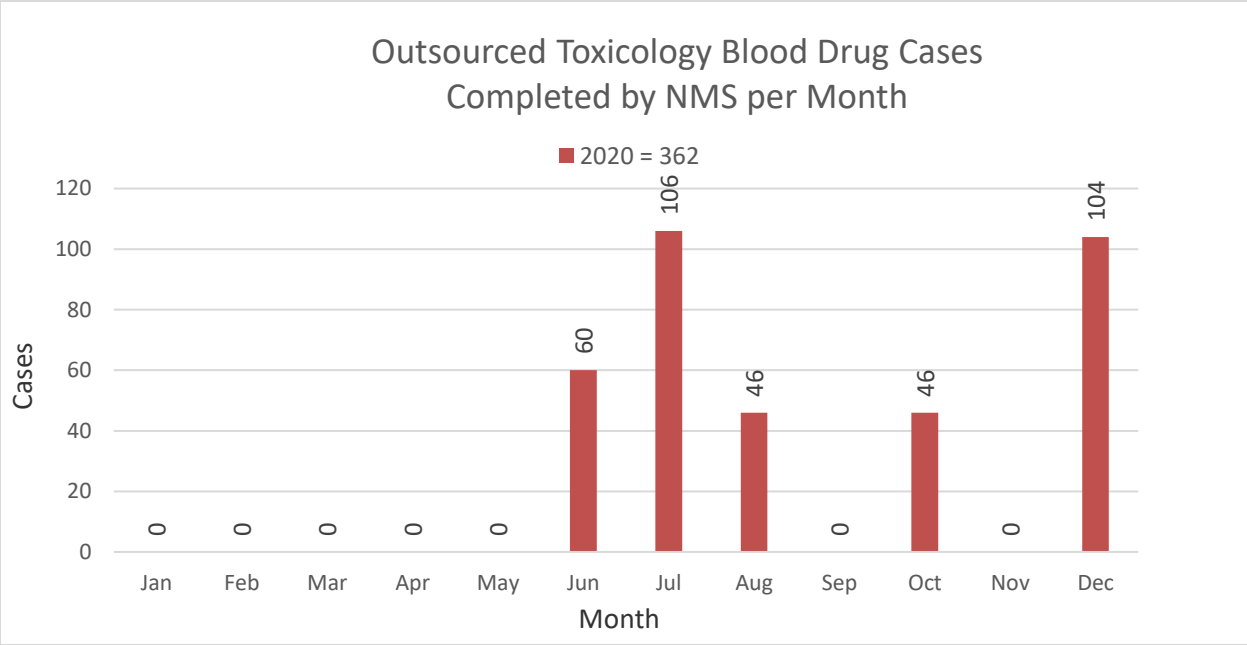

Confirmed Results of Blood Drug In-House Cases per Drug Type
22%
17%
11%
10%
8%
6%
5%
5%
3%
3%
3%
3%
2%
2%
1%
Fentanyl
Carboxy-THC
THC
Benzoylecgonine
Methadone
Alprazolam
Others
7-Aminoclonazepam (NOT REPORTED)
Hydroxy-THC
Clonazepam
Oxycodone
Phencyclidine (PCP)
Amphetamine
Cocaine
Zolpidem

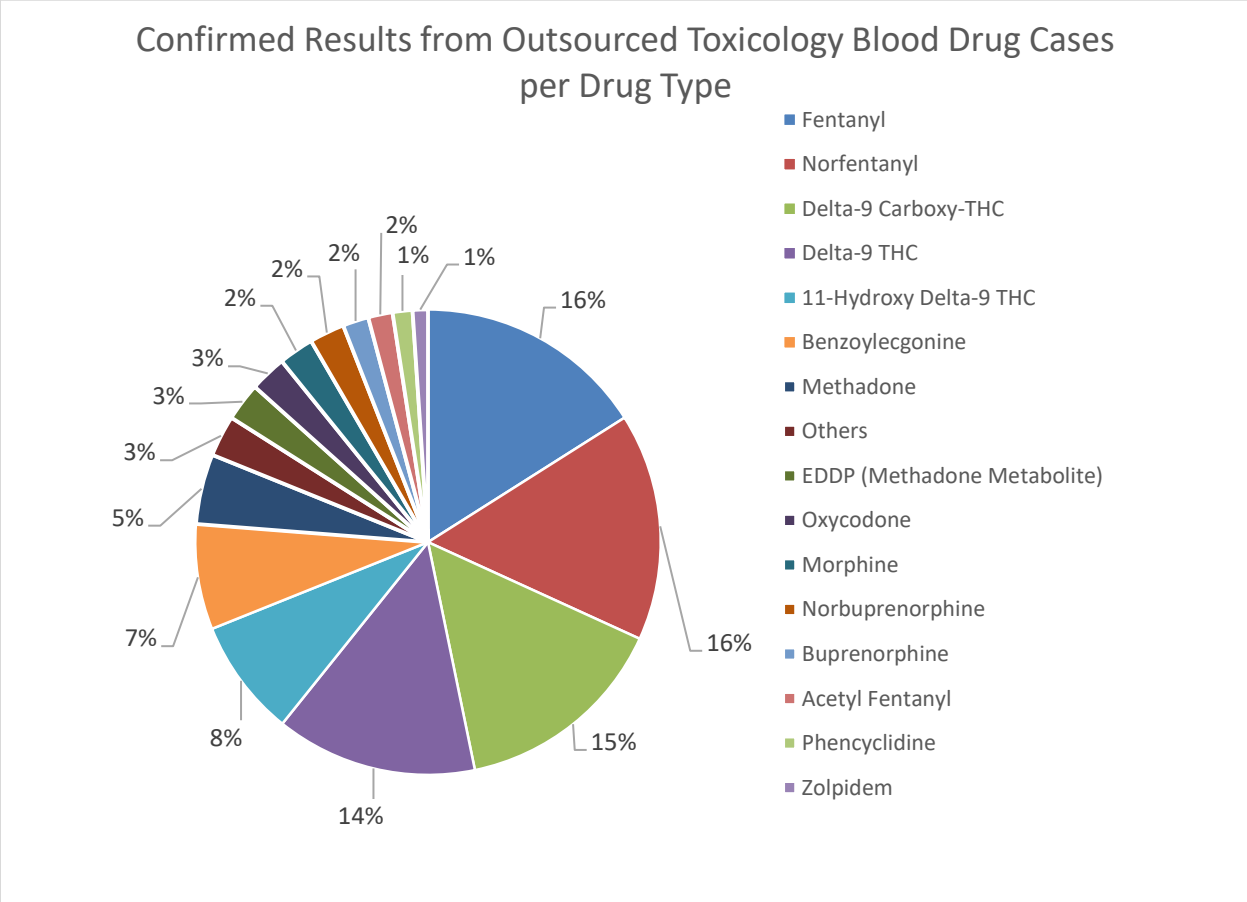
CHEMISTRY SECTION OUTSOURCING

In an effort to eliminate the CDS and Toxicology case backlog, FSD began outsourcing both CDS cases and Toxicology Blood Drug cases for analysis to National Medical Services (NMS) Labs, Inc. Using a US DOJ Office of Community Oriented Policing Services grant under the Anti-Heroin Task Force Program to fund both Toxicology and CDS cases, both Units were able to successfully reduce their backlogs in 2020. This grant covers the outsourcing costs of both the analysis and courtroom testimony for casework. In November 2020, FSD's request for a six-month extension of the one-year contract with NMS Labs for outsourcing CDS and Toxicology cases was approved by the Maryland Board of Public Works so that both Units can continue the outsourcing efforts.


Outsourced CDS Cases Completed by NMS per Month
2019 = 283
2020 = 5567
Cases
800
700
600
500
400
300
200
100
0
695
607
627
400
342
363
518
449
436
428
590
239
112
0
44
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month


CDS Outsourced Cases Reported per Drug Type
25%
17%
10%
9%
7%
6%
5%
5%
4%
3%
2%
2%
2%
1%
1%
1%
Marihuana
Cocaine
Fentanyl
No CDS
Methamphetamine
4-ANPP
Delta-9-THC
Others
Buprenorphine
Inconclusive
Alprazolam
Oxycodone
5-Fluoro-MDMB-Pica
Amphetamine
Eutylone
Acetylfentanyl


Outsourced Toxicology Blood Drug Cases
Completed by NMS per Month
2020 = 362
120
100
80
60
40
20
0
Cases
0
0
0
0
0
60
106
46
0
46
0
104
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month


Confirmed Results from Outsourced Toxicology Blood Drug Cases
per Drug Type
16%
16%
15%
14%
8%
7%
5%
3%
3%
3%
2%
2%
2%
1%
1%
Fentanyl
Norfentanyl
Delta-9 Carboxy-THC
Delta-9 THC
11-Hydroxy Delta-9 THC
Benzoylecgonine
Methadone
Others
EDDP (Methadone Metabolite)
Oxycodone
Morphine
Norbuprenorphine
Buprenorphine
Acetyl Fentanyl
Phencyclidine
Zolpidem

NOTEWORTHY CASES

In January 2020, a New Windsor woman was indicted for causing a three-vehicle car crash as a result of impaired driving. Blood drug and alcohol tests performed by the FSD Toxicology Unit resulted in a positive analysis for a cocaine metabolite and the sedative etizolam. Investigators at the scene also submitted 22 exhibits of tablets, pills, and capsules to the CDS Unit for analysis. It was found that one tablet was a Schedule IV controlled substance used as sleep disorder medication. Due to the combined results of the Toxicology and CDS Units, a Carroll County grand jury indicted the suspect with second-degree assault, causing a life threatening injury as a result of negligent driving while impaired by drugs and a CDS, driving while impaired by drugs and a CDS, and possession of a CDS.

In May 2020, the success of "Operation Blood Clot" came to fruition after the leader of a drug trafficking organization was indicted by an Allegany County Grand Jury on 64 drug related offenses. The large quantities of seized and suspected fentanyl, heroin, and crack cocaine - a total of 21 exhibits - were submitted to the Hagerstown CDS Laboratory for analysis. A CDS FSII was able to determine the presence of over 1,200 g of fentanyl, 99 g of heroin, and over 475 g of cocaine, along with other CDS including methamphetamine and alprazolam. A drug king pin and 20 other co-conspirators were arrested and charged due to the results produced by the CDS analysis.

BIOLOGY SECTION

The Biology Section is responsible for performing Serological and DNA analyses associated with criminal casework as well as maintaining and operating the State's DNA Database in conjunction with the FBI's Combined DNA Index System (CODIS). In order to efficiently address these functions, the Biology Section is structured on a four-unit basis overseen by one Forensic Scientist Manager.

