



COMMONWEALTH of VIRGINIA

FORENSIC SCIENCE BOARD

Francine C. Ecker, Chair

October 26, 2017

The Honorable S. Chris Jones
Chair, House Committee on Appropriations
P.O. Box 5059
Suffolk, Virginia 23435

The Honorable Thomas Norment, Jr.
Co-Chair, Senate Committee on Finance
P.O. Box 6205
Williamsburg, Virginia 23188

The Honorable Emmett Hanger, Jr.
Co-Chair, Senate Committee on Finance
P.O. Box 2
Mount Solon, Virginia 22843

The Honorable Robert Bell
Chair, Virginia State Crime Commission
2309 Finch Court
Charlottesville, Virginia 22911

Re: 2017 Annual Forensic Science Board Report

Dear Delegate Jones, Senator Norment, Senator Hanger and Delegate Bell:

Pursuant to the provisions of Subsection B of § 9.1-1110 of the *Code of Virginia*, the Forensic Science Board shall, by November 1 of each year, review and make recommendations concerning the following matters:

1. New major programs and plans for activities of the Department of Forensic Science and elimination of programs no longer needed
2. Policy and priorities in response to agency needs

3. General fiscal year operational budget and any major changes in appropriated funds
4. Actions to foster and promote coordination and cooperation between the Department of Forensic Science and the user programs that are served
5. Rules and regulations necessary to carry out the purposes and intent of this chapter
6. Any recommendations submitted to the Board or the Director by the Scientific Advisory Committee

The 2017 Report of the Forensic Science Board concerning these matters is attached.

Please do not hesitate to contact me through the Department of Forensic Science Director's Office if you have any questions or would like additional information.

Sincerely,



Francine C. Ecker
Chair, Forensic Science Board

Enclosure

cc: The Honorable Brian Moran, Secretary of Public Safety and Homeland Security
Victoria Cochran, Deputy Secretary of Public Safety and Homeland Security
Members, Forensic Science Board
Linda Jackson, Director, Department of Forensic Science
Division of Legislative Automated Systems

FORENSIC SCIENCE BOARD 2017 ANNUAL REPORT

Virginia Code § 9.1-1110(B) requires the Forensic Science Board (FSB) to review and make recommendations by November 1 of each year concerning the following:

1. New major programs and plans for activities of the Department of Forensic Science (DFS) and elimination of programs no longer needed;
2. Policy and priorities in response to agency needs;
3. General fiscal year operational budget and any major changes in appropriated funds;
4. Actions to foster and promote coordination and cooperation between the Department of Forensic Science and the user programs which are served;
5. Rules and regulations necessary to carry out the purposes and intent of this chapter; and
6. Any recommendations submitted to the Board or the Director by the Scientific Advisory Committee.

The Forensic Science Board met at the Department of Forensic Science's Central Laboratory in Richmond on January 4, 2017, May 24, 2017, August 9, 2017, and October 12, 2017. A list of members of the Board is included as Attachment A. Pursuant to Code § 9.1-1110(B), the Board makes the following report.

1. NEW MAJOR PROGRAMS AND PLANS FOR THE ACTIVITIES OF DFS AND THE ELIMINATION OF PROGRAMS NO LONGER NEEDED

Post-Conviction DNA Testing Program and Notification Project

In 2001, swabs and cuttings from evidence that had been affixed to a worksheet by a DFS serologist were discovered in an old case file. Post-conviction DNA testing on the evidence exonerated an individual who had been convicted of a rape in the case. After two additional individuals were exonerated of rapes based on post-conviction DNA testing conducted on evidence found in their case files, a random review of 10% of the Department's serology case files was undertaken in 2004 to identify cases where post-conviction DNA testing could provide probative evidence of the defendant's guilt or innocence. Post-conviction DNA testing conducted on the evidence from the thirty-one case files identified by the 10% random review resulted in three additional defendants being exonerated of rapes. In December 2005, based on the results of the random review, a full-scale review was initiated to identify retained evidence in DFS serology case files and to conduct DNA testing when appropriate. Information regarding this Post-Conviction DNA Testing Program and Notification Project has been included in the Forensic Science Board Annual Reports since the first report in 2006. This report provides updates on various aspects of the project, but it does not provide a detailed history; such a history can be found in the Forensic Science Board 2014 Annual Report, which is available online at:

[http://leg2.state.va.us/dls/h&sdocs.nsf/By+Year/RD3562014/\\$file/RD356.PDF](http://leg2.state.va.us/dls/h&sdocs.nsf/By+Year/RD3562014/$file/RD356.PDF)

“Need Known” Cases

“Need known” cases are those where a DNA profile was obtained from the evidence retained in the case file; however, a reference or “known” sample (typically, from the victim or the suspect) is needed to compare to the DNA profile obtained from the evidence. In June 2016, DFS completed additional DNA testing in a “need known” case where a profile had been obtained from the evidence, but a “known” sample had been needed from the individual convicted of the offense. The individual’s “known” sample was submitted for analysis, and DNA testing excluded him as a contributor of the DNA profiles obtained from the evidence in a rape case. In August 2016, the individual filed a petition for a writ of actual innocence, which is pending before the Supreme Court of Virginia.

DFS was able to identify other, similar “need known” cases where the defendants had confirmed notification. With the assistance of the Attorney General’s Office, the Virginia State Crime Commission (VSCC) staff identified updated address information in thirteen cases, and, in the fall of 2016, DFS sent additional letters to the defendants in those cases regarding the need for a “known” sample. In one of the thirteen cases, DFS was contacted about an individual living out of state who had received a “need known” letter and was interested in submitting his known sample for comparison. A “known” sample from the individual was submitted for analysis in July 2017, and DNA testing excluded him as a contributor of the DNA profiles obtained from the evidence in a rape case. In September 2017, the individual filed a petition for a writ of actual innocence, which is pending before the Supreme Court of Virginia.

In addition to the two cases referenced above, there were 144 cases originally classified as “need knowns” by DFS. Thirty-nine have been successfully notified, and 40 were determined to be deceased. There are 15 cases pending notification. With assistance from the Richmond Public Defender’s Office and research by VSCC staff, additional leads were obtained for these individuals, and certified letters were sent to all 15 in September 2017. There are 52 “need known” cases where the defendant has not yet been notified. For the vast majority of these cases, there have been at least three separate attempts made to contact these individuals. In a handful of cases, there has been an indication that the defendant was deceased, but this has not yet been confirmed with official records. In three of these cases, there has been no success in identifying the correct person to notify.

Next of Kin Notifications

In late 2014, the VSCC directed its staff to notify the “next of kin” for any deceased “eliminated” defendant from the Post-Conviction Testing Program and Notification Project. An “eliminated” defendant is an individual whose DNA profile was eliminated as being a contributor to the known DNA profile obtained from the evidence in a case. In 2015, VSCC determined there were 13 cases where next of kin notifications were required, and next of kin letters were sent to the relatives of 11 deceased, eliminated individuals. As a result of these efforts, VSCC staff was able to successfully notify seven of the 11 defendants’ next of kin. In June 2017, Crime Commission staff successfully located and notified an additional

deceased, eliminated defendant's next-of-kin. Notification efforts will continue until all leads are exhausted for the remaining cases requiring next of kin notification.

VSCC Review of Case Files

VSCC staff has continued to manually review the case files from the Post-Conviction DNA Testing Program and Notification Project to confirm the testing and notification status of each individual eligible for notification. Two VSCC staff members conducted a review of each case file to cross-validate the information they have received and collected. This cross-validation has been completed for the 82 "eliminated" and the 146 "need known" cases by both VSCC staff members, and the review of the 483 "inconclusive" cases is underway. All of the information from the case file review is being entered into a spreadsheet database containing the status of each individual requiring notification, as well as all notification efforts made. It is anticipated that the case file review of the "inconclusive" cases will be completed in calendar year 2017.

