



Department of Forensic Science Report to House Appropriations Public Safety Subcommittee

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Agency Overview



DFS supports the criminal justice system by:

- performing forensic analyses of crime scene evidence;
- presenting the results of those analyses through reports, consultations, and expert witness testimony in courts of law;
- training crime scene investigators to utilize optimal evidence collection and submission techniques;
- maintaining and certifying, and training law enforcement to operate, the evidential breath alcohol instruments; and
- maintaining a DNA Data Bank of offender samples.

Key Statistics for CY2018:

Number of cases received by all disciplines	60,626
Number of subpoenas received by DFS personnel	14,483
Number of court appearances	4,183
Number of times expert testimony provided	1,000

Statewide Case Receipt and Completion Statistics



Section	CY17			CY18		
	Received	Completed	% Completed	Received	Completed	% Completed
Controlled Substances	33,108	29,512	89%	34,922	31,929	91%
Digital & Multimedia Evidence (DME)	81	77	95%	182	153	84%
Firearms & Toolmarks	7,632	7,337	96%	6,727	7,963	118%
Forensic Biology (DNA)	5,195	4,567	88%	6,017	6,483	108%
Latent Prints & Impressions	2,821	2,759	98%	2,386	2,334	98%
Toxicology	9,256	9,460	102%	9,691	9,754	101%
Trace Evidence	738	786	107%	701	727	104%

Note: A 100% Completion rate indicates the capacity to complete what is received, but not improve case turnaround times or reduce case backlogs.

DFS Backlog and Average Turnaround Times (TAT)



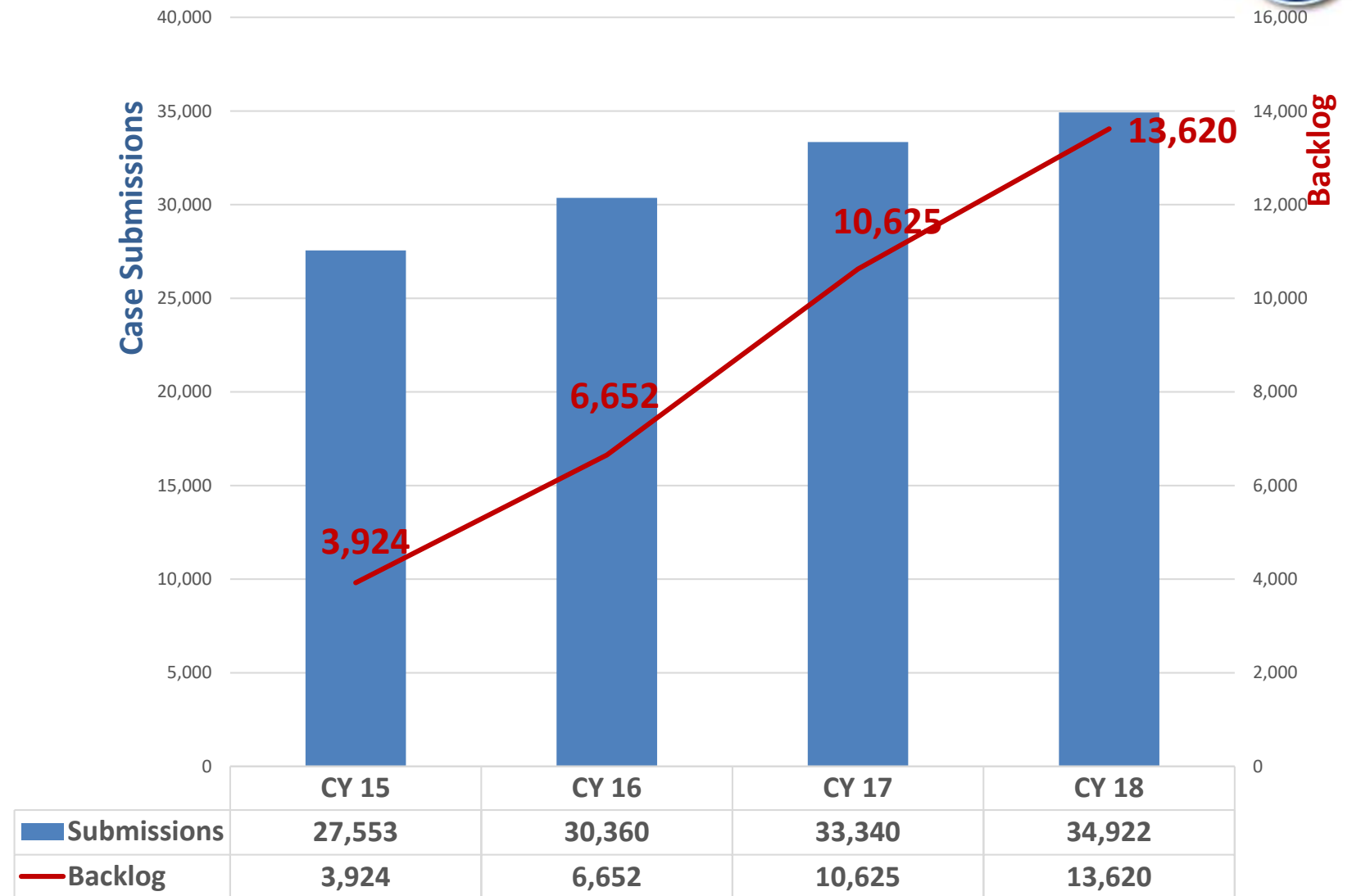
End of December Statistics	Backlog as of January 1, 2019	Average Turnaround Times for Cases Completed in December	Backlog Trend
Controlled Substances	13,589	141	↑
Digital & Multimedia Evidence	146	48	↑
Firearms & Toolmarks	1,818	116	↓
Forensic Biology (DNA)	2,006	142	↓
Latent Prints & Impressions	571	90	↑
Toxicology	1,204	44	↔
Trace Evidence	86	37	↓