There are two casework units: the Investigative Casework Unit and the Trial Casework Unit. The Investigative Casework Unit is staffed by five individuals: three forensic scientists, including one Forensic Scientist Supervisor, one Forensic Scientist Advanced, and one Forensic Scientist II. The fourth position is a Forensic Inventory Control Officer. The fifth position is a Forensic Scientist I which is currently vacant. The Trial Casework Unit is staffed by five forensic scientists, including one Forensic Scientist Supervisor, one Forensic Scientist Advanced, one Forensic Scientist III, and one Forensic Scientist II. The fifth position is a Forensic Scientist I which is currently vacant.

The Database Unit is staffed by seven forensic scientists, including one Forensic Scientist Supervisor (CODIS Administrator), two Forensic Scientists Advanced, and four Forensic Scientist III's, and one vacant Forensic Scientist I.

The Technical/Validation Unit is staffed by five individuals: four forensic scientists including one Forensic Scientist Supervisor (Technical Leader), one Forensic Scientist Advanced, and two Forensic Scientist III's. The fifth position is a Forensic Laboratory Technician I.

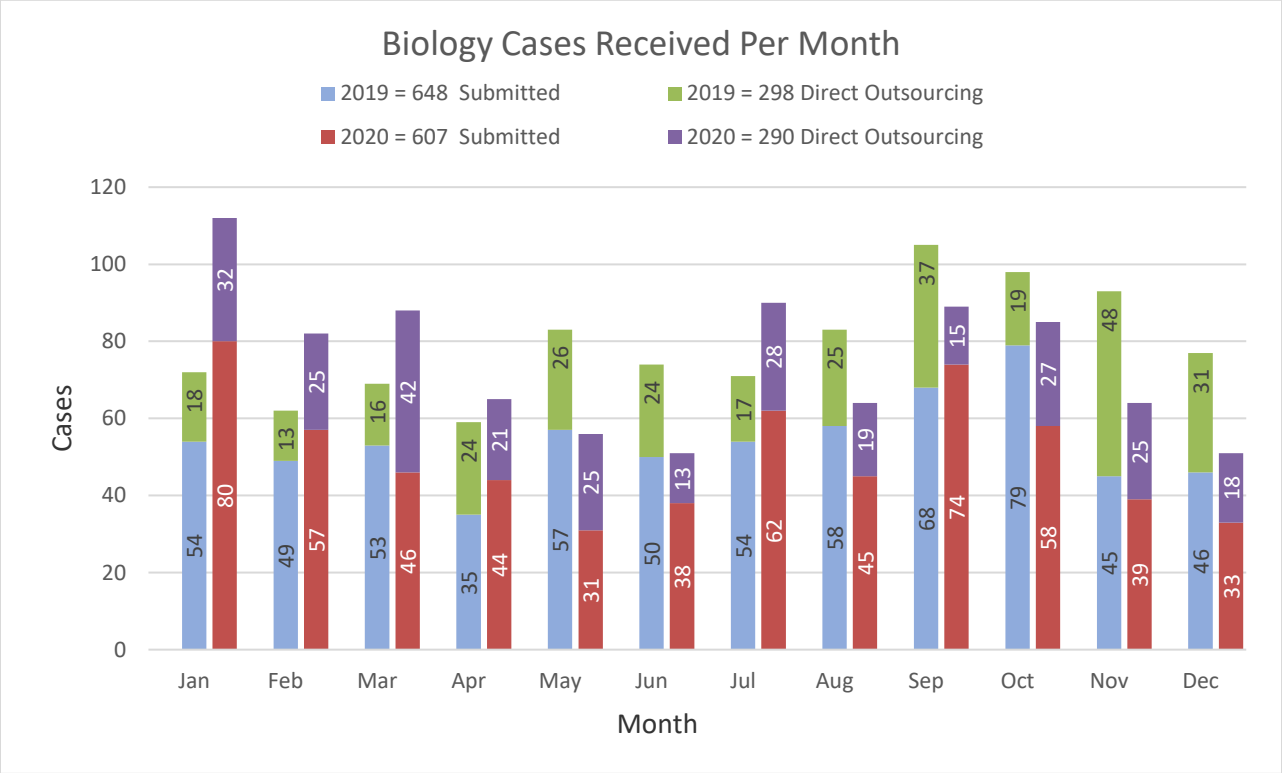
BIOLOGY CASEWORK UNITS

The Trial Casework Unit performs serology and/or DNA testing on cases that have resulted in an arrest and are being tested in support of the adjudication of the arrestee. While the primary responsibility of this unit is cases with pending trial dates, it also assists with the analysis of investigative and cold cases, the preparation and review of outsourced casework, and training of new analysts, as necessary.

The Investigative Casework Unit performs serology and/or DNA testing on cases without pending court dates, which have not resulted in an arrest but are being tested in support of making an arrest. This unit is responsible for handling high-priority/high-profile investigative cases, routine investigative cases, and cold cases. The Investigative Casework Unit is also responsible for the management and processing of outsourced casework to the contract vendor laboratory and training of new analysts, as necessary.

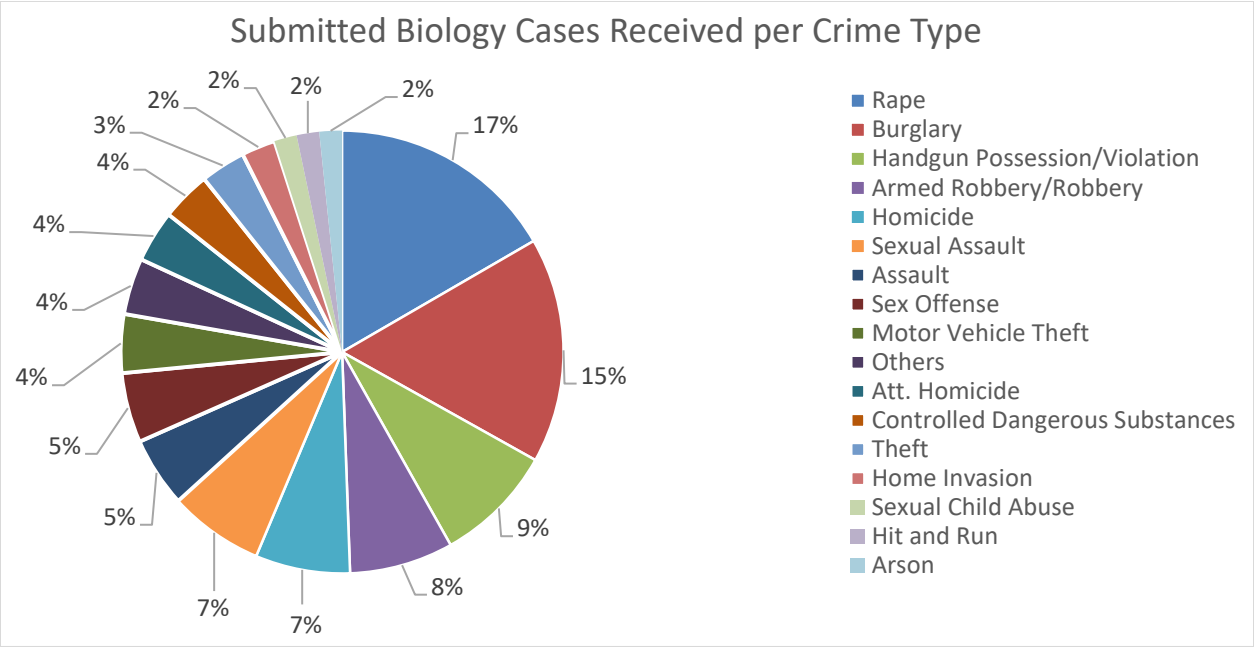
The overall number of case submissions to the Biology Section remained around the same in 2020. There were 648 cases received in the Biology Section, which is only a 1.4% increase from 2019. There was an 11% increase in the number of cases that were directly outsourced in 2020. Even though these cases were directly outsourced from the investigating agency to the contract lab, they were still monitored and tracked by Biology Section staff. Upon completion of all

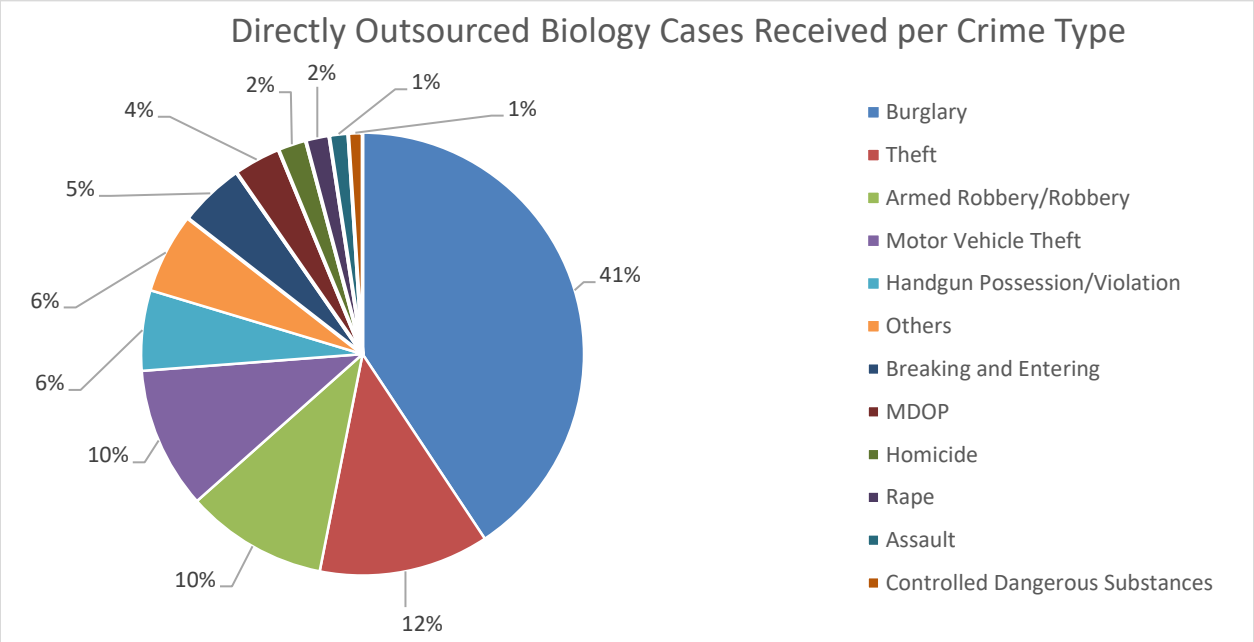
outsourced cases, the data is reviewed and suitable profiles are uploaded to the CODIS database. When considering both in-house cases and directly outsourced cases, the total number of cases completed within the Biology Section decreased by 1.6% in 2020. By utilizing a combination of direct outsourcing, in-house outsourcing (evidence is received at MSP-FSD and then either the entire case or a portion of it is forwarded to a contracted laboratory for analysis), and in-house casework, the casework units have been able to continue to monitor and maintain the backlog at manageable levels.

