



2017

ANNUAL REPORT

**MARYLAND STATE POLICE
FORENSIC SCIENCES DIVISION
STATEWIDE DNA DATABASE
REPORT**

April 2018

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STATEWIDE DNA DATABASE ANNUAL REPORT

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Executive Summary

The Statewide DNA Database was established in 1994 with the required collection of DNA samples from offenders convicted of rape and sexual offenses. The pool of qualifying offenders was expanded in 1999 to those convicted of qualifying crimes of violence and then again in 2002 to those convicted of all felonies and two specific misdemeanor crimes as well as attempts of those crimes. The latest expansion, which went into effect on January 1, 2009, includes the collection of DNA samples of those arrested and charged with qualifying crimes of violence, burglary, and attempts of those crimes.

During 2012, the Statewide DNA Database received national attention when the Maryland Court of Appeals found the collection of DNA samples from individuals arrested and charged with qualifying crimes to be unconstitutional. With that ruling, these collections ceased in April 2012; however, Maryland's Attorney General's Office requested and received an emergency stay in July 2012 and collections resumed. The collection of DNA samples from felony arrestees was heard by the U.S. Supreme Court in February 2013 and was found to be constitutional by a 5 to 4 vote.

Also in 2012, the Maryland General Assembly heard bills on the removal of the December 31, 2013 sunset date for the 2009 DNA Database expansion. The sunset was removed and the collection of DNA samples from individuals arrested and charged with qualifying crimes will continue.

As part of the requirements of the expanded portion of the law, the following annual report has been generated to detail total expenses (**\$1,849,050.87 for 2017**), list demographics of those from which samples have been collected, and categorize the outcomes of the investigations aided by the generation of hits from this new requirement of the law.

Background and Operations

The establishment of DNA databases emerged with the advent of DNA technology and its application to forensic sciences. Collected physical evidence now yields the potential to generate DNA profiles, which can be stored and searched utilizing computer software programs. DNA testing has become a powerful tool for linking suspects to crimes and for exonerating the innocent.

Congress authorized the FBI to establish an index of DNA identification records with the passing of the DNA Identification Act of 1994, Public Law 103 322. These DNA identification records were those of convicted felons and DNA profiles from evidence collected in association with the investigation of crimes. The FBI developed software, CODIS (Combined DNA Index System) which is used to manage this DNA data at three separate levels: Local, State and National. The local forensic DNA laboratories analyze case evidence and collect the data in the Local DNA Index System (LDIS), then upload the qualifying DNA profiles to the State DNA Index System (SDIS). State laboratories analyze evidence, generate DNA profiles from crime scenes for entry into SDIS, and analyze database samples from qualifying offenders. The DNA profiles both from casework and from offenders are then forwarded to the National DNA Index System (NDIS). Searches can result in candidate matches between cases or between cases and offenders. For matches that are confirmed, the information is then forwarded to the law enforcement investigators for further pursuance of the case.

In 1994, the State of Maryland followed the Federal lead and passed legislation to establish the Statewide DNA database: Public Safety Article Title 2, Subtitle 5, ACM (prior to 2003 referred to as Article 88B, Section 12A, ACM). This law required the collection of DNA samples from individuals convicted of rape in any degree, 1st-3rd degree sexual offenses, and child sexual abuse.

The list of qualifying convictions was expanded in 1999 to include not only those from 1994 but also convictions for Murder, 1st degree Assault, Robbery and attempts of those violent crimes. Yet another expansion of qualifying crimes occurred in 2002 with the list being expanded to include all felonies and two misdemeanor crimes: 4th degree burglary and breaking/entering a motor vehicle.

The most recent change of the Statewide DNA Database went into effect on January 1, 2009, when the law was expanded to include those arrested and charged with qualifying crimes of violence, 1st-3rd degree burglaries and any attempts of these crimes. Samples collected under this new revision are not to be analyzed until the arraignment date occurs. Provisions for automatic expungement were also dictated. These restrictions require the tracking of the charged individual through the court system for the assignment of arraignment dates and the final court disposition.

The Maryland Statewide DNA Database receives DNA evidence profiles from six DNA laboratories: Maryland State Police, Anne Arundel County Police, Baltimore City Police, Baltimore County Police, Montgomery County Police and Prince George's County Police. The case evidence DNA profiles are forwarded for uploading into the State Level of CODIS which is managed and administered by the Maryland State Police,-Forensic Sciences Division (MSP-FSD). The MSP-FSD is also the party responsible for the collection, analysis and storage of DNA samples collected from convicted offenders and those individuals arrested and charged with a qualifying offense.

