



# COMMONWEALTH of VIRGINIA

## FORENSIC SCIENCE BOARD RAYMOND F. MORROGH, CHAIRMAN

November 1, 2010

The Honorable Lacey E. Putney  
Chair, House Committee on Appropriations  
P.O. Box 127  
Bedford, VA 24523

The Honorable Charles J. Colgan  
Chair, Senate Committee on Finance  
10660 Aviation Lane  
Manassas, VA 20110-2701

The Honorable Janet D. Howell  
Chair, Virginia State Crime Commission  
P.O. Box 2608  
Reston, VA 20195-0608

### **Re: Annual Forensic Science Board Report**

Dear Delegate Putney and Senators Colgan and Howell:

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:

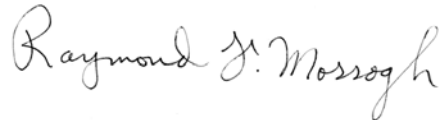
1. New major programs and plans for activities of the Department of Forensic Science and elimination of programs no longer needed;
  2. Policy and priorities in response to agency need;
  3. General fiscal year operational budget and any major changes in appropriated funds;
  4. Actions to foster and 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 purpose and intent of this chapter;
- and

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Annual Forensic Science Board Report

6. Any recommendations submitted to the Board or the Director by the Scientific Advisory Committee.

The 2010 Report of the Forensic Science Board concerning these matters is attached. Please do not hesitate to contact me at (703) 246-2776 if you have any questions or would like additional information.

Sincerely,

A handwritten signature in cursive script that reads "Raymond F. Morrogh".

Raymond F. Morrogh  
Commonwealth's Attorney, County of Fairfax  
Chair, Forensic Science Board

Enclosure

cc: The Honorable Marla G. Decker  
Members, Forensic Science Board  
Peter M. Marone  
Division of Legislative Automated Systems

rfm/gdj

**FORENSIC SCIENCE BOARD  
2010 ANNUAL REPORT  
Pursuant to § 9.1-1110.B of the Code of Virginia**

**1. New major programs and plans for the activities of the Department of Forensic Science (“DFS” or “Department”) and the elimination of programs no longer needed**

**Review of programs and plans; recommendations, if any:**

**Transition to Capillary Electrophoresis for DNA Analysis**

In April 2008, DFS began the transition from the use of gel technology for DNA analysis to the implementation of a platform for DNA analysis utilizing capillary electrophoresis (“CE”). To accomplish this transition, DFS purchased eight Applied Biosystems Genetic Analyzers (ABI 3130xl) and installed the instruments in its labs. Protocols for using CE were submitted to the Department’s Scientific Advisory Committee (“SAC”) for review. Upon recommendation of the SAC, the Forensic Science Board approved use of the CE protocols on August 12, 2009. DFS staff attended intensive training courses in capillary electrophoresis at Marshall University in West Virginia. Training was completed by October 2009, and the DNA Data Bank and the four regional laboratories implemented the new DNA platform at the beginning of 2010. The Department has observed an increase in productivity with this platform change. In 2009, an average of 349 forensic biology cases were completed per month. In the first six months of 2010, using CE, the average number of cases completed each month increased by 18%, to 412.

**Breath Alcohol Instruments and Training of Operators**

In October 2008, DFS began installing Intox EC/IR II evidential breath alcohol testing instruments in local, state, and federal enforcement agencies across Virginia. These replaced the Intoxilyzer 5000 instruments that had been used in the Commonwealth for more than 12 years. Full deployment of replacement instruments was completed by the end of April 2009. DFS maintains and certifies the accuracy of the 169 instruments currently in use. To date, the Breath Alcohol Section has trained and certified more than 5,100 operators on the Intox EC/IR II breath test instrument.

**Western Laboratory Expansion**

The 2008 Appropriation Act authorized DFS to explore the possible purchase of land for expansion or replacement of its Western Laboratory in Roanoke, Virginia. On March 31, 2009, Governor Kaine approved funding for the purchase of property adjacent to the Western Laboratory from the Roanoke County School Board. The transfer of ownership of the property was completed in November 2009. As a consequence of the state revenue picture, no plans have been established as yet to develop this property for expansion of the Western Laboratory.

## **Eastern Laboratory Expansion**

The renovation of vacant space at the Eastern Laboratory building in Norfolk, to allow for expansion of DFS laboratory facilities, continued throughout 2010. The project, planned as four phases, is expected to be completed in 2011.