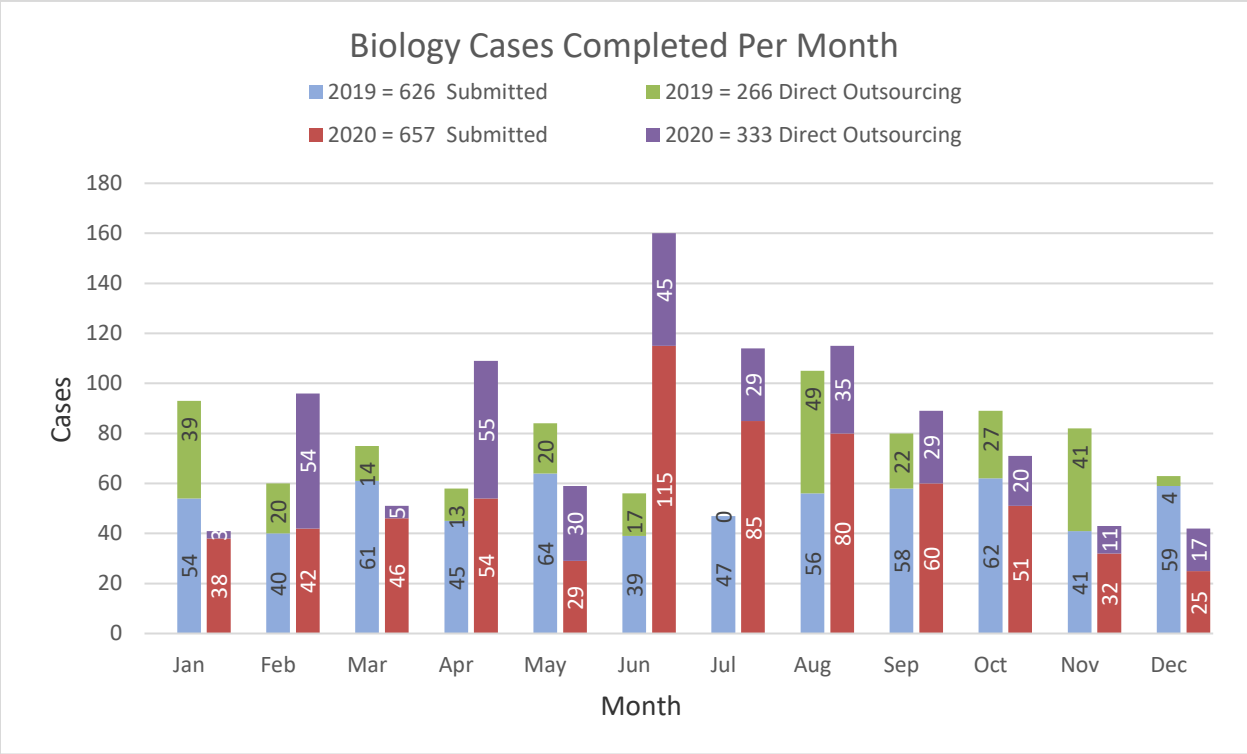


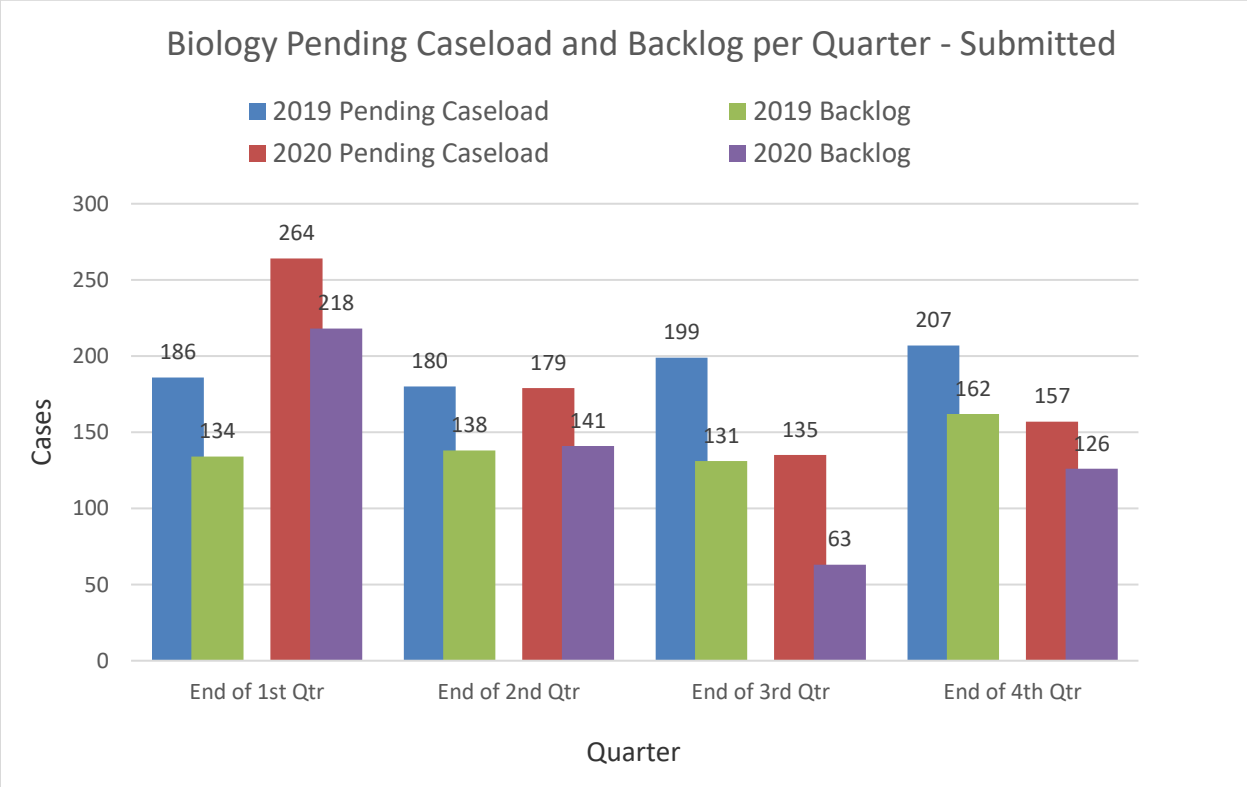
Biology Cases Received per MSP Installation				
MSP Installation	**Counties Served**	**Case Type**		
		Submitted	Directly Outsourced	Combined
MSP-CID/CED	Statewide	39	3	42
MSP-DED/C3I	Allegany	17	3	20
MSP-Homicide	Statewide	12	0	12
MSP-Easton	Talbot, Caroline, Dorchester	8	0	8
OSFM	Statewide	6	0	6
MSP-Forestville	Prince George's	4	1	5
MSP-North East	Cecil	3	1	4
MSP-Salisbury	Wicomico	4	0	4
MSP-Berlin	Worcester	3	0	3
MSP-Hagerstown	Washington	2	1	3
MSP-Leonardtown	St. Mary's	3	0	3
MSP-McHenry	Garrett	3	0	3
MSP-Westminster	Carroll	2	1	3
MSP-College Park	Prince George's	2	0	2
MSP-Golden Ring	Baltimore	2	0	2
MSP-Princess Anne	Somerset	2	0	2
MSP-Cumberland	Allegany	1	0	1
MSP-Bel Air	Harford	0	1	1
	TOTAL	**113**	**11**	**124**

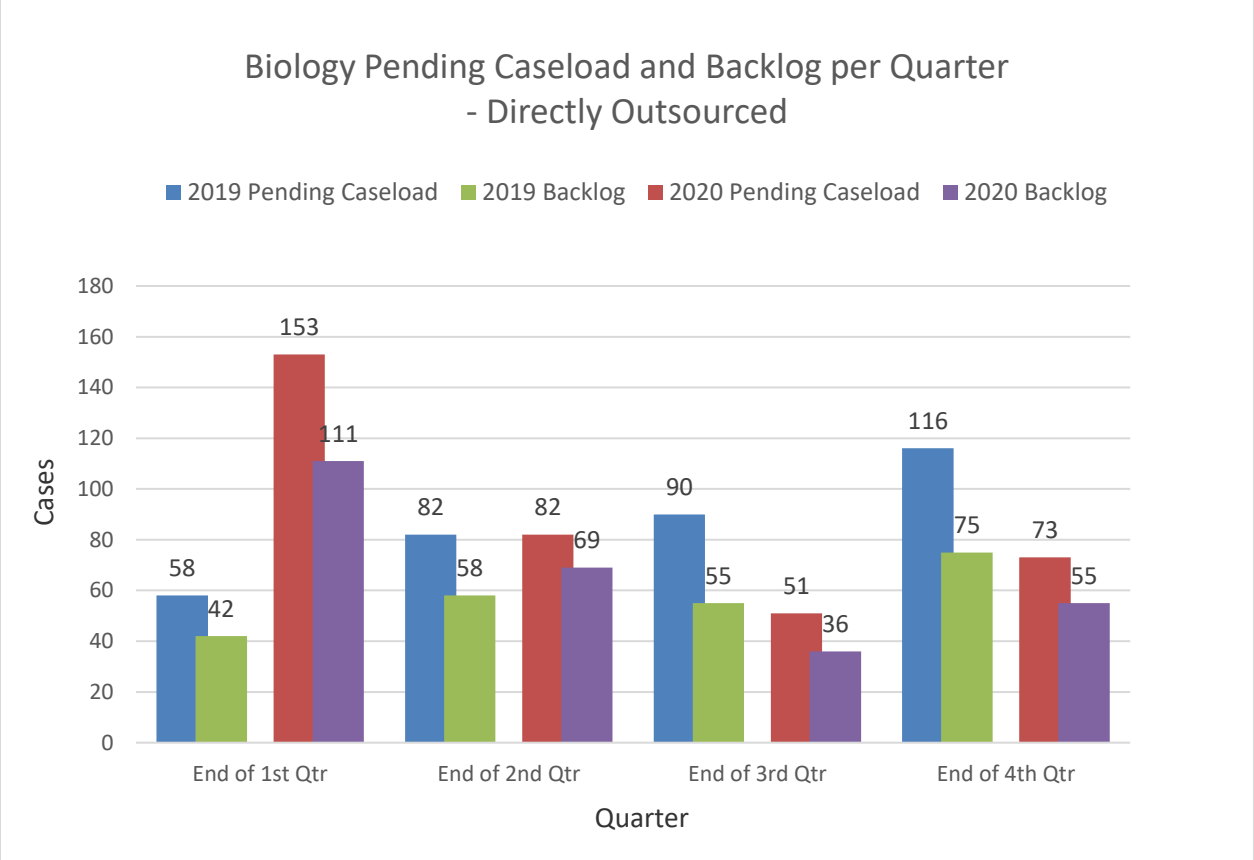
Allied Agency Cases Received by Biology per County			
County	**Case Type**		
	Submitted	Directly Outsourced	Combined
Charles	78	128	206
St. Mary's	38	58	96
Frederick	45	26	71
Wicomico	62	1	63
Worcester	31	31	62
Harford	41	2	43
Cecil	38	2	40
Washington	22	12	34
Anne Arundel	20	7	27
Dorchester	23	2	25
Carroll	19	2	21
Talbot	20	0	20
Prince George's	13	5	18
Calvert	10	1	11
Statewide/Not Determined*	10	0	10
Caroline	7	0	7
Somerset	5	1	6
Queen Anne's	4	1	5
Garrett	3	0	3
Kent	2	0	2
Allegany	1	0	1
Baltimore	1	0	1
Howard	1	0	1
TOTAL	**494**	**279**	**773**