In the past, the analysis of convicted offender samples and samples from those arrested and charged with a qualifying offense was outsourced to a commercial DNA typing laboratory for analysis. When outsourcing database samples, MSP-FSD performed in-house technical reviews on all commercial analytical data prior to its acceptance for uploading into CODIS. The year 2011 saw the gradual transfer from commercial outsourcing to internal analysis of the qualified samples. In 2012, the analysis of both convicted offender samples and the arrestee/charged samples was handled as part of the MSP-FSD in-house operations.

In preparation for the 2009 revision of the law, the Governor's Office of Crime Control and Prevention organized and hosted four regional summits to educate and update the law enforcement community as well as the judicial system on their vital responsibilities in enacting this law. MSP-FSD developed and disseminated instructional videos on the collection of DNA samples and the use of the newly designed DNA Collection kits.

The successful implementation of the new procedures required for the 2009 revision was directly due to the cooperative efforts of several groups. The Department of State Police has been fortunate to be partnered with the Governor's Office of Crime Control and Prevention (GOCCP), State Attorney's Offices, the Department of Public Safety and Correctional Services Information Technology and Communications Division, the Department of Corrections, the Department of Parole and Probation, Sheriff's Offices, Detention Centers, and the Judiciary. Combined efforts have gone to oversee the collection of samples, the transfer of court data, and verification that all individuals eligible for collections have had a sample taken and that those samples no longer eligible have been expunged.

In the first year of its implementation (2009), the newly expanded portion of the law resulted in the collection of 11,643 DNA samples from individuals arrested and charged with qualifying crimes. In 2009, a total of 4,213 arrested and charged DNA profiles were uploaded to CODIS and searched. There were 37 matches reported to law enforcement in 2009 and, as of the end of 2016, they had led to 19 arrests and 15 convictions.

The second year of operation (2010) resulted in the collection of 11,404 DNA samples from individuals arrested and charged with qualifying crimes. In 2010, a total of 6,030 arrested and charged DNA profiles were uploaded to CODIS and searched. There were 60 matches reported to law enforcement in 2010 and, as of the end of 2016, they had led to 22 arrests and 14 convictions.

The third year of operation (2011) resulted in the collection of 10,528 DNA samples from individuals arrested and charged with qualifying crimes. In 2011, a total of 4,327 arrested and charged DNA profiles were uploaded to CODIS and searched. There were 78 matches reported to law enforcement in 2011 and, as of the end of 2016, they had led to 30 arrests and 21 convictions.

The fourth year of operation (2012) resulted in the collection of 7,041 samples from individuals arrested and charged with qualifying crimes. In 2012, a total of 3,174 arrested and charged DNA profiles were uploaded to CODIS and searched. There were 45 matches reported to law enforcement in 2012 and, as of the end of 2016, they had led to 14 arrests and 11 convictions.

The fifth year of operation (2013) resulted in the collection of 9,889 samples from individuals arrested and charged with qualifying crimes. In 2013, a total of 4,180 arrested and charged DNA

profiles were uploaded to CODIS and searched. There were 83 matches reported to law enforcement in 2013 and to date they have led to 21 arrests and 17 convictions.

The sixth year of operation (2014) resulted in the collection of 9,373 samples from individuals arrested and charged with qualifying crimes. In 2014, a total of 4,430 arrested and charged DNA profiles were uploaded to CODIS and searched. There were 104 matches reported to law enforcement in 2014 and to date they have led to 24 arrests and 23 convictions.

The seventh year of operation (2015) resulted in the collection of 9,518 samples from individuals arrested and charged with qualifying crimes. In 2015, a total of 4,000 arrested and charged DNA profiles were uploaded to CODIS and searched. There were 136 matches reported to law enforcement in 2015 and to date they have led to 33 arrests and 30 convictions.

The eighth year of operation (2016) resulted in the collection of 8,974 samples from individuals arrested and charged with qualifying crimes. In 2016, a total of 3,555 arrested and charged DNA profiles were uploaded to CODIS and searched. There were 149 matches reported to law enforcement in 2016 and to date they have led to 28 arrests and 23 convictions.

The ninth year of operation (2017) resulted in the collection of 8,032 samples from individuals arrested and charged with qualifying crimes. A total of 3,629 DNA profiles from arrested and charged individuals were uploaded to CODIS and searched. There were 133 matches reported to law enforcement that year and to date they have led to 35 arrests and 25 convictions.

In each year, only a portion of samples collected from individuals arrested and charged with qualifying crimes are uploaded to CODIS. Some of the reasons that a sample may not end up in CODIS include:

- duplicate samples are collected
- sample is collected but does not qualify for collection
- sample is collected but a convicted offender sample is already on file
- sample is collected but the individual is not arraigned and analysis cannot begin
- sample is collected and analyzed but the charges do not result in a conviction and the sample is expunged

At the conclusion of 2017, the cumulative number of convicted offender DNA samples in CODIS was 126,261 and the cumulative number of arrested and charged DNA profiles in CODIS was 37,538. As a result, there have been 5,988 cumulative CODIS hits (inclusive of convicted offender, arrestee/charged, and casework hits).