Phase I: Construction of the Latent Prints Section and Administrative Office on the 5<sup>th</sup> floor is anticipated to be completed by the end of December 2010.

Phase II: Renovation of the vacated space on 4<sup>th</sup> floor to expand the Firearms and Biology sections is projected to be completed by the end of March 2011.

Phase III: The design has been completed for parking lot re-configuration to increase the number of parking spaces. Construction is currently projected to occur in the spring of 2011.

Phase IV: The design for the balance of the 5<sup>th</sup> floor, to accommodate expansion of the Toxicology and Controlled Substances laboratories, is in progress. Construction is currently projected to commence in the summer of 2011.

## **Post-Conviction DNA Testing Program and Notification Project**

### ***Post-Conviction DNA Testing Program***

The project initiated in 2005 at the direction of former Governor Mark Warner to perform DNA testing of biological evidence retained in certain archived DFS serology case files dating from 1973 through 1988 continued throughout 2010. Of approximately 534,000 DFS case files from the relevant time period that were individually reviewed, 800 case files meet the following criteria:

- the file included cuttings, swabs, or threads with human biological evidence;
- the file identified at least one known suspect; and
- a known suspect was convicted of a felony crime against a person.

Both state and federal funding have supported the testing program. DFS utilized \$1,422,000 provided by the Governor to pay employee wages and the testing of more than 300 cases from February 2007 to June 2008, when federal funds totaling more than \$ 4.5 million were awarded to DFS to pay for the identification and testing of a then-estimated 700 cases through a grant from the National Institute of Justice (NIJ). A Cooperative Agreement governing the award of these funds was executed on September 24, 2008.

The focus of the program to date has been the testing of evidence in cases that meet the NIJ criteria for payment under the federal grant. Those are cases in which a suspect was convicted of rape, murder, or non-negligent manslaughter. Within this group of cases, testing priority was given to cases relating to persons who were known to be then incarcerated. DNA testing has been conducted on evidence from some cases that ultimately were determined to be

not NIJ grant-eligible. In general, however, the testing of the “state-eligible” cases (those in which suspects were convicted of serious crimes against persons, other than rape, murder, or non-negligent manslaughter) has generally been deferred until the completion of testing and reporting of the grant-eligible cases. It is the intention of the Department to complete the testing of these cases as well. DFS remains hopeful that NIJ grant criteria may be modified in the future to allow for the testing of evidence in additional cases.

As of October 15, 2010, DFS was able to report the following data relating to the DNA testing program:

- **640** cases meeting the NIJ grant criteria (i.e., a suspect was convicted of rape, murder, or non-negligent manslaughter) have been sent for testing
- **108** cases in which a suspect was convicted of another violent crime against a person (“state cases”) have been sent for testing
- DNA test results have been completed by the contract laboratory for **615** cases
- Certificates of Analysis have been issued by DFS in **467 cases**
- **132** Certificates of Analysis have been sent to notified Suspects upon request
- In cases for which Certificates of Analysis have been issued, DNA test results indicated that **50** suspects convicted of NIJ grant-eligible crimes and **26** suspects not convicted of NIJ grant-eligible crimes were not indicated (i.e., eliminated as a contributor of DNA) on evidentiary samples in their case.
- Hits to DNA profiles in the Virginia/National DNA databanks of persons not named in the case file have been made in **15** of the cases.

### *Convicted Suspect Notification Project*

Since the fall of 2008, the Department of Forensic Science has provided staff support to carry out the responsibility imposed on the Forensic Science Board by the General Assembly, under language that first appeared in the 2008 Appropriations Act, to notify convicted defendants of the existence of physical evidence found in their old DFS case files and that such evidence was available for DNA testing. Using address information provided by the Department of Corrections and the Virginia State Police (VSP), and upon advice of the Office of the Attorney General (OAG), more than 1,100 notification letters were mailed from September through December 2008 in an effort to contact as many of 1,031 convicted persons then believed to be entitled to notification. The notification letters requested a response from the addressee and contained postage paid response cards. These mailings resulted in total of 317 confirmed notifications (including hand-delivery to 169 inmates, enclosed white postcard confirmations returned, or confirmation from the Mid-Atlantic Innocence Project). A significant percentage of these confirmed deliveries were to persons in the custody of the Department of Corrections. Based principally on government records, it also was confirmed at that time that 206 of the convicted persons were then deceased. A total of 528 notification letters from the two rounds of mailings were returned as “undeliverable,” and addresses for 58 persons remained undetermined at that time. Notification letters continued to be mailed throughout 2009, as updated addresses were obtained.