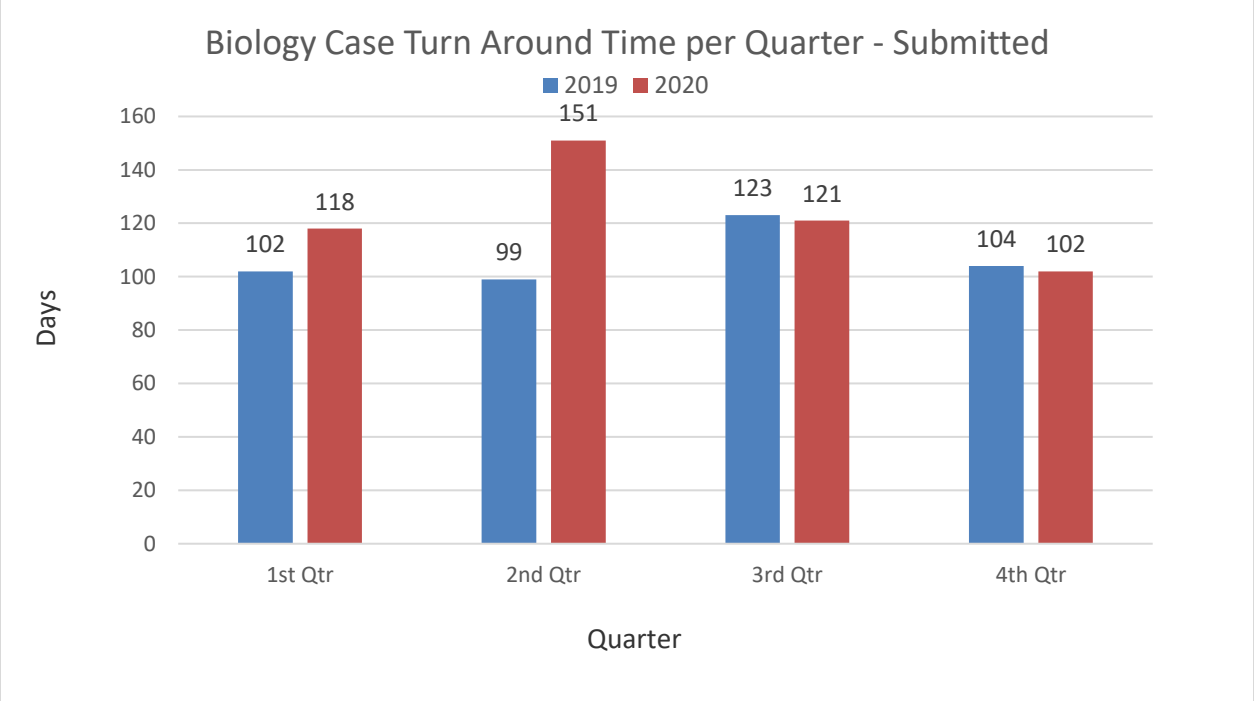

Submitted Biology Cases Received per Crime Type
17%
15%
9%
8%
7%
7%
5%
5%
4%
4%
4%
3%
2%
2%
2%
2%
Rape
Burglary
Handgun Possession/Violation
Armed Robbery/Robbery
Homicide
Sexual Assault
Assault
Sex Offense
Motor Vehicle Theft
Others
Att. Homicide
Controlled Dangerous Substances
Theft
Home Invasion
Sexual Child Abuse
Hit and Run
Arson

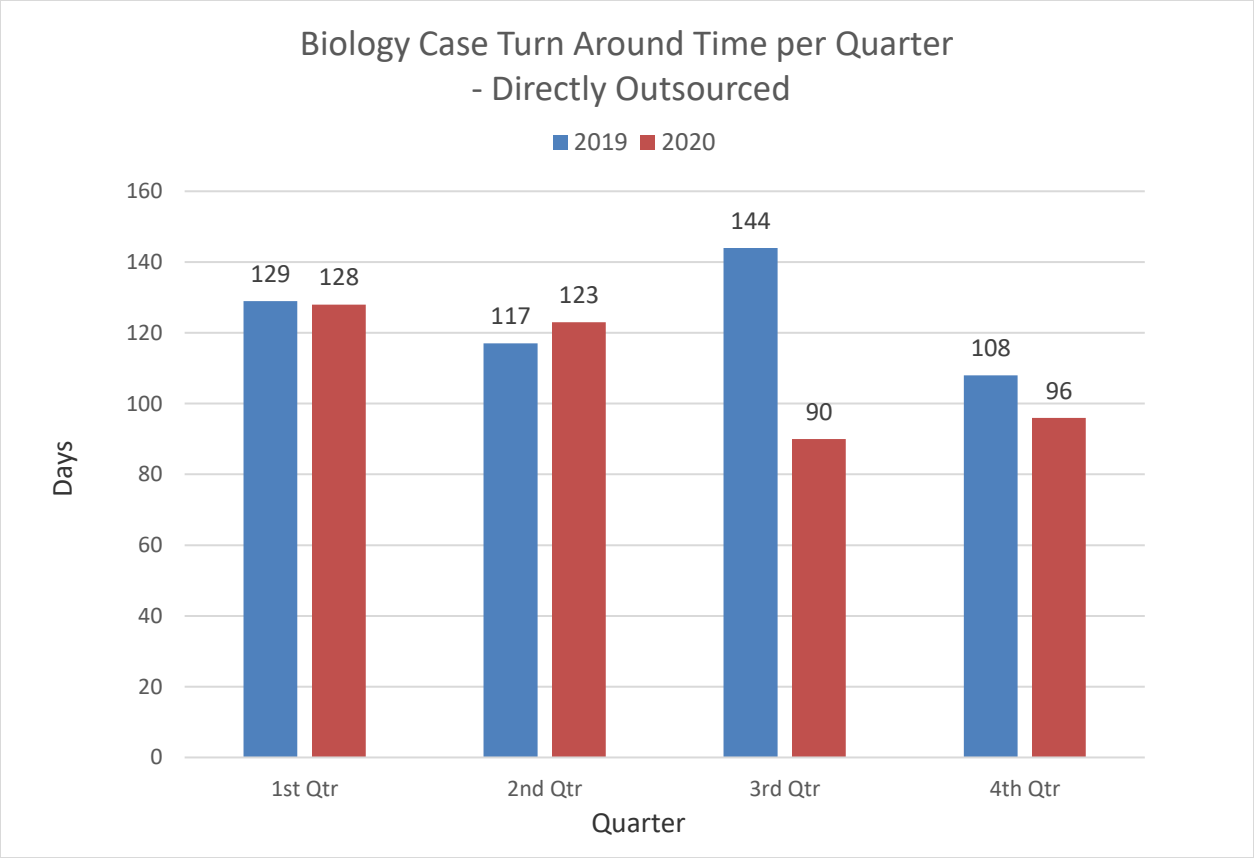

Directly Outsourced Biology Cases Received per Crime Type
41%
12%
10%
10%
6%
6%
5%
4%
2%
2%
1%
1%
Burglary
Theft
Armed Robbery/Robbery
Motor Vehicle Theft
Handgun Possession/Violation
Others
Breaking and Entering
MDOP
Homicide
Rape
Assault
Controlled Dangerous Substances


Biology Cases Completed Per Month
2019 = 626 Submitted
2019 = 266 Direct Outsourcing
2020 = 657 Submitted
2020 = 333 Direct Outsourcing
Cases
Month
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec


Biology Pending Caseload and Backlog per Quarter - Submitted
2019 Pending Caseload
2019 Backlog
2020 Pending Caseload
2020 Backlog
Cases
Quarter
End of 1st Qtr
End of 2nd Qtr
End of 3rd Qtr
End of 4th Qtr


Biology Pending Caseload and Backlog per Quarter
- Directly Outsourced
2019 Pending Caseload
2019 Backlog
2020 Pending Caseload
2020 Backlog
Cases
180
160
140
120
100
80
60
40
20
0
58
42
153
111
82
58
82
69
90
55
51
36
116
75
73
55
End of 1st Qtr
End of 2nd Qtr
End of 3rd Qtr
End of 4th Qtr
Quarter