Controlled Substances Challenges

- Increased submissions
- Increased sample complexity
- Increased safety measures
- Increased reporting requirements

Increased Drug Case Submissions



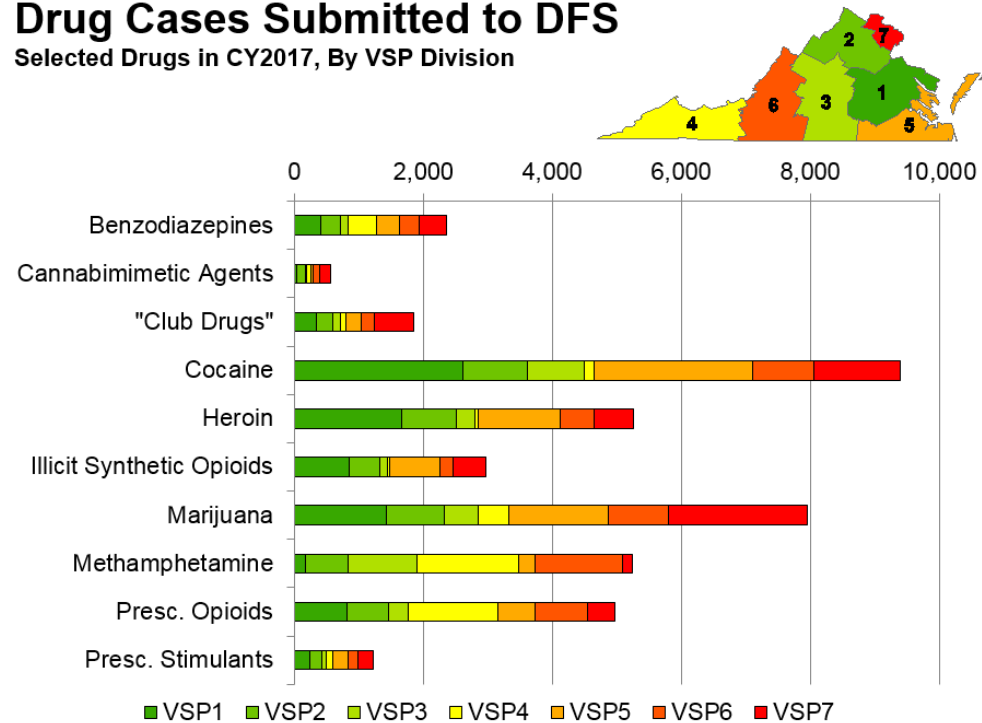
Drug Cases Submitted to VADFS Calendar Year 2017