Following recommendations for facilitating notifications offered by both the Forensic Science Board and the Virginia State Crime Commission (VSCC), the 2009 Session of the

General Assembly enacted emergency legislation authorizing the Board to utilize the services of pro bono attorneys and other volunteers to assist with the notification project. The legislation was signed into law by Governor Kaine on March 23, 2009. Thereupon, the Board adopted a work plan for implementing the legislation and utilizing pro bono attorneys and other volunteers to assist in the notification project. The Executive Director of the Crime Commission, who serves on the Board as designee of the VSCC Chair, became chair of a Notification Subcommittee. The Subcommittee enlisted the assistance of both the Crime Commission staff and the Mid-Atlantic Innocence Project (MAIP) in coordinating the training and use of pro bono attorneys and other volunteers and secured a commitment of cooperation from the Circuit Court Clerks Association. In 2009, seven training sessions for volunteers, approved for CLE credit by the Virginia State Bar, were conducted by the MAIP around the Commonwealth, and the OAG prepared waiver of liability and confidentiality agreement forms required of volunteer participants under the new law. DFS provided to the Notification Subcommittee Chair its database records identifying cases in the testing program and all information in its possession pertaining to the identification of persons entitled to notification.

Initially, 110 cases involving suspects who then still required notification were selected for assignment to the pro bono volunteers. From a corps of approximately 100 volunteers formed in the fall of 2009, assignments to locate and present notification letters to specified convicted case defendants were initially made to 65 pro bono attorneys and law students. In the first eight months of 2010, the volunteer effort proved challenging and produced marginal results. A number of volunteers dropped out of the program, citing time and schedule conflicts. Nonetheless, to date, the Notification Subcommittee reports that volunteers have completed 22 notifications, nearly all by personal delivery, to persons located in the Commonwealth.

Although the use of pro bono volunteers was not as productive as had been hoped in the first year of this effort, cases that have not been completed will be reassigned. Training materials are being revised, and additional training sessions are being scheduled. Because DFS received approval from NIJ in May 2010 to modify the scope of its 2008 Post-Conviction DNA Testing Assistance Grant to allow sub-awards of \$53,127 to the VSCC and \$54,971 to the MAIP, both are able to continue their coordination activities with support for personnel costs and other expenses. Importantly, the funding has allowed the VSCC to utilize a search service offered by Westlaw, called West Batch Processing. Among other things, it validates lists of names and addresses, adds telephone numbers, identifies deceased individuals, and researches bankruptcy data. Crime Commission staff expects to utilize its full capabilities to verify DFS data records and locate individuals still requiring notification. The research database was used in 2010 to confirm that 28 case suspects are deceased.

As of the preparation of this report, 876 such persons are believed still alive and identified as entitled to notification. DFS has confirmed notification to 360 persons (including hand-delivery to inmates, enclosed postcard confirmations returned, confirmation from the Innocence Project, or delivery by pro bono volunteers). Records reflect, therefore, that 516 notifications remain unconfirmed.

## **Study of Familial DNA Searching**

During the summer of 2010, media reports of the arrest in California of the long-sought “Grim Sleeper” murder suspect resulted in several requests to DFS to look at the advisability and feasibility of conducting familial DNA searches in Virginia. Under current DFS procedures, a DNA profile developed from biological material collected at a crime scene can be checked against known profiles in Virginia’s DNA data base. The objective in conducting such a search is to find an exact match, if one exists among profiles in the data bank. It is possible with different software, specially developed for such a purpose, to conduct a search that is less stringent, in order to identify profiles that are not identical but, rather, similar enough to point to a possible family member of the person who deposited DNA on the evidence sample (since relatives share genetic similarities). Such “familial searching” typically results in a large number of associations that then need to be refined by further DNA testing. Even after additional Y-STR DNA testing, the process may still identify a number of DNA profiles of persons who may be related to the individual whose DNA was found on the evidentiary sample. These would all be leads requiring some form of law enforcement investigation. An actual family member ultimately may or may not be found among the similar profiles identified in the data bank.

In the states that have performed familial searches, California and Colorado, procedures have been established both to identify cases appropriate for such searches and to conduct the necessary follow up investigations. Both states have had to develop and validate their search software and commit the necessary resources to these efforts.