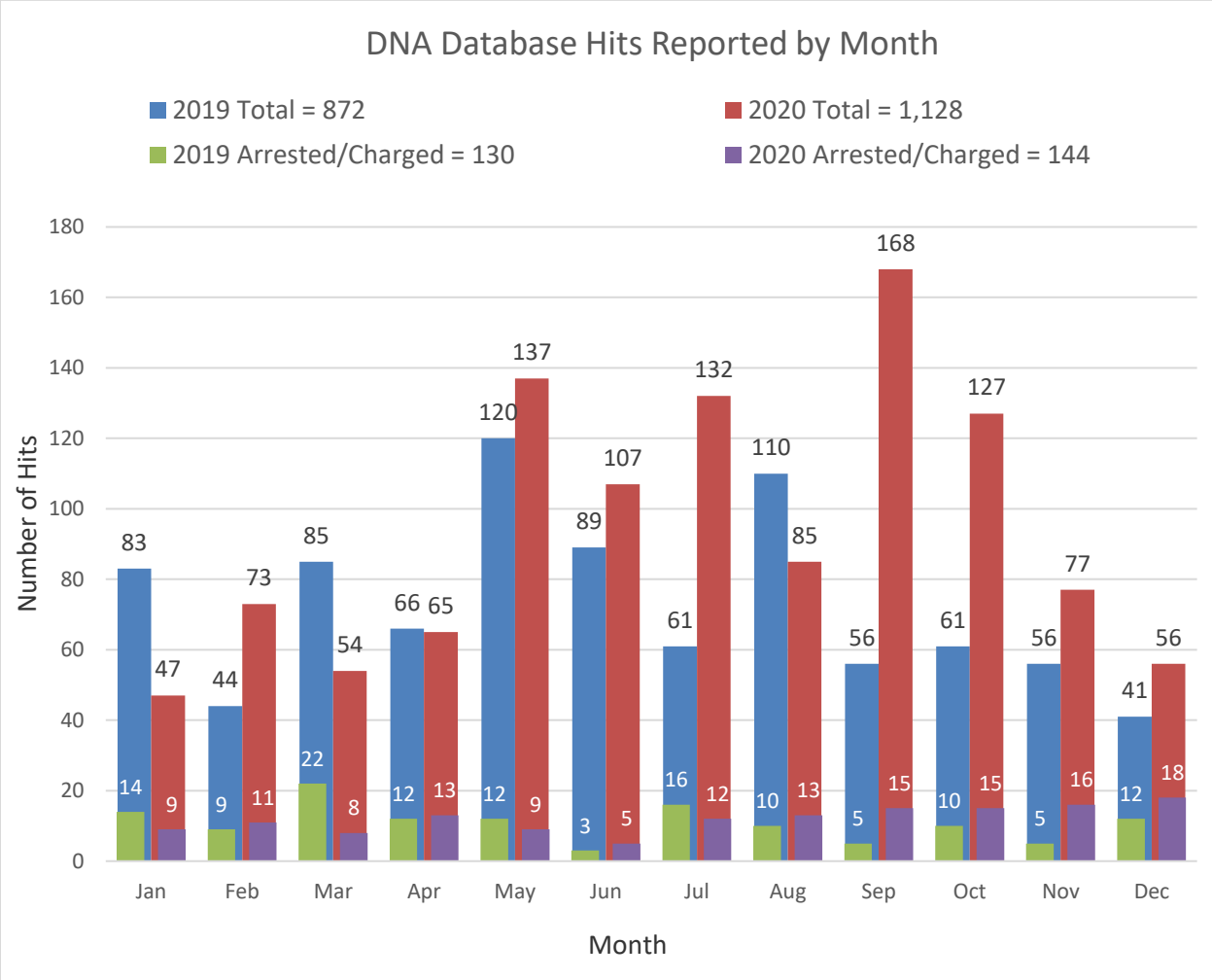

Biology Case Turn Around Time per Quarter - Submitted
2019
2020
Days
160
140
120
100
80
60
40
20
0
102
118
99
151
123
121
104
102
1st Qtr
2nd Qtr
3rd Qtr
4th Qtr
Quarter


Biology Case Turn Around Time per Quarter
- Directly Outsourced
2019
2020
Days
160
140
120
100
80
60
40
20
0
129
128
117
123
144
90
108
96
1st Qtr
2nd Qtr
3rd Qtr
4th Qtr
Quarter

BIOLOGY DATABASE UNIT

The Biology Database Unit is responsible for collecting DNA Database samples from individuals required under Maryland law to provide a sample. The law was expanded in 2009 to include individuals arrested and charged with crimes of violence, burglary, and attempts of these crimes. While the majority of samples are collected by Allied Agencies, the Biology Database Unit is responsible for ensuring that all samples that were collected are received. The Biology Database Unit is also responsible for processing the DNA database samples received (as per Maryland law), entering DNA profiles from DNA database samples into the database, searching the database for hits, and reporting database hits. The Biology Database Unit also oversees the entry of DNA profiles from casework evidence into the database.

In July 2020 the Maryland DNA Database released its 8000th hit. This hit was connected to an open 2019 Baltimore City rape case still under investigation.



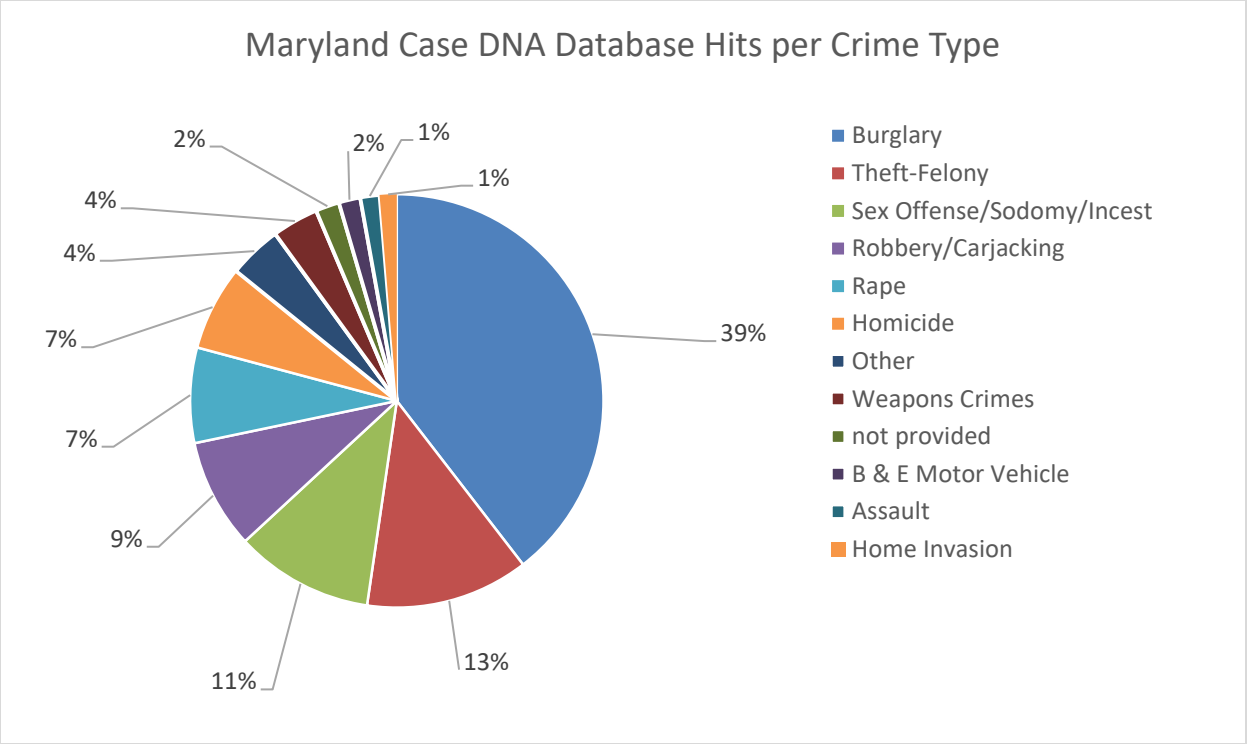
Note: Arrested/Charged DNA Database Hits do not include Convicted Offender DNA Database Hits

Maryland Case DNA Database Hits	
	Hits
Hits to Offenders/Arrestees (MD or National)	395
Hits to Cases (MD or National)	733
Total	**1,128**

Note: Maryland case hits include a Maryland case hitting to a Maryland offender/arrestee, a Maryland case hitting a National offender/arrestee, a Maryland case hitting a Maryland case, and a Maryland case hitting a National case. A Maryland case hitting a Maryland case is considered as two Maryland case hits (this is not consistent with how hits are reported for the National DNA Index System (NDIS)). A Maryland case hitting to a Maryland offender/arrestee is counted as both a Maryland offender/arrestee hit and a Maryland case hit.

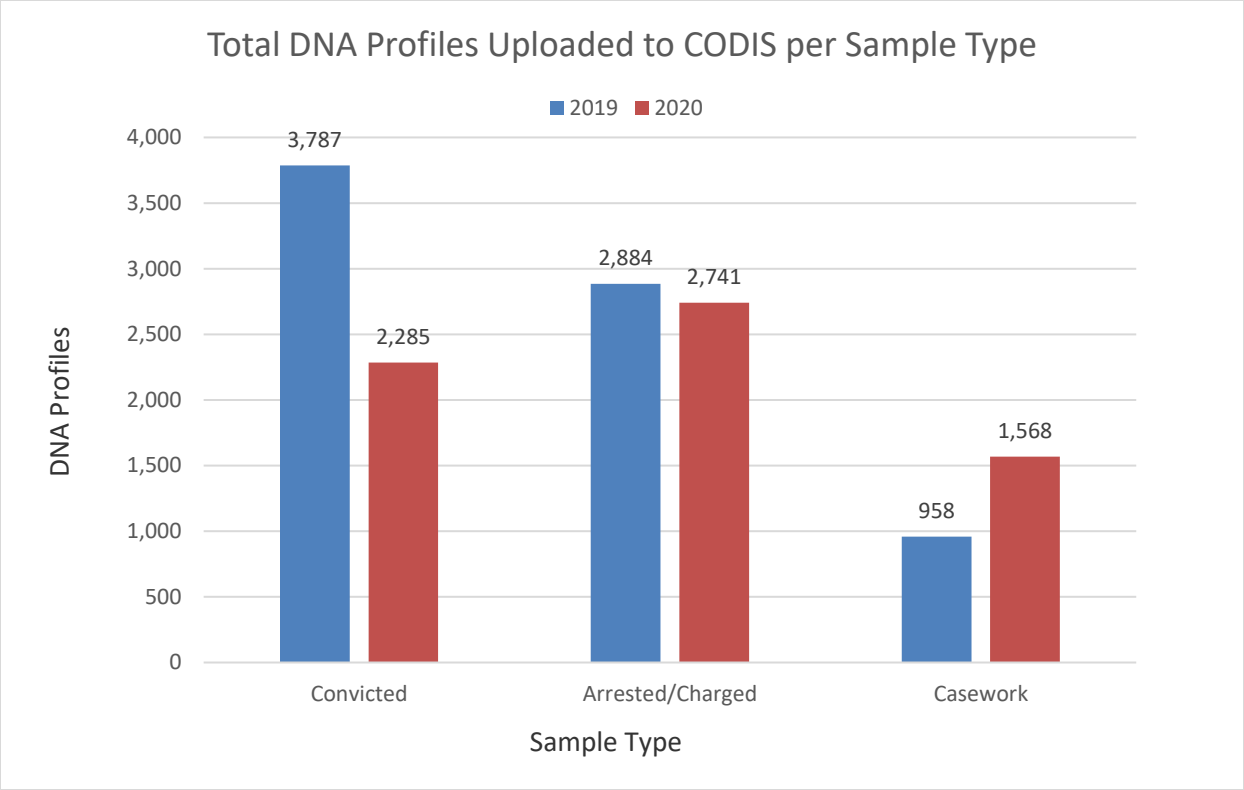
Maryland Case DNA Database Hits by County	
County	**Hits**
Baltimore City	354
Anne Arundel	207
Prince George's	143
Montgomery	108
Baltimore	58
Charles	53
St. Mary's	36
Frederick	29
Wicomico	22
Howard	21
Harford	19
Cecil	15
Worchester	13
Talbot	12
Washington	10
Dorchester	10
Allegany	5
Garrett	2
Queen Anne's	2
Somerset	2
Calvert	2
Caroline	2
Carroll	1
Carroll	1
Kent	1
TOTAL	**1,128**