VSCC staff requested assistance from the Indigent Defense Commission for the remaining un-notified "eliminated" and "need known" (vast majority being "need known") cases one last time to either locate the individual or determine if the individual is deceased. The Richmond Public Defender's Office agreed to assist, and VSCC staff delivered 90 cases for them to research in July 2017. They completed their research in early August 2017. As a result of this research, approximately 20 additional individuals were determined to be deceased, and multiple leads were developed for other individuals in terms of current addresses. VSCC staff has updated the spreadsheet database with this information, and DFS has sent letters to the individuals where addresses could be identified. VSCC staff has also begun determining whether or not "due diligence" has been met for instances where multiple notifications have been attempted without success. It is anticipated that VSCC and DFS staff will meet to discuss the remaining cases jointly to determine if "due diligence" has been met in terms of notification efforts. Crime Commission staff will continue to cross-validate records and determine "due diligence" for each case requiring notification, with the majority of attention now being placed on the "inconclusive" cases.

Naloxone Legislation (2017 General Assembly) and Other Opioid Safety Measures

During the 2017 General Assembly Session, two companion bills¹ passed that add employees of the Department of Forensic Science, the Office of the Chief Medical Examiner and the Division of Consolidated Laboratory Services to the groups of individuals who may possess and administer naloxone or another opioid antagonist, provided they have completed a training program. These bills, introduced on behalf of DFS, passed with emergency enactment clauses, and went into effect in February 2017.

Staff from each DFS regional laboratory attended a Revive! Train the Trainer course, conducted by Dr. Hughes Melton, Chief Deputy Commissioner at the Virginia Department of

¹ Senate Bill 1031 was carried by Senator David W. Marsden, and House Bill 1642 was carried by Delegate Patrick A. Hope.

Health. This curriculum, which was developed by the Department of Behavioral Health and Developmental Services (DBHDS), provides training on opioid overdose, the administration of naloxone and the ability to train others on both topics. DFS trained staff subsequently provided the DBHDS' REVIVE! Training to their fellow staff members. Naloxone is now available to staff at each DFS laboratory so that it can be administered in the event of a life threatening opioid overdose resulting from an accidental exposure.

In response to the opioid crisis, the Department has implemented additional safety measures. These measures include respirator training, installation of class V security cabinets, the purchase of portable air filtration devices, and updating the Department's safety manual to minimize laboratory personnel's exposure to hazardous opioids.

Laboratory Information Management System

The Department's Laboratory Information Management System (LIMS) was upgraded to the latest version, Forensic Advantage 16.1.9, in August 2017. This version allowed for the integration of toxicology methods and Uncertainty of Measurement values directly on the Certificates of Analysis. Further, through funding from the DMV Highway Safety Office Traffic Records Electronic Data System (TREDS) grant, an enhancement was made to create an electronic data file of toxicology testing results that can be integrated into the Office of the Chief Medical Examiner's (OCME's) database and eliminate the need for DFS results to be manually entered into the OCME system. DFS anticipates being able to pilot the function that will allow law enforcement to remotely submit Requests for Laboratory Examinations (RFLEs) in 2018.

Qualtrax

On January 26, 2017, DFS went "live" with the Qualtrax System. Qualtrax is a quality and compliance management software that maintains accreditation, certification and training documentation, in addition to having the ability to streamline business processes. All official Quality System Documents (QSD), including the DFS Quality Manual, administrative policies and discipline specific procedures and training manuals, are available to staff via the online Qualtrax System. DFS has used the system for its employees' Annual Code of Ethics and Confidentiality acknowledgements, as well as implementing a more efficient travel request and approval process. The next process to be integrated into Qualtrax will be Human Resources New Employee Onboarding.

Facility Expansion and Renovation

Central Laboratory

The Central Laboratory expansion and renovation project was legislatively approved to allow the DFS operations currently housed across the street in the Biotech 8 Building to be moved back into an expanded Central Laboratory facility. This would include the Breath Alcohol and Forensic Training Sections, the Director's Office, Human Resources, and the Division of Administration and Finance. The OCME, which is co-located

in the Central Laboratory and the Biotech 8 Building with DFS, would also return all of its operations to the Central Laboratory after the expansion.

The planning and design phase of the Central Laboratory expansion and renovation commenced with the selection of SFCS as the architecture and engineering firm for the project and Skanska as the Construction Management company, following the Construction Management at Risk Process. Virginia government construction projects of this type (large and complicated) are generally managed through the Construction Management at Risk process where the construction management company is contracted with early in the design process to work collaboratively with the architect to assess the “buildability” of proposed designs.

Numerous meetings have occurred with staff members from both DFS and the OCME in order to appropriately allocate space and establish critical requirements for the project. Space programming for the project has been completed, and preliminary schematic designs for the renovation and expansion were developed. This schematic design process has revealed that all potential options for the configuration of design that meet the legislative intent of the approved project cannot be accomplished within the approved budget for the project. DFS management is currently in consultation with staff at the Bureau of Capital Outlay Management, the Department of Planning and Budget, and the Department Real Estate Services to develop an alternate path forward to meet the legislative intent or to modify the scope of the project.

Western Laboratory

The expansion and renovation of the Western Laboratory in Roanoke began in March 2014, and the ceremony celebrating the official opening of the expanded and renovated Western Laboratory facility was held in September 2016. The final Certificate of Occupancy for the expanded and renovated facility was received in early 2017. The Western Laboratory building houses both DFS and the OCME Western District. The DFS Western Laboratory provides forensic services in the disciplines of controlled substances, firearms & toolmarks, forensic biology, latent prints & impressions, toxicology, and trace evidence. The original 54,000 square foot laboratory building opened in 1995; by 2005, it had reached its maximum capacity for DFS. The needs of the OCME, which performs autopsies for cases in the western region, had also expanded beyond the building’s capacity. The expansion, which added 62,000 square feet of space to the facility, houses the Controlled Substances, Toxicology, Trace Evidence, Evidence Receiving and Administrative Sections of DFS, along with waiting areas and meeting rooms for the OCME. Additionally, the expanded facility has 4,000 square feet on the ground floor designated for three large classrooms and breakout rooms for training. Approximately half of the original 54,000 square foot facility was renovated to increase the space for both the OCME and DFS. The roof on the original laboratory is nearing the end of its serviceable lifetime, and plans are being developed for its replacement.

Service Area Activities

Elimination of Questioned Documents Section

On October 14, 2016, DFS notified its user agencies that it was no longer accepting evidence for questioned documents examinations. Effective January 1, 2017, the Department's Questioned Documents Section was eliminated. DFS has shared with user agencies seeking questioned documents examinations information on federal laboratories that provide such services.

New Toxicology Methods

In June 2017, after completing the development and validation, the Toxicology Section implemented a new method to quantitate and confirm 12 different opioids, as well as cocaine, benzoylecgonine, and cocaethylene. This method combines five previously separate methods into one. The total analysis time for all 15 targets was reduced from over ten working days down to only two.

In August 2017, after completing the development and validation, the Toxicology Section implemented a new method for the quantitation and confirmation of chlordiazepoxide and a second method to quantitate and confirm buprenorphine, norbuprenorphine, and naloxone. The chlordiazepoxide method transitioned the analysis to instrumentation that is available in all four regional laboratories and also provides a more specific identification. The buprenorphine method allows the Toxicology Section to identify and quantify a compound that is of interest to many DFS user agencies and that had previously required outsourced testing.