In light of the interest in this subject, a brief overview of the procedures involved in conducting familial DNA searches and the practical and policy issues implicated by the process was presented at the meeting of the Virginia Forensic Science Board on August 11, 2010. The overview included reference to a review of familial searching undertaken by a subcommittee of the Virginia Scientific Advisory Committee in 2007. The Board asked the Department of Forensic Science to study familial DNA searching, including existing software, the potential cost of the Department’s implementation, and the validation and efficacy of familial DNA searching, and to report back to the Board at its October 15, 2010 meeting.

At the October meeting, DFS Biology Program Manager Brad Jenkins presented the Department’s report to the Board. It included an explanation of genetic inheritance and the factors that provide the basis for DNA testing and data bank searches. The report reiterated that typical DNA data bank searches, regarded as “moderate stringency” searches, are performed to determine if a DNA profile in the state database is consistent with the DNA profile identified on an item of evidence from a crime scene. Using specialized search software designed to perform a familial search, the DNA database could be searched for “partial matches.” Such a search could identify profiles in the data bank that share sufficient genetic similarities with the evidence profile to suggest the profiles *may be* attributed to persons who are related to the person who deposited DNA on the evidence sample (*i.e.*, a parent, child or sibling). Many – and possibly all -- of the identified persons, however, will not be biologically related to the donor of the evidence profile.

The Department reported that additional DNA “lineage testing” and kinship statistical analyses can rank and narrow the field of candidates to those most likely to be a close relative of the person who deposited DNA on the evidence sample. The narrowed field of persons would be regarded as “leads,” and a law enforcement investigation would then be required to determine if any such identified persons appear to have a relative who may be the donor of the evidence profile.

The Department’s report also included the following:

- In the United States, only California, Colorado and the city of Denver conduct familial searches of their DNA data banks. The requirements and processes for doing so are set out in California Department of Justice and Colorado Bureau of Investigation policies.
- Familial searches have been conducted in the United Kingdom (UK) since 2002.
- No state laws authorize familial DNA searching, and two jurisdictions, Maryland and the District of Columbia, specifically prohibit familial searches.
- California and the UK have limited familial searches to the investigation of violent crimes, when all other investigative leads have been exhausted.
- Virginia legislation may be needed to specify criteria for conducting familial searches and releasing search results to law enforcement.
- To conduct familial DNA searches, DFS would have to acquire the software needed, validate the software according to its accreditation requirements, and train staff to evaluate the genetics of potential familial relationships identified through partial match searches. The cost to accomplish this is estimated to be approximately \$100,000.
- California’s data bank is comprised of approximately 1.2 million samples, four times the size of Virginia’s data bank. When familial searches are performed there, follow-up lineage testing is limited to 200 identified candidates per search. If, as an example, Virginia subjected only 50 identified samples per case to lineage testing, Virginia could conduct 12 familial searches per year with current staff resources, at an estimated cost of \$65,040.
- It was reported to DFS that California spent \$10 million acquiring the ability to perform familial DNA searches and conducting ten investigations in which familial searches were used to develop investigative leads. These costs reportedly included the law enforcement investigations needed to narrow the field of candidates who may or may not have been relatives of the evidence DNA donor. California has identified one suspect among the ten cases.
- The DFS report identified the following considerations, among others, in implementing familial DNA searches in Virginia:
  - What criminal cases should be eligible for familial searching?
  - Should searches be conducted on arrestee samples in the data bank?
  - What procedures are needed to balance the privacy interests of innocent persons *versus* the limited possibility of identifying a criminal suspect?

Following the DFS report, the Commonwealth’s Attorneys for Prince William County and Chesterfield County encouraged the Board to support the implementation of familial DNA searching in Virginia. After discussion, the Board unanimously approved a motion



recommending that the General Assembly consider the implementation, funding and use of familial DNA searching in the Commonwealth.

## **2. Policy and priorities in response to agency needs**

### **Grants**

Since November 1, 2009, funding has been available or been awarded to DFS under the following grant programs:

***FY 08 Forensic DNA Backlog Reduction Program*** - 2008-DN-BX-K036, \$942,280 from the National Institute of Justice (NIJ). Funding provided to reduce the forensic casework backlog in the Forensic Biology Section.

***FY 09 Forensic DNA Backlog Reduction Program*** – 2009-DN-BX-K080, \$950,167 from NIJ to reduce the forensic casework backlog in the Forensic Biology Section.

***FY 09 Convicted Offender/Arrestee DNA Backlog Reduction Program*** – 2009-DN-BX-K020, \$171,579 from NIJ to eliminate the backlog in the DNA data bank.