A Joint Report by the Virginia Departments of Forensic Science
and Criminal Justice Services

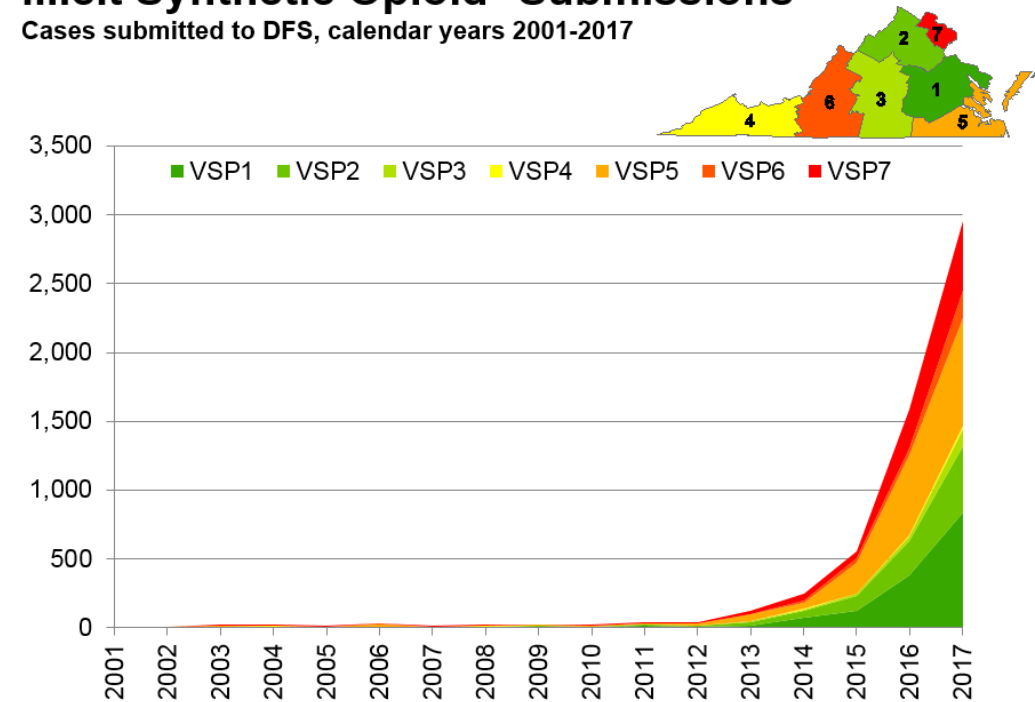
Drug Cases Submitted to DFS

Selected Drugs in CY2017, By VSP Division



Illicit Synthetic Opioid* Submissions

Cases submitted to DFS, calendar years 2001-2017



Published on August 10, 2018

<http://www.dfs.virginia.gov/documentation-publications/>



Actions Taken Prior to FY19

- Issued Policy Notice Dec. 1, 2017
 - Gross weights
 - Limit food products
 - Limit search warrant evidence
- Created 3 new positions effective July 1, 2017
- Created FLS support positions in Eastern and Western
- Received 6 FS positions for FY19 – all hired and in training
- Performed mandatory and voluntary overtime
- Transferred cases to normalize case turnaround times
- Posted current average case turnaround times online

<http://www.dfs.virginia.gov/about-dfs/current-turnaround-times/>

Non-General Fund Initiatives for Controlled Substances



- Implement grant-funded Lean Six Sigma project to increase efficiency and quality of analytical process
 - Grant funding was awarded and available as of January 1, 2019
- Evaluate potential submission policy changes with customer input
 - Stakeholder meeting held on November 29