Maryland DNA Database Case Hits by Crime Year	
Crime Year	**Hits**
1977	1
1983	1
1989	1
1991	1
1992	3
1993	3
1994	6
1995	1
1997	2
1999	4
2000	1
2001	2
2002	5
2003	5
2004	3
2005	19
2006	10
2007	8
2008	6
2009	21
2010	20
2011	17
2012	20
2013	29
2014	24
2015	25
2016	52
2017	210
2018	120
2019	274
2020	135
Unknown	99
Total	**1,128**



Maryland Offender/Arrestee DNA Database Hits per Crime Jurisdiction*	
Jurisdiction	**Number of Hits**
Maryland	321
District of Columbia (Metro PD)	46
FBI	10
Virginia	8
New York	4
Florida	3
Pennsylvania	2
North Carolina	2
California	2
Delaware	1
West Virginia	1
ATF	1
Minnesota	1
Texas	2
Colorado	1
Georgia	1
Kansas	1
New Jersey	1
Ohio	1
Total	**409**

*Includes both Convicted Offender and Arrestee/Charged DNA Database Hits



BIOLOGY TECHNICAL UNIT

The Technical Unit of the Biology Section is responsible for the evaluation of new technologies to determine if they are appropriate to implement into the Section, validation of new technologies, training of personnel on new and current technologies, and quality assurance / quality control aspects of the Biology Section.

In 2020, the Technical Unit:

- validated and implemented a "stop-at-quant" threshold to allow for evidence samples that would not produce useful results to be terminated earlier in the analysis process, thereby reducing workloads and reagent consumption,
- validated and implemented a "virtual standard curve" process as part of DNA quantitation, thereby reducing workloads and reagent consumption,
- validated and implemented an update to the Hamilton Starlet for a change in hardware and software that will minimize the number of sample jams, thereby reducing time needed to address instrument malfunctions,
- initiated a validation study on "Y-screening" for the purpose of pre-screening evidence samples to allow for more targeted downstream DNA analysis, thereby reducing the number of samples tested, reducing case turnaround times, and reducing reagent consumption, and
- conducted an internal FBI Quality Assurance Standards Audit of the Biology Section.

NOTEWORTHY CASES

In 2020, a victim was found deceased in her home, not wearing any clothing with a ligature (phone charger cord) around her neck. The OCME office ruled death by strangulation. The victim's vehicle was missing, and was intercepted a day later. The felony stop resulted in the arrest of a suspect. The suspect was known to have been doing yard work at the victim's residence 2 days prior to the discovery of the body. The vaginal swabs from the victim were positive for semen, and gave a single male profile in the sperm fraction matching the suspect. The fingernail swabs of the victim gave mixtures of a male and female; the male contributor on one of these samples matched the suspect. The other mixture was consistent with the combined profiles of the suspect and the victim. Serological testing indicated blood on the ligature (phone cord) but autosomal testing found mostly victim DNA on it. Y-STR testing gave single partial profiles from both ends of the ligature. The suspect could not be excluded from the ligature Y profiles.

TRACE EVIDENCE SECTION

The Trace Evidence Section (TES) consists of two units, the Trace Evidence Unit and the Questioned Documents Unit. The Trace Evidence Unit is sub-divided into three sub-units, Trace Pattern, Trace Chemistry, and Trace Biology. The Trace Evidence Section consists of one Forensic Scientist Supervisor, one Forensic Scientist Advanced, and three Forensic Scientist III's.

The TES works closely with our allied agencies so that the various types of examinations included in this discipline are available to the citizens of Maryland. The TES relies on a former trace examiner from an Allied Agency to technically review casework in which MSP-FSD only has one qualified examiner. It is anticipated that a second MSP examiner will be approved in 2021 for all types of evidence performed in this section. Forensic Scientists from the TES have reviewed casework from Baltimore City when needed. Since the last remaining Trace examiner at the Baltimore City Lab retired as of November 2020, it is anticipated that our Trace Section will absorb cases from this jurisdiction. TES has obtained some equipment from the former Baltimore County Trace Lab and is in the process of validating this instrumentation for casework. Additional equipment may be obtained in the upcoming year from the former Baltimore City Trace Unit.

TRACE EVIDENCE UNIT

The Trace Pattern Sub-Unit performs analyses on evidence that either contains or produces a unique pattern that provides beneficial information to the investigators of the case. These analyses include Fracture Matches, Lamp Examinations and Plastic Bag comparisons.

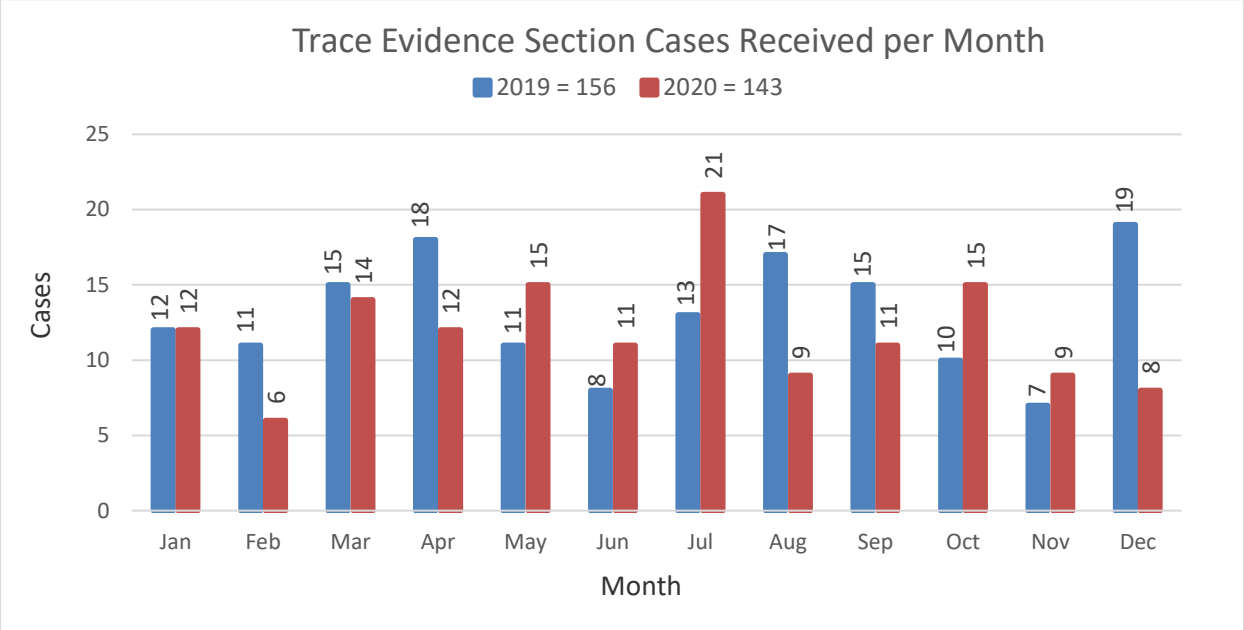
The Trace Chemistry Sub-Unit receives the bulk of the Trace Evidence Section case requests and is responsible for the analyses of any evidence that requires chemical or instrumental testing to determine physical and chemical properties. These include analyses in the areas of Fire Debris, Paint, Bank Dye Packs, Fibers, Tapes and Adhesives, Soil Anomalies, Cordage, Knots and Ligatures and miscellaneous liquids, powders and solids.

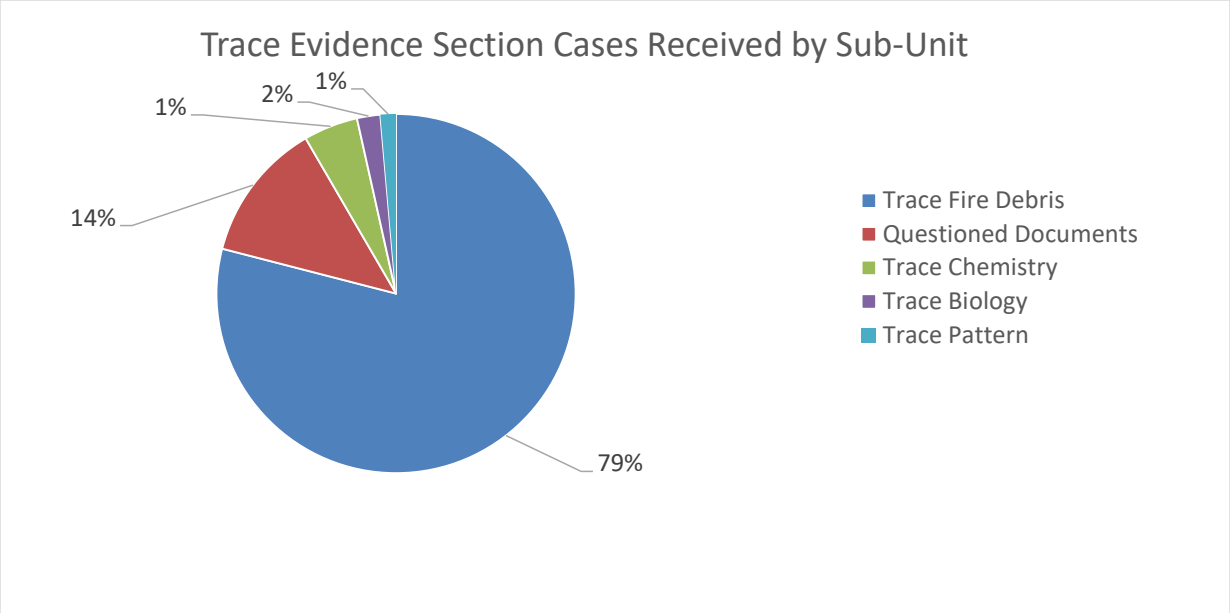
The Trace Biology Sub-Unit examines biological evidence in support of the operations of the Biology Section. The main area of analyses is the examination of hair to determine species (animal or human) and growth phase for further DNA profiling.