New Trace Evidence Method

In May 2017, after completing the validation and training of examiners, the Trace Evidence Section implemented a method for the identification of lithium. The method will allow DFS to identify lithium metal and lithium residue present in submitted methamphetamine reaction products. Lithium is commonly used in the illicit manufacturing of methamphetamine.

Multiplex Kits for DNA Casework

Effective May 1, 2017, after completing the validation and training of examiners, the Forensic Biology Section moved to new Powerplex Fusion (Multiplex) chemistries and instrumentation for DNA casework. The new protocol allows DFS to report on 24 areas of DNA or loci, instead of the current 16 loci. Including 24 instead of 16 DNA loci increases the discrimination power, particularly for unidentified human remains cases. The testing process itself with the Multiplex kits is quicker, copying the DNA in two hours rather than five hours; however, interpreting the results with eight additional loci adds time to the analytical process.

Grant Funded Physical Evidence Recovery Kit (PERK) Related Activities

Streamlined Approach for Processing PERKs

The Forensic Biology Section is developing and validating a process to screen Physical Evidence Recovery Kit (PERK) evidence for male DNA. Once implemented, the male DNA screening will eliminate the time-consuming, manual process of conducting microscopic sperm searches of PERK evidence. This new screening will be streamlined and more sensitive at detecting male DNA. DFS was able to hire a part-time Forensic Laboratory Specialist to assist with this project using funds received as a sub-recipient of the Sexual Assault Kit Initiative grant awarded to the Attorney General's Office. It is anticipated that the male DNA screening of PERKs will be implemented by the Forensic Biology Section by the late fall of 2017.

PERK Tracking System

DFS also received funds as a sub-recipient under the Sexual Assault Kit Initiative grant awarded to the Attorney General's Office to contract with its Laboratory Information Management System (LIMS) vendor to develop PERK tracking software that will be integrated with the DFS LIMS. Once developed and implemented, this system will be able to track each PERK through every step in the process, including its distribution as an uncollected kit to the collection site (e.g., hospitals) through collection, transfer to law enforcement, submission to the laboratory for analysis, and return to the law enforcement agency for storage. All agencies handling kits will be granted access in order to update the status of each kit, and victims may use the system to check the status of the analysis of their kits. By tracking the status of kits entered into the system, DFS will be able to notify stakeholders when collected kits have not been appropriately submitted for analysis.

In April 2017, DFS provided detailed information to the vendor to assist in creating the wireframes for the PERK tracking system. On October 12, 2017, the vendor demonstrated a prototype for the system. DFS is working with the vendor to help produce a fully configurable system by testing the configuration interface and sending comments back to the vendor. DFS anticipates being able to begin beta testing of the system in 2018.

Testing of Inventoried PERKs

In 2015, the Department joined the Office of the Attorney General in seeking funds from the New York County District Attorney's Sexual Assault Kit Backlog Elimination Program (DANY) to support testing of the PERKs identified by the inventory completed by DFS. Virginia was awarded \$1.4 million in DANY funds to pay for the outsourced testing of 2,034 untested kits that were collected but not submitted to DFS for analysis prior to July 1, 2014. As of October 30, 2017, law enforcement agencies from five jurisdictions (i.e., Virginia Beach, Fairfax, Richmond City, Chesterfield and Chesapeake) have submitted a total of 1,017 PERKs to the private laboratory for testing. The results of the private laboratory testing were provided to DFS in 653 of those cases, and DFS staff has reviewed the results using grant funds for overtime. In 384 cases, DNA profiles obtained by the

private laboratory were upload for searching in the DNA Data Bank by DFS. There have been 57 resulting Data Bank hits.

Virginia also received funds from the Sexual Assault Kit Initiative grant awarded to the Office of the Attorney General to support the outsourced testing of approximately 1,240 untested PERKs collected but not submitted for analysis covering the period July 1, 2014 through June 30, 2016. The Request for Proposals process to select a private laboratory to conduct this testing is underway.

Historical (Archived) Case File Review Project

DFS began its Historical or Archived Case File Review Project in FY16 after receiving funding to support the review of its archived case files from 1973 through 1994 to assist in identifying cases where microscopic hair examinations were conducted. DFS implemented its Laboratory Information Management System (LIMS) in 1995 so DFS is able to electronically search cases from 1995 forward. Because this project will require DFS to conduct another manual review of archived case files housed at the Library of Virginia, DFS decided the best approach to the review would include the creation of an electronic database of these historical files. An electronic database of archived case file information was created that will include scanned copies of all Certificates of Analysis and additional case information, including the jurisdiction of the offense, the investigating agency, victim and suspect names, date evidence received, type of examination, and examiner names. Five wage employees are each working up to 29 hours per week on the project. As of October 31, 2017, over 99,000 of the estimated 1,000,000 archived case files covering the relevant period have been entered into the database. This searchable database of case information and scanned documentation ultimately will be integrated with the current LIMS.

Microscopic Hair Comparison Case Review

In January 2016, the Board created a Microscopic Hair Comparison Case Review Subcommittee, which developed a process for the initial screening of DFS's microscopic hair comparison cases and for the review of transcripts in cases with convictions. A Review Team, consisting of two attorneys and one DFS scientist with experience as a hair examiner, conducts reviews of the transcripts and makes recommendations to the Subcommittee regarding whether notification to the parties is appropriate.

On November 15, 2016, the Microscopic Hair Comparison Case Review Subcommittee² approved notifications that were recommended by the Review Team in five microscopic hair comparison cases. Three of the notifications were made in February 2017 through letters from the Chair of the Subcommittee to the defendants, the defendants' counsel (if known), the Commonwealth's Attorneys, and the investigating law enforcement agencies. The remaining two notifications are for individuals whose whereabouts are currently unknown to the Department or who are deceased. Those notifications will be made if contact information for those individuals or their next of kin can be identified.

² On November 15, 2016, the Subcommittee included as members Vince Donoghue (Chair), then Board member David Long, and Lt. Colonel Tracy Russillo.

During the spring semester 2017, students with the Actual Innocence Clinic at the University of Richmond, T.C. Williams School of Law, assisted the Department in reviewing approximately 98 cases with microscopic hair comparison examinations that were identified as having positive, probative associations. The students researched whether convictions had resulted in those cases, utilizing online research options, if available, or by sending letters to the appropriate Circuit Court Clerk's Office. Letters were sent to the Circuit Court Clerks in all cases where convictions resulted, seeking copies of the conviction orders and transcripts of hair examiner testimony, if available. Four transcripts have been obtained to date, but additional follow up is being conducted by DFS staff with the Clerks' Offices and with identified court reporting services.

The Department has continued its work identifying microscopic hair examination cases as part of its Historical Case File Review. One of the wage employees who is assisting with the Review project continues the review of all identified hair cases to determine whether there were any positive, probative associations reported in each case. The next step is to confirm conviction information for the cases with positive, probative associations and to continue to seek out transcripts or transcript substitutes, where appropriate, for review. Because DFS does not have the staff or resources for this research, it is hoped that the students with the Actual Innocence Clinic at the T.C. Williams School of Law will continue to assist the Department during 2018.

Serology Case Review

In May 2016, the Board approved the Department's proposal for a Serology Case Review. The review was initiated by DFS in response to allegations made in a petition for a writ of actual innocence filed with the Supreme Court of Virginia. A random sample of 200 serology cases (100 each from the Eastern and Northern Laboratories covering the years 1982, 1986 and 1990) is being reviewed to determine whether a more in depth review is needed. The review will also include serology cases where individuals have been exonerated as a result of DNA testing.

Each case is being reviewed separately by two scientists. DFS had four scientists who previously served as serologists conducting reviews; however, one retired in June 2017, so now there are three DFS scientists conducting the serology reviews. Additionally, Jami St. Clair, a member of the Department's Scientific Advisory Committee who has experience as a serologist, is serving as an independent, external reviewer and is conducting the second review for twenty percent of the cases.