Controlled Substances Case Projections



- Beginning in May 2018, DFS began projecting case backlogs based on potential submission rates and staffing levels.
- Projection Assumptions:
 - Assumes 8 trainees qualified by Sept. 2019 and 7 additional trainees qualified by Feb. 2020 with 3 positions unable to assist with casework (e.g., extended leave, turnover)
 - Assumes outsourcing of 300 cases/month beginning Jan. 2019 for an 18-month period
 - Assumes mandatory overtime period Jan. – May 2019 and limited voluntary OT moving forward
 - Results in average 3,478 case capacity per month after Feb. 2020 (without outsourcing)
 - Average monthly submissions greater than 3,478 will result in the backlog increasing (marked in red)
 - In order to maintain an average 30-day turnaround time, the backlog must be below 3,478 cases
 - Each additional trained examiner is expected to complete an average of 62 cases per month



Case Projections

Best Case Projection (Submissions +3%) - Projects an increase trend of 7% through June 2019 and then 3% thereafter.

Calendar Year	2018	2019	2020	2021	2022
Projected Annual Submissions	35,373	37,158	38,272	39,420	40,603
Projected Average Monthly Submissions	2,948	3,097	3,189	3,285	3,384
Projected Backlog at the end of the Calendar Year with Current Additional Staff and Outsourcing	13,948	14,312	9,584	7,268	6,135

*Projections as of 12/7/18



Case Projections

Projection Based on Current 2018 Submissions (+7%) - Projects an increase trend of 7% indefinitely.

Calendar Year	2018	2019	2020	2021	2022
Projected Annual Submissions	35,373	37,849	40,499	43,332	46,364
Projected Average Monthly Submissions	2,948	3,154	3,375	3,611	3,864
Projected Backlog at the end of the Calendar Year with Current Additional Staff and Outsourcing	13,948	15,003	12,502	14,098	18,726

*Projections as of 12/7/18



Forensic Biology (DNA)

- **Backlog is Decreasing**
- **Staffing**
 - 4 Forensic Scientists in training (Casework) (last year = 12 positions)
 - 1 Forensic Scientist in training (Mitochondrial DNA)
 - 2 Forensic Lab Specialists in training (Data Bank)
- **Validation Projects**
 - Several research projects are underway to increase automation and productivity
 - Increase use of robotic automation
 - Decrease time for statistical calculations
 - Increase analyses performed on most efficient instrumentation

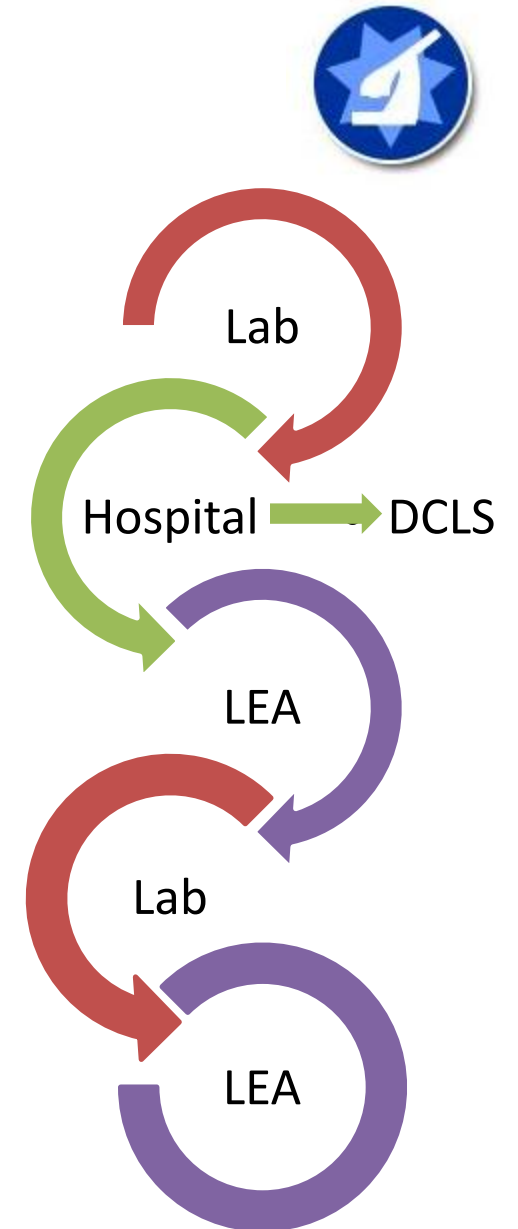
New York County District Attorney's (DANY) Sexual Assault Kit Backlog Elimination Program