The data contained within this report provides the information required by the Code of Maryland Regulations (COMAR 29.05.01.16). It should be noted, as per the reporting requirements, the Governor's Office of Crime Control and Prevention is responsible for collecting and reporting data on crime scene DNA evidence as supplied by local law enforcement and State Police. This information is contained within a separate document provided to the Office of Legislative Audits.

Reporting Requirements

The law states that not later than April 1, 2010, and annually thereafter, the Department of State Police shall compile an annual report to the Governor and to the General Assembly and this report be posted on the website of the Department of State Police not later than April 1 of each year.

The content of the Report is as follows:

1. Total DNA Database Expenses in 2017
 - a. Costs for scientists and support personnel
 - b. Costs for DNA Collection kits (including transport costs)
 - c. Operational Costs (new hardware, software and maintenance)
 - d. DNA Testing and Analysis Costs (equipment, outsourcing)
2. Funds provided by the State, by municipality
3. Individual Data and Analysis (racial demographics of all individuals charged with qualifying crimes upon arrest in designated categories)
4. Case-Specific Data Collection and Analysis.

I. Total DNA Database Expenses in 2017

This section presents the expenses incurred in 2017 to operate the Statewide DNA Database System. Following the requirements of the bill, this section is organized under four subsections. Salary and benefit cost is presented in subsection (a) while subsection (b) is for costs related to DNA Collection. Subsections (c) and (d), respectively, present operational costs for the DNA database and testing/analysis costs. Accordingly, the total expenses in 2017 to operate the Statewide DNA Database System were **\$1,849,050.87**

(a) Salary and Fringe Benefits Costs, for scientists and support staff assigned to the State Police Crime Laboratory (MSP-FSD) for DNA Database

In 2017, a total of \$1,325,624.17 was paid in salaries for scientists and support staff who were working on the Statewide DNA Database project. The corresponding fringe benefits cost during this period was \$98,917.53.

Costs for Scientists and Support Staff			
	Scientists (14)	Support Staff (6)	Total (20)
Salary Paid	\$996,895.17	\$328,729.00	\$1,325,624.17
Benefits-FICA	\$76,262.48	\$21,378.69	\$97,641.17
Benefits-Unemployment	\$996.90	\$279.46	\$1,276.36
Total Salary & Fringe Benefit*	\$1,074,154.55	\$350,387.15	\$1,424,541.70

The combined total of salaries and fringe benefits was \$1,424,541.70.

*Scientists and staff handle convicted offender samples and arrestee/charged samples.

(b) DNA Collection Kit Costs, including costs required to transport kits from collection sites to the Crime Laboratory (MSP-FSD)

The total costs of the DNA Collection kits purchased and the postage used for 2017 was \$160,295.00.

Item	Expense
Kits	\$140,400.00
Postage	\$19,895.00
Total DNA Collection*	\$160,295.00

*Includes costs of collection kits & postage for convicted offender samples & arrestee/charged samples.

(c) DNA Database- Operational Costs

DNA database operational costs include purchasing new hardware, software and maintenance of old and new hardware/software. In 2017, \$13,313.02 was spent to buy hardware for DNA database operations.

Item	Expense
Hardware	\$13,313.02
Software	\$0.00
Maintenance	\$0.00
Total DNA Database Operational Cost*	\$13,313.02

* Operational Costs cover purchases for convicted offender and arrestee/charged programs.

(d) DNA Testing and Analysis Costs

DNA testing and analysis costs for 2017 were \$250,901.15. The costs include in-house equipment purchased, associated maintenance of equipment, outsourced testing and in-house analysis.

Item	Expense
Equipment Purchased	\$43,000.00
Maintenance of Equipment	\$55,174.33
Outsourced Testing	\$0.00
In- House Analysis	\$152,726.82
Total DNA Testing & Analysis*	\$250,901.15

*In-house analysis covers the costs of the arrestee/charged sample analysis only, and the equipment purchased and its maintenance are used for both the convicted offender and arrestee/charged programs. Additional costs as to the in-house analysis of convicted offender samples were in the amount of \$134,418.85.

II. Funds made Available by the State

No specific DNA-related grant funding was available to the six forensic laboratories in the year 2017. The forensic laboratories were awarded \$127,100.00 under the 2017 Paul Coverdell Forensic Science Improvement Grants under which funding can be used to improve the quality and timeliness of forensic services for any discipline.