The double review of 60 of the 100 Eastern serology cases has been completed. The remaining 40 Eastern cases are awaiting the second review. The review of the Northern serology cases began in July 2017. In the reviews conducted as of October 30, 2017, no files were identified where the typing results in the case notes would have eliminated the defendant and were not reported, which was the issue identified in the case prompting the Serology Case Review.

2. POLICY AND PRIORITIES IN RESPONSE TO AGENCY NEEDS

Improving Timeliness

Caseload Data

The caseload data reported in the table below reflects, for FY16 and FY17, the total number of cases received statewide by each DFS section, the total number of cases completed by each section, and the average case turnaround time (number of days from receipt of evidence in a case by DFS to the release of a Certificate of Analysis) for each section. The chart also specifies the ending backlog (total number of cases on hand) in each section as of the end of the respective fiscal years.

Section	Cases Received (FY16)	Cases Received (FY17)	Cases Completed (FY16)	Cases Completed (FY17)	Average Case Turnaround Time (FY16)	Average Case Turnaround Time (FY17)	Ending Backlog 6/30/16	Ending Backlog 6/30/17
Controlled Substances	29,078	31,002	28,406	27,339	59	82	5,419	9,114
Digital & Multimedia Evidence (DME)	-	103	-	101	-	318	-	114
Firearms	6,773	7,563	5,480	6,334	59	131	1,982	3,233
Forensic Biology (DNA)	4,273	4,925	4,140	4,260	132	137	1,148	1,858
Latent Prints (includes DME in FY16)	2,763	2,840	2,862	3,043	91	62	492	411
Questioned Documents*	318	64	286	105	32	63	41	0
Toxicology	8,814	8,804	8,377	9,272	63	59	1,609	1,154
Trace Evidence	767	773	790	862	92	83	166	123
Total	52,786	55,971	50,341	51,215	68	88	10,857	15,893

* The Questioned Documents Section was eliminated effective January 1, 2017.

The Controlled Substances Section continues to see rising submissions, which have contributed to the increase in case turnaround times. Examinations are also taking longer to complete due to the growing complexity of the compounds being submitted, as well as the additional safety precautions required in the handling of the increasingly lethal substances received. As of October 1, 2017, the Controlled Substances backlog was growing by an average of 375 cases each month due to case submissions outpacing the Section's capacity. DFS expects the backlog to continue to increase due to the trend of

rising case submissions, which have grown approximately 21% since 2015. The caseload awaiting analysis in the Controlled Substances Section has risen from 5,442 cases at the end of September 2016 to 10,126 cases at the end of September 2017. Cases completed in September 2017 had an average turnaround time of 116 days

Workload data for the Digital and Multimedia Evidence (DME) is presented in the table separately for the first time. DME data was previously included with Latent Prints statistics as that is how DME cases had been recorded in the Laboratory Information Management System (LIMS). The upgraded LIMS made it possible to separate DME cases from those in Latent Prints beginning in FY17. As of October 31, 2017, the average turnaround time for DME cases was in excess of one year. One of the Section's five positions is currently in the hiring process.

The Firearms Section continues to see an increase in cases being submitted for National Integrated Ballistic Information Network (NIBIN) entry. In response, DFS created multiple NIBIN examiner positions and also added additional NIBIN equipment in all four regional laboratories. The NIBIN only examiners have completed their training and are doing case work. With these new examiners trained, the Section was able complete more cases than it received beginning in the last quarter of FY17. DFS anticipates the turnaround times to begin to go down now that the NIBIN examiners are doing casework, which allows the forensic scientists to focus on the more complex comparison cases.

The Forensic Biology Section statistics reflect that turnaround times are increasing, as is the backlog. Cases completed in September 2017 had an average turnaround time of 159 days and, as of October 1, 2017, there were 2,158 cases in the backlog. DFS has seen a 40% increase in Physical Evidence Recovery Kit (PERK) submissions since the comprehensive PERK legislation went into effect in July 2016. With eleven forensic scientist positions that are either in the hiring or training process (as of October 31, 2017), the Section will continue to see increased turnaround times. Also contributing to the increased turnaround times is the additional time it takes to review cases and calculate statistics with the new fusion kits.

The Latent Prints Section is fully staffed, and the backlog for the Section has continued to decrease. However, in the first quarter of FY18, there was a 20% increase in case submissions over the last quarter of FY17. Anecdotally, DFS understands this is due to the retirement of latent prints examiners that had been working in local law enforcement agencies, resulting in these cases now being submitted to the Department. DFS will continue to monitor these submissions. As of FY17, the DME statistics are no longer included with those for Latent Prints.

The Toxicology Section backlog and turnaround times continue to improve as a result of the six toxicology positions provided in FY17. The Section has been much more consistent in achieving the OCME's required turnaround times to meet the National Association of Medical Examiners accreditation standards.

The Trace Evidence Section is continuing to improve backlog and turnaround times as the Section is now fully staffed.

Mandatory Overtime Implemented for Controlled Substances Section

In response to increasing submissions and the correspondingly high backlog and turnaround times in the Controlled Substances Section, beginning September 24, 2017, DFS implemented mandatory overtime requiring each examiner in the Section to work a minimum of 24 hours of overtime by December 2, 2017. The mandatory overtime is a temporary measure designed to assist the Controlled Substances Section in limiting the growth of the backlog during the overtime period; it will not address the underlying resource need.

Factors Affecting DFS Workloads and Backlogs

U.S. Supreme Court Decision in Melendez-Diaz v. Massachusetts

The United States Supreme Court's Melendez-Diaz v. Massachusetts decision in 2009 significantly increased the number of witness subpoenas DFS staff received, as well as the amount of time examiners were spending out of the laboratory for court travel and appearances. In Melendez-Diaz, the Court held that the defendant's Sixth Amendment right to confront witnesses against him is violated if the laboratory report is offered into evidence without the testimony of the forensic scientist who performed the analysis. As reported in prior Forensic Science Board Annual Reports, the volume of witness subpoenas received and the time examiners are spending out of the laboratory have remained dramatically elevated compared to pre-Melendez-Diaz levels. When examiners are out of the laboratory, they have fewer hours available to perform forensic analyses. The Controlled Substances and Toxicology Sections continue to be most directly affected by this decision.

Ability to Hire and Train Qualified Examiners

The demand for trained, experienced forensic scientists has exceeded the supply for many years. In order to fill positions with limited qualified applicants, DFS has developed a process of hiring and training individuals with the necessary educational credentials but without the practical experience. The table below reflects the average length of the training for new scientists hired as trainees in each discipline. The length of training for scientists who come to DFS as previously "qualified" in another laboratory may be reduced.

Section	Average Examiner Training Period
Breath Alcohol	12 months
Controlled Substances	10 months
Digital & Multimedia Evidence	12 months
Firearms & Toolmarks	6 months (NIBIN forensic scientists) 24 months (forensic scientists)
Forensic Biology (DNA)	12 months
Latent Prints & Impressions	12 months (latent prints forensic scientists) 12 months (impressions forensic scientists)
Toxicology	12 months (forensic scientists) 18 months (toxicologists)
Trace Evidence	12 months

Current examiners conduct the training for new hires and must dedicate significant time to working with the trainees, which results in decreased case output for these examiners while they are training new examiners.