- Award for DFS: \$123,226
 - Award period: Ended 9/30/18
 - Testing for kits collected prior to 7/1/14
 - 1,805 kits were submitted to Bode from 99 agencies
 - Testing completed/data received for all submitted kits
 - DFS has completed 1,681 with the remaining 124 in process
- The Office of the Attorney General will fund the remaining approximately 900 hours of OT that will be necessary to complete the project (~\$36,900)

National Sexual Assault Kit Initiative Competitive Grant (SAKI) FY 2016

- Award for DFS: \$421,155 (10/1/16 -9/30/19)
- PERK Tracking Software – beta test version in development but is not anticipated until February 2019
- PERK Tracking Coordinator position
- PERK Testing
 - 1,232 kits were identified in the OAG inventory
 - 482 kits submitted to the contract laboratory as of 12/18/18
 - Testing completed/data received in 179 kits as of 1/2/19



Toxicology



Breath Alcohol

- Intox EC/IR II instruments will be enhanced in FY2019
 - Allow for laser printers
 - Allow for high speed test data transfer
- Deployed new online recertification for Intox EC/IR II Operators

Toxicology

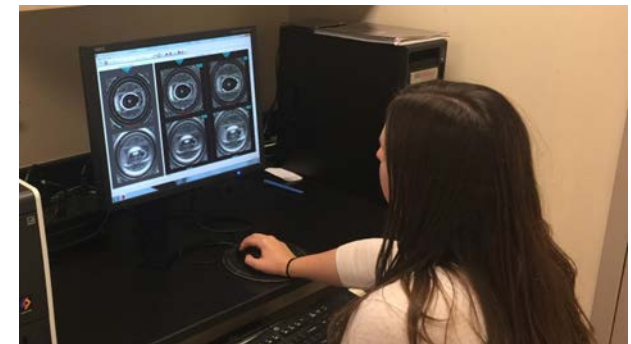
- Expanded methodology to identify over 30 synthetic opioids
- Implementing method to identify novel psychoactive substances
- For the two quarters, 100% of OCME cases completed within 90 days



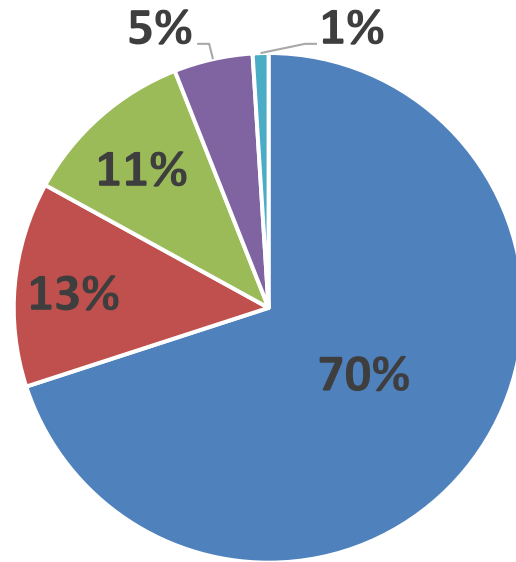
Firearms & Toolmarks



- Backlog has decreased for the last 5 quarters
- FY17 budget provided ~\$600,000 in funding for positions and equipment
- Created new Forensic Scientist NIBIN positions
- Purchased equipment to provide full NIBIN capability in all 4 laboratories



Budget and Resources



- Personnel
- Laboratory
- Facilities
- Administrative
- Travel

	2019 General Fund	2019 Nongeneral Fund	2020 General Fund	2020 Nongeneral Fund
Initial Appropriation for the Biennium	\$45,818,010	\$2,043,270	\$46,173,510	\$2,043,270
Emergency Funding Transfer (FY20 to FY19) on 8/1/19	\$1,660,000	0	\$-1,660,000	0
Changes to FY20 in Governor's Introduced Budget			\$3,841,288	\$216,500