QUESTIONED DOCUMENTS UNIT

The Questioned Documents Unit performs analyses and comparisons of handwriting as well as hand-printed and machine-printed materials. This unit also performs examinations of obliterated and indented writing.

The MSP-FSD has two Questioned Documents examiners since a second examiner recently started casework in Questioned Document analysis. This second examiner will allow us to no longer rely on outside MSP-FSD technical reviewers.

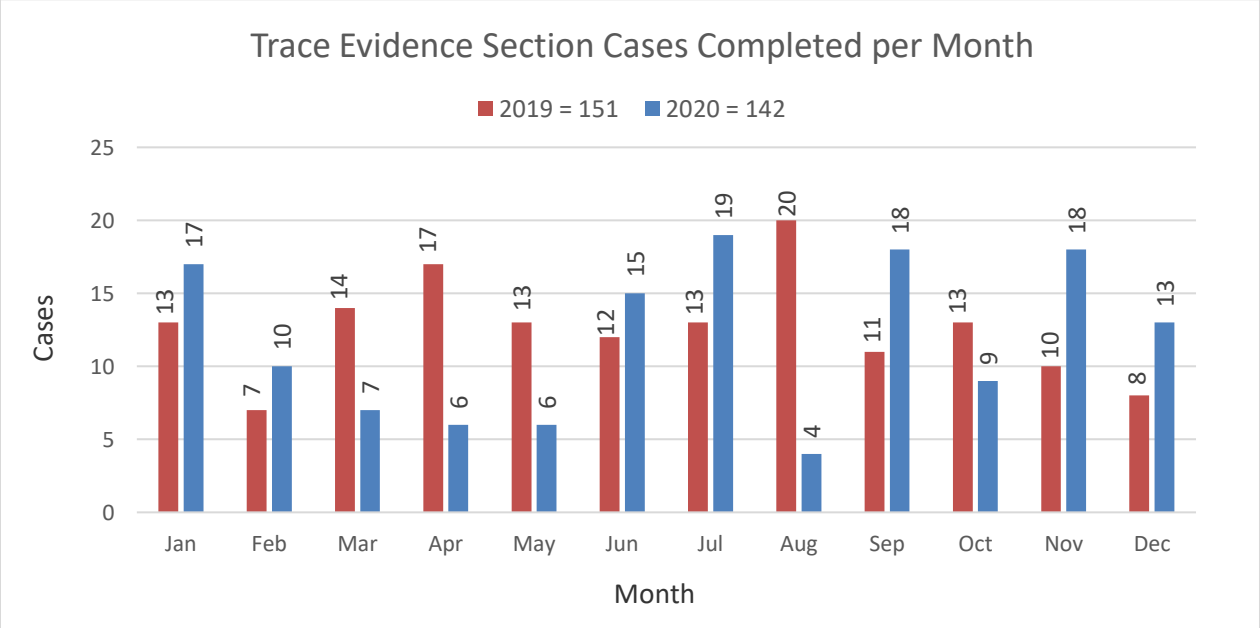


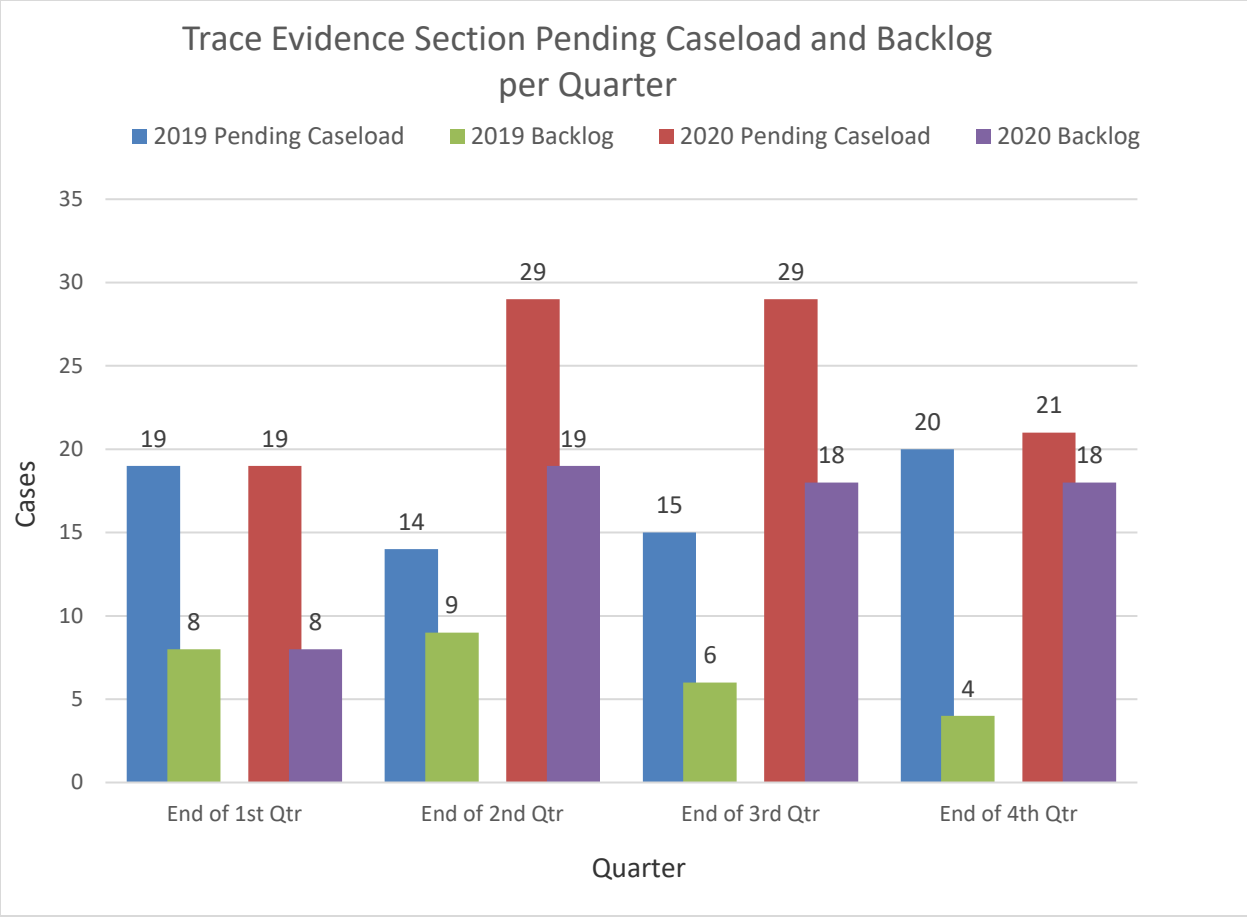


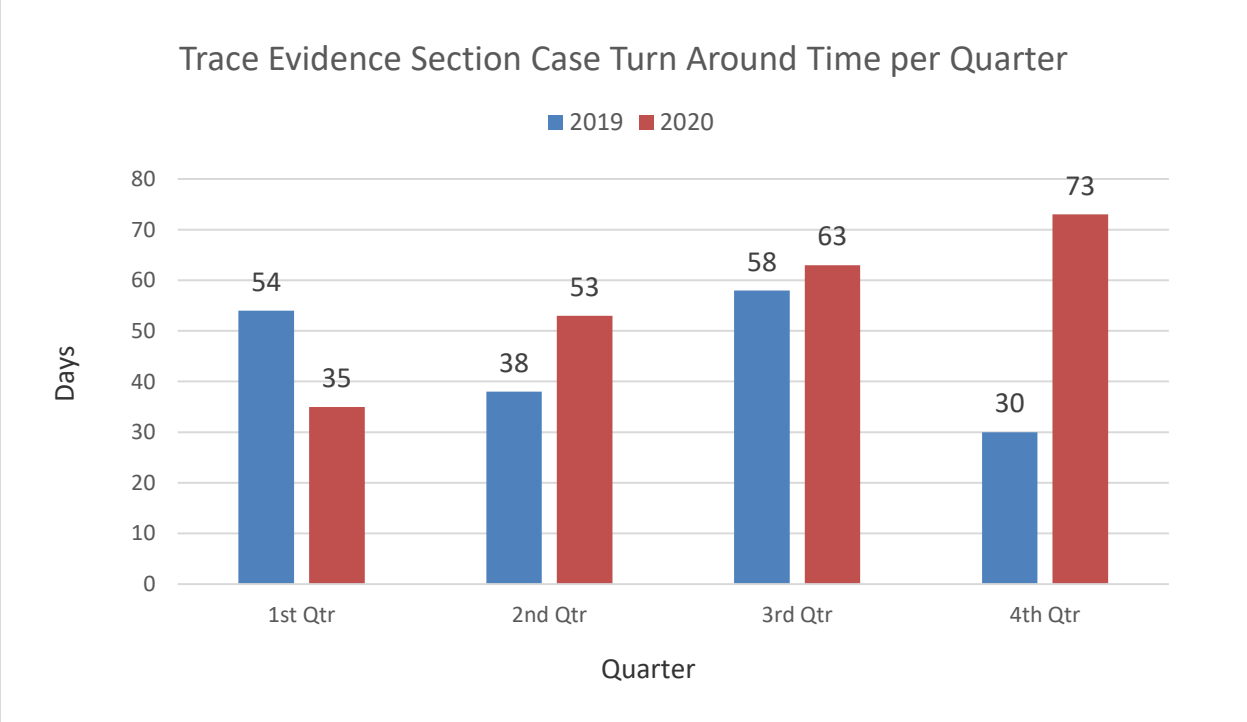
Trace Evidence Section Cases Received per MSP Installation		
Installation	**Counties Served**	**Submissions**
MSP-CID/CED	Statewide	4
MSP-Crash Team	Statewide	2
MSP-Easton	Talbot, Caroline, Dorchester	2
MSP-CVED	Statewide	1
MSP-Homicide	Statewide	1
MSP-North East	Cecil	1
	TOTAL	**11**