3. GENERAL FISCAL YEAR OPERATIONAL BUDGET AND ANY MAJOR CHANGES IN APPROPRIATED FUNDS

Budget Overview

The Department's annual budget for FY2018 is:

General Fund Base Budget	43,570,743
Adjustments to Base Budget	1,195,679
Non-General Funds	2,030,144
TOTAL	46,796,566
Less Budget Reductions	(0)
TOTAL OPERATING BUDGET	46,796,566

The adjustments to the Department's Base Budget include \$1,195,679 to cover centrally funded changes to items such as health insurance costs and internal service charges.

In light of the budget shortfall, DFS was requested, along with other state agencies, to prepare savings strategies for FY17 equal to five percent of the DFS annual budget, which would have required savings of approximately \$2 million. Governor McAuliffe's FY17 Savings Plan, which was released on October 13, 2016, accepted savings strategies from DFS totaling \$1,107,164; this included \$1,087,393 in DFS General Fund appropriations, and \$19,771 in DFS General Fund Resources. The most significant reduction was the elimination of the Questioned Documents Section at DFS. The FY17

reductions also resulted in DFS no longer supplying marijuana field test kits to law enforcement.

The savings accepted from DFS for FY17 were returned beginning in FY18. However, the Questioned Documents Section had been eliminated as of January 1, 2017 with the retirement of the Section's two examiners. As a result of discussions with the Secretary's Office and the Department of Planning and Budget, DFS reassigned the funds that had been allocated to the Questioned Documents Section and created three forensic scientist positions for the Controlled Substances Section and a research scientist position for the Chemistry Program Area. As a result of the restorations, DFS resumed supplying marijuana field test kits to law enforcement beginning in FY18.

Grants

During the period of November 1, 2016 through October 31, 2017, funding has been available or awarded to DFS under the following grant programs:

FY15 Paul Coverdell Forensic Science Improvement Program – \$197,409 awarded by NIJ to Virginia (the Department of Criminal Justice Services or DCJS) for DFS and the Office of the Chief Medical Examiner. The DFS portion (\$98,704) is to be used for training and continuing education of scientific staff in the Chemistry, Physical Evidence, and Toxicology program areas. The grant period was October 1, 2015 – September 30, 2016, but was extended through June 30, 2017.

FY16 Paul Coverdell Forensic Science Improvement Program – \$218,912 awarded by NIJ to Virginia (the Department of Criminal Justice Services or DCJS) for DFS and the Office of the Chief Medical Examiner. The DFS portion (\$109,456) is to be used for training and continuing education of scientific staff in the Chemistry, Physical Evidence, and Toxicology program areas. The grant period is January 1, 2017 – December 31, 2017.

FY15 DNA Capacity Enhancement and Backlog Reduction Grant – \$913,390 awarded by NIJ to enhance capacity in the Forensic Biology Section. The funds are to be used to support personnel, training, and equipment. The grant period is January 1, 2016 – December 31, 2017.

FY16 DNA Capacity Enhancement and Backlog Reduction Grant – \$1,382,996 awarded by NIJ to enhance capacity in the Forensic Biology Section. The funds are to be used to support personnel, training, and equipment. The grant period is January 1, 2017 – December 31, 2018.

FY15 NIJ Research and Development for Publicly Funded Forensic Science Laboratories – \$149,504 awarded by NIJ to develop and validate two innovative quantitative liquid chromatography mass spectrometry methods for forensic toxicology analyses. The grant period is January 1, 2016 – June 30, 2018.

FY16 Research and Evaluation for the Testing and Interpretation of Physical Evidence in Publicly Funded Forensic Laboratories (Latent Prints) – \$216,225 awarded by NIJ to: 1) determine the accuracy and reliability of the LatentSleuth technology for latent print examinations; and 2) determine if integrating LatentSleuth into current comparison workflow for complex comparisons improves efficiency and reproducibility as compared to existing methods. The grant period is January 1, 2017 – December 31, 2018.

Opioid Joint Project (OCME and DFS) – DFS received funds from the OCME in the amount of \$133,293 to support additional personnel in DFS to improve both the timeliness and comprehensiveness of toxicological studies in deaths that are suspicious for opioid overdose. The grant period is September 1, 2017 – August 31, 2018.

FY17 Byrne Justice Assistance Grant (JAG) – \$50,000 awarded by DCJS to increase the capacity in the Forensic Training Section. Funds were used to hire a part-time forensic trainer and add equipment. The total amount of the grant includes a required match of \$5,000. The grant period was October 1, 2016 – September 30, 2017.

FY18 Byrne Justice Assistance Grant (JAG) – Continuation Funding – \$50,000 awarded by DCJS to maintain the increased capacity in the Forensic Training Section that was realized with the FY17 grant project. Funds will be used to retain the part-time forensic trainer position and to add several items of equipment that can be used as a back-up when the current equipment is in need of repair. The total amount of the grant includes a required match of \$5,000. The grant period is October 1, 2017 – September 30, 2018.

New York County District Attorney's Office (DANY) Sexual Assault Kit Backlog Elimination Project – \$1,399,989 awarded to the Office of the Attorney General and DFS (co-applicants in the project) to outsource the testing of previously untested sexual assault kits. The DFS portion of the award (\$123,226) will be used for overtime hours for DFS scientists to conduct reviews on DNA profiles received from the contract laboratory, upload all eligible profiles into CODIS, perform DNA testing needed for Data Bank hit confirmations, and prepare all necessary reports. The original grant period was October 1, 2015 to September 30, 2017, but it was extended through September 30, 2018.

Sexual Assault Kit Initiative (SAKI) Grant – \$421,155 awarded by the Office of the Attorney General to DFS as a sub-recipient. Funding provided to DFS to hire a part-time forensic laboratory specialist to assist in implementing a streamlined approach to processing SAKs that will include testing of samples collected in SAKs for male DNA followed by extraction and testing of DNA with robotics. The OAG also provided funds to DFS to contract with a vendor to develop SAK tracking software that will be integrated with the DFS Laboratory Information Management system. In addition, funds were allocated to DFS to hire an Applications Project Manager to

provide help-desk and data-entry for law enforcement. The grant period is October 1, 2016 – September 30, 2019.

2017 Highway Safety Grant Program – \$285,130 awarded by DMV for Breath Alcohol training and travel costs for law enforcement officers and continuing education for DFS Breath Alcohol personnel. Included funds for one forensic scientist and to further expand the capabilities of the online database for public access to breath alcohol instrument records, instrument certification information and statistical reports. The total amount of the award included an in-kind match of \$57,026. The grant period was October 1, 2016 – September 30, 2017.

2018 Highway Safety Grant Program – \$275,714 awarded by DMV for the DFS Breath Alcohol training program. Funding is provided for reimbursement of travel costs for law enforcement officers, supplies needed for breath alcohol classes, continuing education for DFS Breath Alcohol personnel, and the retention of the grant-funded Breath Alcohol Forensic Scientist position. This year, funding is also provided to purchase software licenses for web-based, on-demand training programs. DFS will also contract with the breath alcohol database developer to provide enhanced search functionality. The total amount of the award includes an in-kind match of \$55,143. The grant period is October 1, 2017 – September 30, 2018.

2017 Highway Safety Grant Program (TREDS Project) – \$90,290 awarded to DFS as a sub-recipient of DMV under its TREDS (Traffic Records Electronic Data System) Program. The project goal is to decrease the turnaround time of data from the OCME to DMV in cases involving motor vehicle accident fatalities. This project will involve the OCME, DFS and DMV. DFS will receive funds in the amount of \$84,290 to hire four part-time Forensic Laboratory Specialists to assist in the Toxicology Sections statewide to increase capacity. DFS will also receive \$6,000 to contract with its Laboratory Information Management System provider to create a mechanism that will allow for the electronic distribution of drug and alcohol testing results to the OCME. The grant period was October 1, 2016 – September 30, 2017.