Recipient	Coverdell Grant Program Funds
A.A. County Police Department	\$18,159
Baltimore Police Department	\$18,150
Baltimore Co. Police Department	\$18,159
Hagerstown Police Department	\$18,159
Office of the Chief Medical Examiner	\$18,159
Maryland State Police	\$18,155
P.G. County Police Department	\$18,159
Total	\$127,100.00

III. Individual Data and Analysis

This section deals with racial demographics of all individuals charged in 2017 with qualifying crimes upon arrest in designated categories. The information was generated through the MSP Sample Tracking program.

Race	2009	2010	2011	2012	2013	2014	2015	2016	2017
Asian	65	63	44	33	37	56	60	56	54
African-American	7,092	7,009	6,354	4,108	6,185	5,761	5,927	5,566	4,995
White	4,066	3,985	3,913	2,794	3,523	3,388	3,374	3,176	2,730
Hispanic	328	259	93	54	31	72	61	84	168
Others	17	13	26	10	18	9	18	14	5
Unknown	75	75	98	42	95	87	78	78	80
Total	11,643	11,404	10,528	7,041	9,889	9,373	9,518	8,974	8,032

IV. Case-Specific Data and Analysis

This information was provided by the primary investigating agency that received the DNA hit. Due to an audit and reconciliation of data in early 2018, some values are different from those previously reported.

The number of Convicted offender (CO) DNA Matches (Hits) Resulting in Investigations, Formal Charges, and Convictions (2013 – 2017)

Type of Collection/Analysis	2013	2014	2015	2016	2017
DNA matches (hits)	195	218	249	253	260
Matches (hits) that resulted in the investigation of the individual identified in the match*	124	150	163	146	172
Investigations still ongoing**	13	20	44	47	69
Matches (hits) resulting in formal charges*	59	63	75	70	79
Matches (hits) resulting in convictions*	42	46	54	55	37
The number of cases still pending trial**	2	3	2	6	33
Convicted individuals exonerated by DNA matches in a calendar year	1	1	0	1	2
The number of matches resulting in convictions of individuals who were not already incarcerated*	12	19	18	26	27

* Report reflects end of year statistic, these numbers will increase as more DNA hit investigations are closed.

** Report reflects end of year statistics, these numbers will decrease as more DNA hit investigations are closed

The number of Charged/Arrestee (A) offender DNA Matches (Hits) Resulting in Investigations, Formal Charges, and Convictions (2013 – 2017)

Type of Collection/Analysis	2013	2014	2015	2016	2017
DNA matches (hits)	83	104	136	149	133
Matches (hits) that resulted in the investigation of the individual identified in the match*	44	57	73	82	89
Investigations still ongoing**	7	9	24	32	36
Matches (hits) resulting in formal charges*	21	24	33	28	35
Matches (hits) resulting in convictions*	17	23	30	23	25
The number of cases still pending trial**	0	0	0	2	8
Convicted individuals exonerated by DNA matches in a calendar year	0	0	0	0	0
The number of matches resulting in convictions of individuals who were not already incarcerated*	5	8	20	12	11

* Report reflects end of year statistics, these numbers will increase as more DNA hit investigations are closed

** Report reflects end of year statistics, these numbers will decrease as more DNA hit investigations are closed.

Breakdown of 2017 matches (hits) to a convicted offender sample or charged/arrestee sample that resulted in convictions (n=62) and the prior offenses of the associated individual:

Crime Associated with Conviction	Prior Offenses	Number of Convicted Offenders	Number of Arrestees/Charged
Sex Offense	Theft, Assault, Burglary, CDS, Carjacking, Armed Robbery, Robbery, Attempted Murder, Kidnapping, Rape, Battery, Child Abuse, False Imprisonment, Hand Gun Violation	3	3
Assault	CDS, Assault, Burglary, Theft	1	3
Robbery	Theft, Robbery, Armed Robbery, Assault, CDS	4	4
Burglary	Robbery, Theft, Assault, Burglary, Armed Robbery, CDS, Rogue and Vagabond, Battery, Robbery, Arson	21	12
Weapons Offense	Armed Robbery, Assault, Robbery, Theft	1	0
Theft	Theft, Burglary, Rogue and Vagabond, Assault, CDS, Sex Abuse, Sex Offense	1	0
A&R	Theft, CDS, Assault	1	0
Shooting	CDS	1	0
Home Invasion	CDS	1	0
CDS	CDS, Theft	2	0
Motor Vehicle Theft	Theft, Burglary, CDS	1	0
Recovered Property	Theft, Robbery, Assault, CDS	0	1
Armed Car-Jacking	Theft, Robbery, Assault	0	1
Att. Breaking and Entering	Theft, Robbery, Assault	0	1
	Total	37	25