OSFM Cases Received by the Trace Evidence Section per OSFM Region		
Region	**Counties Served**	**Submissions**
OSFM - North East	Harford, Cecil	21
OSFM - Lower Shore	Dorchester, Somerset, Wicomico, Worcester	11
OSFM - Southern	Calvert, Charles, St. Mary's	7
OSFM - Western	Allegany, Garrett, Washington	3
OSFM - Upper Shore	Caroline, Kent, Queen Anne's, Talbot	1
	TOTAL	**43**

Allied Agency Cases Received by TES per County	
County	**Submissions**
Montgomery	23
Anne Arundel	23
Baltimore	11
Frederick	5
Howard	5
Washington	5
Charles	4
Worcester	3
Dorchester	2
Wicomico	2
Carroll	1
Cecil	1
Prince George's	1
Harford	1
Baltimore City	1
Caroline	1
TOTAL	**89**




Trace Evidence Section Pending Caseload and Backlog per Quarter
2019 Pending Caseload
2019 Backlog
2020 Pending Caseload
2020 Backlog
Cases
35
30
25
20
15
10
5
0
19
8
19
8
14
9
29
19
15
6
29
18
20
4
21
18
End of 1st Qtr
End of 2nd Qtr
End of 3rd Qtr
End of 4th Qtr
Quarter


Trace Evidence Section Case Turn Around Time per Quarter
2019
2020
Days
80
70
60
50
40
30
20
10
0
54
35
38
53
58
63
30
73
1st Qtr
2nd Qtr
3rd Qtr
4th Qtr
Quarter

NOTEWORTHY CASES

In October 2020, the Trace Section Supervisor and a Forensic Scientist Advanced were called to testify in two separate Daubert hearings for the analysis of duct tape in Charles County Circuit Court. The hearings were the first Daubert hearings, since the Maryland Court of Appeals ruling of Rochkind v. Stevenson (August 28, 2020), abandoned the Frye-Reed admissibility and adopted the Federal Rules of Evidence's Daubert factors. The Trace case included both a Chemical analysis and Physical Match of Duct Tape. Both the Section Supervisor and the Forensic Scientist Advanced were called to testify in separate hearings on different dates and testified for a combined 6 hours. The testimony required both examiners to be familiar with updated SOP's, training manuals, recent data and methodology in the field, as well as accepted standards and guidelines used in the discipline. The Section Supervisor and the Forensic Scientist Advanced were asked questions from the Prosecution, Defense and the Judge. Based on the expert testimonies provided, the motion to exclude the Physical Match of duct tape analysis was denied. The motion for exclusion of chemical analysis has not yet been ruled on.

EMPLOYEE RECOGNITION

Special Appointments

Catherine Savage, Forensic Scientist Supervisor in CDS-Pikesville, continued to serve as the President-Elect for the Mid-Atlantic Association of Forensic Scientists (MAAFS) for 2020 and was named the MAAFS American Board of Criminalistics Chair in 2020.

Theresa DeAngelo, Quality Assurance/Safety Manager, was elected the Chair Elect for the Ethics Subdivision of the American Chemical Society's Division of Professional Relations in 2020.

Mitchell Dinterman, Crime Scene Section Manager, was invited to be on Loyola University's Forensic Studies Advisory Board in December 2020.

Jason Befus, Forensic Scientist Supervisor in the Biology Section, continued to serve as Executive Secretary of the OSAC Biological Methods Subcommittee.

Bruce Heidebrecht, Forensic Scientist Supervisor in the Biology Section, continued to serve as the Vice-Chair of the Scientific Working Group on DNA Analysis Methods, Autosomal STR Interpretation Committee.

Certification Achievements

Through grant funding, MSP-FSD provided the resources for several MSP-FSD staff members to achieve certification by nationally/internationally recognized certification boards for forensic science specialties. In 2020, three additional MSP-FSD staff members became certified. The following staff became certified by the American Board of Criminalistics: Forensic Scientist Supervisor Charles R. Miller IV and Forensic Scientist III Brooke Welsh. Crime Scene Technician II Maggie Iman became certified by the International Association for Identification in Bloodstain Pattern Analysis.

Promotions

Several MSP-FSD staff members were promoted in 2020. In April, Elizabeth Schneider was promoted to Forensic Scientist Advanced and became the new Technical Leader for the three Controlled Dangerous Substances Units. The following staff were promoted from Forensic Scientist II to Forensic Scientist III: Adonia Doane-Lianos, Laurel Hardy, Stephanie Laufert, Jennifer Lewis, and Darby Stemple. Toxicologist Ying Ren was promoted from Forensic Scientist I to Forensic Scientist II and Crime Scene Technicians (CST) Morgan Stanley and Samantha George were promoted from CST I to CST II.

Commander's Award for Outstanding Performance

Cindy Hoffman, Central Receiving Unit Supervisor
And
Arnetta Haith, Forensic Inventory Control Officer

Director Katz awarded the 2020 Commander's Award to Ms. Cindy Hoffman, MSP-FSD Central Receiving Unit Supervisor, and Ms. Arnetta Haith, MSP-FSD Forensic Inventory Control Officer. Both Ms. Hoffmann and Ms. Haith demonstrated outstanding service within 2020, which includes their hard work and dedication in keeping the Central Receiving Unit running despite having half of the positions in the unit vacant for essentially the entire year.

Cindy Hoffman

Arnetta Haith

Additional FSD Staff Awards in 2020

ASCLD 2020 Research Innovation Award

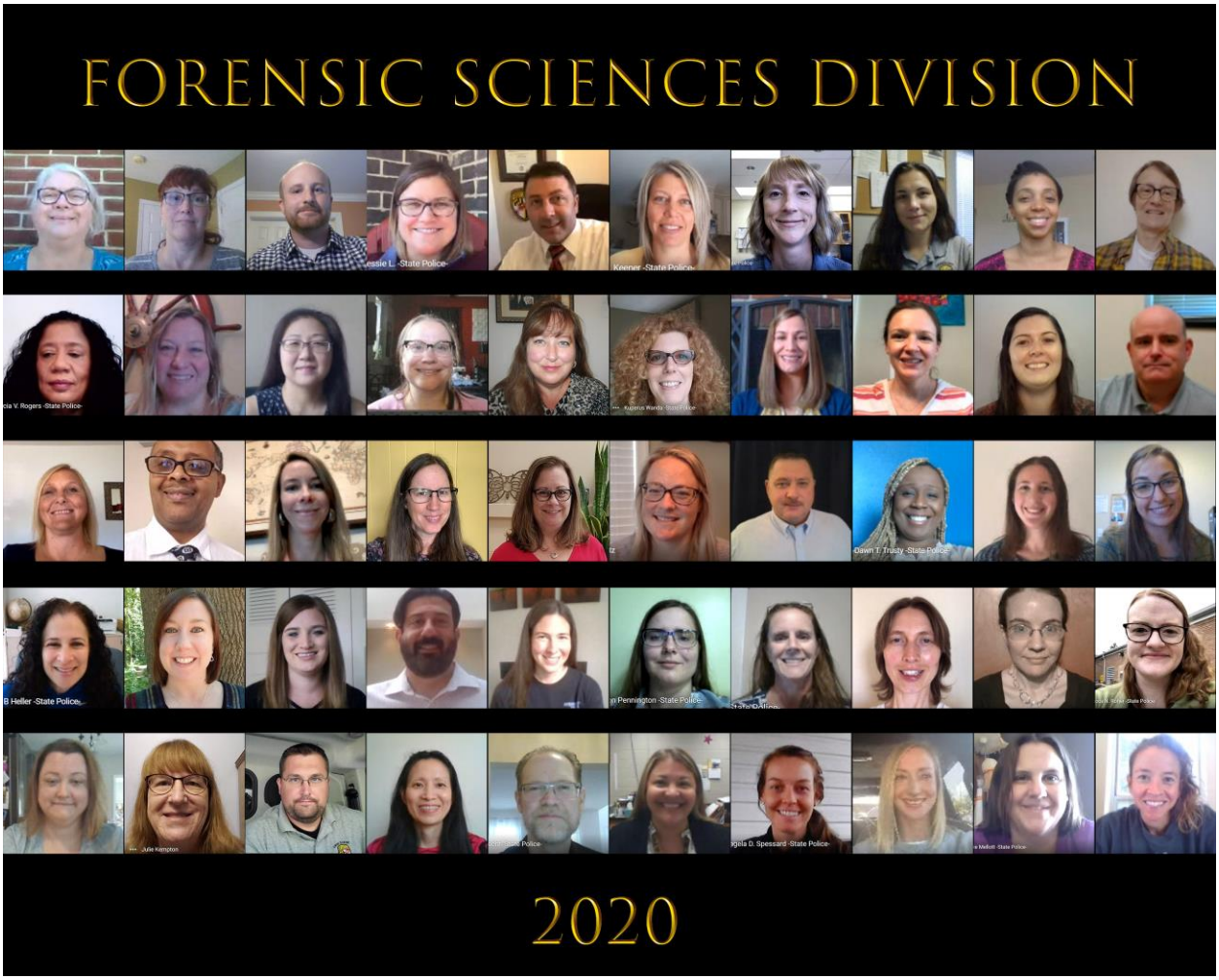
In April, the American Society of Crime Laboratory Directors, Forensic Research Award Committee awarded the 2020 Research Innovation Award to Amber Burns, Chemistry Section Manager, for the work she has done to address the opioid epidemic in CDS laboratories. Rather than wait for someone else to address the many safety, technical, and workflow issues that have arisen from the influx of opioids in the lab, Ms. Burns has been a leader in finding solutions.

Deputy Director Wanda Kuperus (right) presenting the Research Innovation Award to Amber Burns (left)

NIST Collaborative and Teamwork Accolade

In July 2020, Director Katz and Chemistry Section Manager Burns along with two scientists from the National Institute of Standards and Technology (NIST) were selected by NIST to receive a 2020 Collaboration and Teamwork Accolade. The award was given due to the team leveraging expertise from NIST and FSD in a strategic partnership that has advanced measurement capabilities and developed the necessary controlled substance metrology for understanding the impact of drug background in forensic laboratories.

Amber Burns (left) and Daniel Katz (right)


FORENSIC SCIENCES DIVISION
2020

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