2018 Highway Safety Grant Program (TREDS Project) – \$84,290 awarded to DFS as a sub-recipient of DMV under its TREDS (Traffic Records Electronic Data System) Program. The project goal is to decrease the turnaround time of data from the OCME to DMV in cases involving motor vehicle accident fatalities. This project will involve the OCME, DFS and DMV. DFS received funds to retain four part-time Forensic Laboratory Specialists to assist in the Toxicology Sections statewide to increase capacity. The grant period is October 1, 2017– September 30, 2018.

4. ACTIONS TO FOSTER AND PROMOTE COORDINATION AND COOPERATION BETWEEN DFS AND THE USER PROGRAMS WHICH ARE SERVED

Notices Sent to DFS User Agencies

Firearms Being Returned to Citizens Following NIBIN Searches

On January 19, 2017, DFS sent information to law enforcement agencies across the Commonwealth, requesting to be notified when a firearm submitted to the laboratory for a National Integrated Ballistic Information Network (NIBIN) search is returned to a citizen. The purpose of the notification is for firearms to be properly classified in the NIBIN database for future searches and potential links to criminal activity.

Policy Changes in Response to Passage of Bill Addressing Birchfield v. North Dakota

On March 16, 2017, Governor McAuliffe signed House Bill 2327, which passed with an emergency enactment clause in response to the U.S. Supreme Court decision in Birchfield v. North Dakota. In Birchfield, the U.S. Supreme Court held that the Fourth Amendment does not permit warrantless blood tests incident to arrests in DUI cases and that a motorist may not be criminally punished for refusing to submit to a blood test based on implied consent. Of relevance to DFS, House Bill 2327 amended Virginia's DUI law to treat blood collected pursuant to a search warrant the same as blood collected pursuant to implied consent for purposes of chain of custody, independent analysis, admissibility of Certificates of Analysis, and the rebuttable presumptions of impairment. In response to the emergency enactment of House Bill 2327, on March 16, 2017, DFS disseminated a Notice of DFS Policy Change to its user agencies advising how the DFS Toxicology Section had revised its processes for handling DUI blood samples collected pursuant to search warrants in DFS DUI/D kits to comply with the requirements of the new law. In August 2017, DFS modified its DUI/D kits to include a new "DUI/D Submission Information Sheet," which is to be completed by the investigating officer to provide information regarding the process used to collect the sample (e.g., implied consent, search warrant).

Triaging of Physical Evidence Recovery Kits

On March 29, 2017, DFS disseminated to Commonwealth's Attorneys, law enforcement and the criminal defense bar a Policy Notice on the triaging of Physical Evidence Recovery Kits (PERKs). PERK contents are triaged so that items deemed most probative are tested initially. This triaging is designed to expedite the analysis to provide information on the inclusion or elimination of potential suspects and, in cases involving unknown perpetrators, allow for more timely Data Bank searching of unidentified DNA profiles. Recognizing that the testing of additional samples contained within the PERK may be necessary, the Notice points out the importance of reviewing Certificates of Analysis related to PERK testing upon receipt so that, if additional testing is required, the matter can be discussed with the Forensic Biology Section as soon as possible. A copy of the Notice is being included with any Certificates of Analysis disseminated to law enforcement that address PERK testing.

“Trace” DNA Submission Policy Revised

On June 9, 2017, DFS disseminated to its user agencies a Notice of DFS Policy Change, which revised the “Trace” DNA (previously referred to as “Touch” DNA) submission policy. Under the revised policy, DFS will no longer require the Commonwealth’s Attorney to submit a letter for “Trace” DNA evidence submissions; however, only two items of potential “Trace” DNA will be analyzed for lesser felony crimes, such as property crimes, drug possession and possession of a firearm by a felon.

NIST 1036 U.S. Population Dataset Revised

On July 28, 2017, DFS advised its user agencies that the National Institute of Standards and Technology (NIST) notified the forensic science community that the NIST 1036 U.S. Population Dataset used to calculate population statistics in DNA cases was revised effective July 25, 2017. The NIST 1036 U.S. Population Dataset was used by DFS from May 1 – July 25, 2017. DFS temporarily suspended calculating population statistics while the revised Population Dataset was verified. This issue affected a small subset of cases with Certificates of Analysis issued during the time period when DFS used the NIST 1036 Population Dataset. The statistical calculations previously reported on Certificates of Analysis changed as a result of the Dataset in less than 30 cases. Amended Certificates of Analysis are being issued in those cases.

Notice Regarding Controlled Substances Workload

On August 16, 2017, DFS sent a Notice addressing the increasing Controlled Substances workload to all law enforcement agencies, all Commonwealth’s Attorneys, the criminal defense bar, and circuit and district judges. The Notice acknowledged numerous recent communications that DFS received from user agencies expressing concerns about delays in the analysis of controlled substances cases. The Notice advised that, comparing the period of January to July in 2015 to the same period in 2017, there was an overall increase in submissions of 19%. During the same two-year period, the Controlled Substances backlog grew from 4,801 cases to 9,588 cases. The Notice reported the average controlled substances case turnaround time was 99 days at the end of July 2017.³

Multiple factors, in addition to increasing submissions, have contributed to the mounting backlog. The growing complexity of cases being analyzed (e.g., synthetic opioids, cannabimimetic agents, research chemicals) and the additional safety precautions implemented in response to the increasing lethality of the compounds being analyzed both add time to the analytical process. Additionally, the Notice pointed out that there were eight controlled substance scientist positions either in training or in the hiring process and that it takes between nine and 12 months for a new scientist to be trained and qualified. In the Notice, the Department recognized the impact that increased turnaround times have on the criminal justice process and indicated that it is working to address the issue and will

³ By the end of September 2017, the turnaround time for Controlled Substances cases was 116 days.

continue to assess the volume of submissions in relation to its capacity to more timely perform the requested analyses.

Controlled Substances Stakeholder Meeting

At the Board's May meeting, DFS advised that a safety audit identified the process of determining the weight of powders as a high risk activity and discussed with the Board the idea of changing its weighing practices so that gross weights are provided in lieu of net weights unless there is a relevant weight threshold at issue. The Board recommended that DFS seek input from its stakeholders if it was interested in pursuing such a change. On September 18, 2017, DFS held a meeting with Commonwealth's Attorneys and narcotics investigators from law enforcement agencies across the state to discuss the Department's weighing practices for controlled substances and other measures that may increase the efficiency of the analytical process. The consensus from the meeting was that DFS should discontinue providing net weights for substances unless the substance is at or near a statutory weight threshold. Substances that do not meet or exceed an established weight threshold will be reported using the gross weight, which includes innermost packaging. Additional efficiency measures discussed were related to marijuana food products, search warrant cases and Schedule VI pharmaceuticals. At the Board's October meeting, Director Jackson updated the Board on the stakeholder meeting and measures discussed and recommended by the stakeholders to increase efficiencies. The Department will be revising its submission protocols to implement the measures.

Board of Pharmacy Expedited Regulations

Pursuant to Virginia Code § 54.1-3443(D), the Board of Pharmacy is permitted to temporarily place substances into Schedule I or II via an expedited regulatory process. This process may be used when the Board of Pharmacy has determined, in consultation with DFS, that the substances should be so scheduled. The Board of Pharmacy must conduct a public hearing, with at least 30 days' advance notice, providing a list of substances it intends to schedule. The Board of Pharmacy must notify the House and Senate Courts of Justice Committees of any new substances added to Schedule I or II by this expedited regulatory process. Any substances added by this process will remain in Schedule I or II for 18 months and then be de-scheduled unless a general law is enacted adding such substance to Schedule I or II in the Code of Virginia. DFS monitors evidence submissions to its Controlled Substances Section and tracks new compounds that are submitted statewide. DFS recommends compounds to the Board of Pharmacy for this process on a quarterly basis.