Original Biennial Budget Items

Item	FY2019	FY2020	FTE
Increase staffing for Controlled Substances Section and provide funding for overtime	\$ 595,000	\$ 660,000	6
Increase staffing for Digital and Multimedia Evidence Section	\$ 82,500	\$ 110,000	1
Provide funding for one research scientist for the Forensic Biology Section	\$ 82,500	\$ 110,000	1
Finance purchase of scientific instruments via MELP	\$ 167,750	\$ 403,250	0



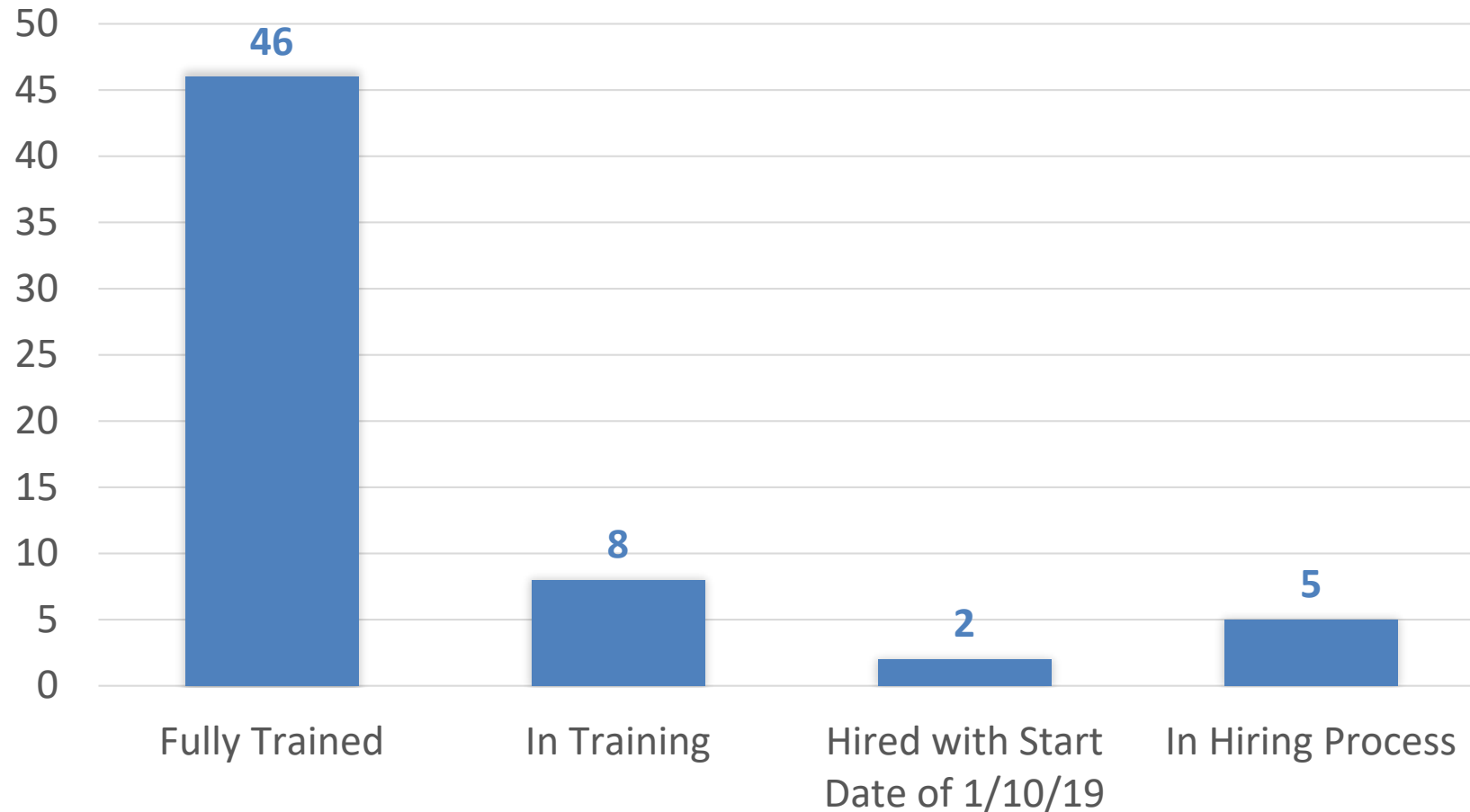
Funding Transferred from FY20 to FY19

Develop additional capacity with positions and equipment	• Beginning in FY19, fill 6 currently unfunded positions with additional Controlled Substances forensic scientists	\$550,000
	• Obtain additional equipment needed for the increased number of scientists	\$250,000
Increase support staff capacity	• Add two wage administrative specialist positions	\$40,000
	• Add two wage evidence receiving personnel	\$40,000
Outsource a portion of the backlog	• Approximately 8,000 cases with one or two items will be sent to a private laboratory over a 27-month period (final payments will be made in FY21)	\$750,000
Dedicate 2 Forensic Scientists to training	• To maximize teaching resources by allowing trainees to travel between laboratories as part of their training	\$30,000
Total Expenses		\$1,660,000

Controlled Substances Staffing



STAFFING – 61 FTE



Governor's Introduced Budget: Changes to FY 2020



Restore second year general fund appropriation and support ongoing opioid crisis response

Restores funding that was carried forward from fiscal year 2020 to fiscal year 2019 to fund an opioid crisis emergency response plan, and funds positions and outsourcing costs to address backlogs in the controlled substances section.

	<u>2019</u>	<u>2020</u>
General Fund	\$0	\$3,341,288

Detail

Repay what was transferred to FY 2019	\$1,660,000
Continued funding for 6 Forensic Scientists	\$686,850
Continued funding for 4 wage positions	\$94,438
Outsource approximately 3,600 cases	\$900,000

Governor's Introduced Budget: Changes to FY 2020



Fund cost of laboratory supplies in biology and toxicology sections Provides funding to purchase supplies needed to perform case analysis in the forensic biology and toxicology sections.	General Fund	2019	2020