As indicated in the 2016 Forensic Science Board report, DFS recommended eight compounds to the Board of Pharmacy in October 2016. Those compounds were subsequently scheduled by Board of Pharmacy regulation effective February 22, 2017. DFS recommended an additional eight compounds in January of 2017, which were scheduled via Board of Pharmacy regulation effective June 14, 2017. Three more compounds were recommended by DFS in April 2017, and they were scheduled via Board of Pharmacy regulation effective October 4, 2017. There were nine additional compounds

recommended by DFS in July, which were approved by the Board of Pharmacy on September 26, 2017 and will become scheduled following publication in the Register of Regulations. In October 2017, DFS recommended an additional 11 compounds to the Board of Pharmacy. Of the 31 compounds recommended to the Board of Pharmacy by DFS between November 1, 2016 and October 31, 2017, 15 were research chemicals, four were cannabimimetic agents, one was a benzodiazepine, two were stimulants, and nine were synthetic opioids.

Conferences and Presentations

The Department encourages its staff to attend meetings and conferences of its user agencies to give presentations on relevant forensic science issues and to be available for feedback and comment on the services that the Department is providing. From November 1, 2016 to October 31, 2017, DFS representatives attended statewide conferences for the Virginia Association of Commonwealth's Attorneys, the Indigent Defense Commission, and the Virginia Sheriffs' Association. Staff also attended and gave presentations at multiple regional and local meetings of DFS user agencies.

Training

Forensic Training Section

Utilizing funds from the FY17 Byrne Justice Assistance Grant, the Department's Forensic Training Section was able to hire a part-time instructor to expand the number of short courses offered, as well as provide staff capacity to offer a third Forensic Science Academy (FSA) in 2017. DFS was awarded continuation funding for the grant for FY18 so DFS anticipates also offering a third FSA Session in 2018. Each nine-week Academy session provides in-depth training to twelve selected law enforcement students in the recognition, documentation, collection, preservation, and handling of physical evidence through classroom instruction by forensic experts, evidence collection demonstrations, and numerous practical exercises in simulated crime scenes.

The Forensic Training Section also presented numerous short courses throughout the year on various crime scene investigation subjects, including Basic Crime Scene Investigation, Basic Digital Crime Scene Photography, and Impression Evidence Documentation and Collection. Law enforcement training updates were also conducted at each of the four DFS Regional Laboratories. These programs, entitled "Laboratory Capabilities and Update," allow DFS personnel to communicate evidence receiving guidelines and changes to laboratory services to, as well as receive feedback directly from, the larger law enforcement community. The Virginia Forensic Science Academy 2017 Annual Retraining Seminar was held August 29 – September 1, 2017. Numerous DFS staff gave presentations at this seminar, which was coordinated by the Forensic Training Section and attended by nearly 170 Forensic Science Academy alumni.

Breath Alcohol Instrument Operator Training

The Department's Breath Alcohol Section provides maintenance of evidential breath alcohol instruments, responses to legal requests for information, testimony, and training for law enforcement personnel. From November 1, 2016 through October 31, 2017, the Breath Alcohol Section conducted 41 initial breath alcohol instrument operator (3 day) classes and licensed 839 new operators. The Section also conducted 98 relicensing (1/2 day) sessions and subsequently relicensed 3,007 operators. Instructor Recertification was held September 11-13, 2017, and 24 law enforcement instructors were recertified. The law enforcement instructors assist Breath Alcohol staff in conducting the operator training classes.

Forensic Science Training Program for Attorneys (and Judges)

DFS is considering implementing a forensic science training program for criminal attorneys in Virginia. The program would be modeled after the Arizona Forensic Science Academy, which was created in 2011 as an initiative of the Arizona Attorney General's Office Forensic Science Advisory Committee. The Arizona program provides training to prosecutors and criminal defense attorneys together on the science underlying the various laboratory disciplines. Judges are also invited to attend the classes.

The Department held a stakeholder meeting on August 16, 2017, to discuss establishing a similar training program in Virginia. The stakeholder group, which included the Chief Medical Examiner, prosecutors, criminal defense attorneys and two circuit judges, provided input on how such a program could best be implemented in Virginia. With input from the stakeholders, DFS developed a Needs Assessment Survey to allow attorneys to identify the topics that would be most beneficial to cover through this training. The Survey was disseminated to criminal attorneys across Virginia at the beginning of October 2017. Five hundred and twenty-four attorneys completed the Needs Assessment Survey. The results of the survey were discussed by the Stakeholder group when it met for a second time on October 23, 2017. The Department plans to start the program in 2018 by selecting one subject and offering training in that subject in all four DFS regional laboratories. After discussing the results, the group recommended that DFS begin by offering training in DNA.

Publications

The updated report "Drug Cases Submitted to the Virginia Department of Forensic Science CY 2016" was released on July 28, 2017. DFS receives tens of thousands of drug samples every year, submitted by law enforcement agencies across the state. This report, a joint effort by DFS and the Virginia Department of Criminal Justice Services (DCJS), highlights the frequency with which various selected drugs are submitted, broken out by the seven Virginia State Police divisions. The report can be accessed on the DFS website here:

http://www.dfs.virginia.gov/wp-content/uploads/2017/07/CY16DfsDataReport_Final.pdf

Availability of Breath Alcohol Records Online

In 2014, the Department's Breath Alcohol Section began offering Breath Alcohol Instrument records on the DFS website, including Certificates of Instrument Accuracy, instrument maintenance history, and quality assurance worksheets. The Breath Alcohol Section subsequently expanded the available records to include Subject Test Records, which are searchable via instrument serial number, but have all personally identifiable information redacted. The DFS website also provides reports of aggregate data, such as "Test Results by Age," "Test Results by Gender" and "Test Results by Instrument Site." In May 2017, two additional reports were made available online, "Agency Instrument History" and "Agency Test Results by Age and Gender." This project was made possible through a grant administered by the Department of Motor Vehicles, Virginia Highway Safety Office.

Timely Sharing of Opioid Data with State Police Fusion Center

On December 1, 2016, DFS instituted a new procedure to enable investigative information related to synthetic fentanyl derivatives and other potent opioids identified by the Controlled Substances Section to be shared timely with the Virginia State Police Fusion Center. The investigating officer for the case will be contacted and alerted that his/her contact information and the drug compounds indicated or identified in the evidence will be shared with the Fusion Center. An email (without any sensitive data) will be sent to the Fusion Center Division contact for investigation. This procedure will allow the Fusion Center to further investigations, identify potential geographic trends in the field, and more quickly disseminate bulletins with safety information to first responders.

Coordination Between the OCME and the DFS Toxicology Section

On August 4, 2017, Director Linda Jackson and Dr. William Gormley, Chief Medical Examiner, held a video-conferenced meeting with all OCME pathologists and DFS Toxicologists to discuss standardized test ordering, expectations for consultation between agencies and overall communications.

New Online Kit Ordering System

In December 2016, DFS implemented a new DFS webpage that allows law enforcement agencies to request forensic kits using a new online ordering form. Agencies that are two or more hours from the nearest DFS laboratory may request that the kits be mailed to them; agencies within two hours of a DFS laboratory may order kits using the online system, and then pick them up at a designated DFS laboratory. These kits include Victim and Suspect Physical Evidence Recovery Kits (PERKs), Primer Residue Kits, Data Bank Buccal Collection Sample Kits and DUI/DUID Blood Specimen Collection Kits. Information about the online kit ordering system was disseminated to law enforcement agencies statewide.

5. RULES AND REGULATIONS NECESSARY TO CARRY OUT THE PURPOSES AND INTENT OF CHAPTER 11 OF TITLE 9.1 OF THE CODE OF VIRGINIA (DFS)

Regulations

A periodic review of the Department's non-exempt regulations was initiated at the Forensic Science Board's meeting on October 13, 2016. The periodic review is required every four years pursuant to Executive Order 17 (2014) and Virginia Code §§ 2.2-4007.1 and 2.2-4017. The purpose of a periodic review is to consider the continued need for the regulation, any overlap with other state or federal regulations, and the minimization of the regulation's economic impact on small businesses. The notice of the periodic regulatory review was published in the Virginia Register of Regulations on March 6, 2017. The public comment period ran from March 6, 2017 until March 31, 2017. No public comment was received regarding any of the regulations.

The Board considered the results of the periodic review at its May 24, 2017 meeting. While no public comments were received, the Board considered an amendment to the Department's Public Participation Guidelines or PPGs (6 VAC 40-11-10 et seq.), which were enacted in 2008. The PPGs required an amendment to reflect a 2012 statutory change (Chapter 795 of the 2012 Acts of the Assembly), which permits an interested person to be accompanied and represented by counsel or other representative during participation in a regulatory action. This proposed amendment to 6 VAC 40-11-50 was approved by the Board and submitted as a fast-track regulation because it was necessary to bring the PPGs into compliance with current statutory law.

The Board determined that no amendments were needed to the remainder of the Department's regulations, including the Regulations for Breath Alcohol Testing (6 VAC 40-20-10 et seq.), the Regulations for the Approval of Field Tests for Detection of Drugs (6 VAC 40-30-10 et seq.), the Regulations for the Implementation of the Law Permitting DNA Analysis Upon Arrest for All Violent Felonies and Certain Burglaries (6 VAC 40-40-10 et seq.), the Regulations for the Approval of Marijuana Field Tests for Detection of Marijuana Plant Material (6 VAC 40-50-10 et seq.), and the DNA Data Bank Regulations (6 VAC 40-60-10 et seq.). The periodic review was finalized on May 30, 2017, with these regulations being retained with no changes.

On August 21, 2017, the Office of the Attorney General submitted its certification that the proposed fast track amendment to 6 VAC 40-11-50 was constitutional, consistent with the authority granted by Virginia Code § 2.2-4007.02, and in conformity with existing statutory provisions. The Department of Planning and Budget's review of the proposed amendment was completed on September 22, 2017, and the Governor's Office approval was obtained on September 22, 2017. The proposed amendment was published on October 16, 2017 in the Virginia Register of Regulations, with a public comment forum open from October 16, 2017 through November 15, 2017. If there are no objections to the fast track amendment to 6 VAC 40-11-50, it will become effective on December 1, 2017.

6. ANY RECOMMENDATIONS SUBMITTED TO THE FORENSIC SCIENCE BOARD OR THE DIRECTOR BY THE SCIENTIFIC ADVISORY COMMITTEE

The Scientific Advisory Committee (SAC) met at the DFS Central Laboratory in Richmond on May 23, 2017 and October 11, 2017. A list of members of the Scientific Advisory Committee is included as Attachment B.

Scientific Advisory Committee (SAC) Recommendations/Actions in 2017

- The SAC's Toxicology Subcommittee met on October 11, 2017 to review the validation of the new toxicology testing method for opiates, cocaine and cocaine metabolites and the evaluation of potential interferences that could have an effect on the analysis. Both had been provided to the Subcommittee for review in advance of the meeting. After making recommendations and suggestions to DFS, the Subcommittee closed both reviews.
- The Forensic Biology Subcommittee was provided the validation summaries for the Fusion Multiplex kit chemistries. The Subcommittee will review the validation and provide comments to the Biology Program Manager.
- At the SAC's meeting on October 11, 2017, the SAC amended its Policy on Individual Participation in SAC Meetings by Electronic Means under Virginia Code § 2.2-3708.1. This Code section was amended in July 2017, and the policy was updated to reflect those amendments.

Attachment A

FORENSIC SCIENCE BOARD MEMBERS

(as of October 31, 2017)

- **Colonel W. Steven Flaherty** – Term: period in office or employment
Superintendent of the Virginia State Police
- **Francine C. Ecker (Chair)** – Term: period in office or employment
Director of the Department of Criminal Justice Services
- **William T. Gormley, M.D.** – Term: period in office or employment
Chief Medical Examiner
- **Caroline D. Juran**– Term: period in office or employment
Executive Director of the Virginia Board of Pharmacy
- **James F. Entas, Esq.** – Term: period in office or employment
Designee of Attorney General Mark R. Herring
- **Karl R. Hade** – Term: period in office or employment
Executive Secretary of the Supreme Court of Virginia
- **Kristen J. Howard** – Term: period in office or employment
Designee of the Chair of the Virginia State Crime Commission
- **Denise M. Toney, Ph.D.** – Term: period in office or employment
Director of the Division of Consolidated Laboratory Services
- **The Honorable Vince Donoghue** – Term: period in office or employment
Designee of the Chair of the Senate Committee for Courts of Justice
- **Delegate Rick Morris** – Term: period in office or employment
Designee of the Chair of the House Committee for Courts of Justice
- **Leslie Edinboro, Ph.D.** – Term: designated by Scientific Advisory Committee Chair
Member of the Scientific Advisory Committee
- **Richard P. Meyers** – Term: designated by Scientific Advisory Committee Chair
Member of the Scientific Advisory Committee
- **Colonel Maggie A. DeBoard** – Term: ending 6/30/2021
Governor Appointee – Member of Law Enforcement
- **Colette W. McEachin (Vice-Chair)** – Term: ending 6/30/2021
Governor Appointee – Member of the Virginia Commonwealth’s Attorneys Association
- **David R. Lett, Esq.**– Term: ending 6/30/2021
Governor Appointee – Criminal defense attorney with special knowledge in the area of forensic sciences

Attachment B

SCIENTIFIC ADVISORY COMMITTEE MEMBERS

(as of October 31, 2017)

- **Linda C. Jackson** – Term: period in office or employment
Director of the Department of Forensic Science
- **Les Edinboro, Ph.D. (Chair)**– Term: ending 6/30/2019
Governor Appointee – Director of a private or federal forensic laboratory located in the Commonwealth
- **Jami St. Clair** – Term: ending 6/30/2019
Governor Appointee – Scientist or other person with education, training or experience in laboratory standards or quality assurance regulation and monitoring
- **Robin W. Cotton, Ph.D.** – Term: ending 6/30/2021
Governor Appointee – Molecular Biologist
- **George C. Maha, Ph.D.** – Term: ending 6/30/2019
Governor Appointee – Population Geneticist
- **Richard P. Meyers** – Term: ending 6/30/2018
Governor Appointee – Forensic Chemist
- **Carl Sobieralski (Vice-Chair)** – Term: ending 6/30/2019
Governor Appointee – Forensic Biologist
- **Maureen C. Bottrell** – Term: ending 6/30/2018
Governor Appointee – Trace Evidence Scientist
- **Barry S. Levine, Ph.D.** – Term: ending 6/30/2018
Governor Appointee – Toxicologist certified by the American Board of Forensic Toxicologists
- **Kenneth Zercie** – Term: ending 6/30/2019
Governor Appointee – Member of the Board of the International Association for Identification
- **Travis Spinder** – Term: ending 6/30/2021
Governor Appointee – Member of the Board of the Association of Firearms and Toolmark Examiners
- **Randall E. Beaty** – Term: ending 6/30/2018
Governor Appointee – Member of the International Association for Chemical Testing
- **Kathleen Corrado, Ph.D.** – Term: ending 6/30/2021
Governor Appointee – Member of the American Society Crime Laboratory Directors