		\$0	\$500,000

- Forensic Biology (\$350,000)
 - New DNA kits (Fusion) analyze 24 areas of DNA rather than 16 and are 33% more expensive
 - Increased personnel by 10% = increased testing
- Toxicology (\$150,000)
 - More frequent testing to reduce case turnaround times
 - Increased scope of testing to include new drugs
 - Increased personnel by 20% = increased testing

Governor's Introduced Budget: Changes to FY 2020



Increase federal fund appropriation and position levels

Increases nongeneral fund appropriation and provides two positions to support grant funding for the toxicology and forensic biology sections.

	<u>2019</u>	<u>2020</u>
Nongeneral Fund	\$0	\$216,500
Authorized Positions	0.00	2.00

- With implementation of Opioid Response Plan, DFS had reached MEL of 326
- Grants were awarded with funds for full time employees
 - NIJ Research and Evaluation Grant for Toxicology - Post-Doctoral Scientist to develop method for automated sample preparation
 - NIJ Sexual Assault Kit Initiative Grant - PERK Tracking Coordinator to assist law enforcement, hospital staff, etc. with the utilization of the new PERK Tracking System
- Temporary increase of MEL was authorized by DPB Director

Grants



- Actively seeking federal grant funding to augment general funding
- Instrumentation
 - Byrne/JAG (DCJS): \$220,000 for 2 GC/MS instruments in Controlled Substances
 - Center for Disease Control (VDH): \$948,000 for 4 robotic sample preparation instruments for toxicology and drug standards



Central Facility Update

- Biotech 2 in Richmond houses both DFS and OCME
 - Both DFS and OCME lease additional space
- Project Funded through Detailed Planning
 - 2014 Chapter 2 and 2016 Chapter 759/769
 - Total Approved Budget \$137,954,186
 - Approved Scope
 - 145,700 SF Expansion
 - 134,100 SF Renovation
 - 134,000 Parking Structure (351 Spaces)
- Construction Manager at Risk
 - SFCS is Project Architect
 - Skanska is providing Construction Management
- Approved Scope was expanded in FY19/FY20 budget
 - DGS investigating land options for new facility





WWW.DFS.VIRGINIA.GOV