***2008 Post-Conviction DNA Testing Assistance Program*** - 2008-DN-BX-K128, \$4,520,295 from NIJ. Funding provided to pay the contract fees associated with the DNA analysis of a minimum of 700 post-conviction cases. Grant period extended to March 31, 2011. Change of scope granted to provide funding to Virginia State Crime Commission and Mid-Atlantic Innocence Project for their costs associated with case review and notification of convicted persons.

***Research and Development in the Area of Controlled Substances Detection and Analysis*** - 2008-DN-BX-K140, \$49,774 from NIJ. Funding provided to develop a Thin Layer Chromatography Method for the separation of enantiomers using chiral mobile phase additives.

***FY 08 Using DNA Technology to Identify the Missing*** - 2008-DN-BX-K154, \$443,682 from NIJ. DFS is partnering with the Office of Chief Medical Examiner (“OCME”) in a joint effort to conduct DNA analysis and profiling of human remains currently in OCME storage.

***2009 Paul Coverdell Forensic Science Improvement Grant Program*** - \$164,951 to DFS through DCJS for renovation of existing space at the Central Laboratory to create lab work space and for the modification of office space.

***2010 Highway Safety Grant Program*** – K8-2010-50105-3725, \$136,469 from DMV to conduct breath alcohol training for law enforcement officers statewide.

***FY 09 Solving Cold Cases with DNA*** - \$490,960 from the NIJ to pay the salaries and benefits of two new full-time scientists and to purchase the necessary equipment and supplies to conduct in-house DNA analyses on approximately 120 cold cases.

***2010 Byrne Justice Assistance Grant*** – 11-A2148AD08, \$19,000 in federal funds from DCJS for the training and personal certification testing of Forensic Science Academy students and graduates.

***2010 Byrne Justice Assistance Grant*** – 11-A2147AD08, \$71,246 in federal funds from DCJS for the acquisition of four computer systems and associated hardware, software, and training to improve the services provided by the DFS Digital and Multimedia Evidence Section.

***2011 Highway Safety Grant Program*** – K8-2011-51106-4048, \$173,958 from DMV to conduct breath alcohol training for law enforcement officers statewide.

***2010 Paul Coverdell Forensic Science Improvement Grant Program*** – 2010-CD-BX-0038, \$311,246 to DFS through DCJS to conduct training in the Chemical Analysis and Physical Evidence Sections and to purchase equipment and supplies for the Chemical Analysis Section.

***FY 10 Using DNA Technology to Identify the Missing*** – 2010-DN-BX-K130, \$468,640 from NIJ to continue the joint effort between DFS and the OCME to conduct DNA analysis and profiling of human remains currently in OCME storage and other cases as submitted by law enforcement.

***FY 10 Forensic DNA Backlog Reduction Program*** – 2010-DN-BX-K120, \$920,520 from NIJ to reduce the forensic casework backlog in the Forensic Biology Section.

In addition, DFS submitted an application for funding under the following programs, but did not receive a grant award:

***FY 10 Forensic Science Training Development and Delivery Program*** – DFS requested a total of \$1,584,677 from NIJ in three separate applications under this solicitation for training projects in the Breath Alcohol Section, the Forensic Academy, and Human Resources. Each project was proposed to last two years.

***FY 10 Solving Cold Cases with DNA*** – DFS requested \$482,971 from NIJ to pay the salaries and benefits of two new full-time scientists and to purchase the necessary equipment and supplies to continue to conduct in-house DNA analyses on cold cases.

### **3. General Fiscal Year Operational Budget and any Major Changes in Appropriated Funds**

#### **Budget Review**

The final DFS FY 2010 general fund appropriation for operating expenses was \$32,636,565, which included Governor's spending reductions totaling approximately \$4.43 million. The reductions were a combination of approximately \$1.93 million base budget reductions initiated in prior fiscal years, a continuation of the 0.5% Administration reduction (\$0.42 million), approximately \$1.09 million in reductions to be achieved through one-time savings, and approximately \$0.99 million in reductions that are to be offset by reduced payments to employees and other agencies.. The final DFS FY 2010 federal fund appropriation (federal grants) was \$3,162,748. In addition to positions held open to achieve the required budget reductions, DFS had one-time facility contract savings and extended vacancies that allowed the agency to return \$500,000 to the General Fund at the end of FY10.

The 2010-2012 biennial budget enacted in the 2010 Session provides DFS a general fund appropriation for operating expenses of \$34,656,950 in FY11 and \$34,682,602 in FY12. The authorized general fund appropriation reflects the cumulative effects of various administrative adjustments and Appropriation Act provisions to cover additional items, such as costs related to the U.S. Supreme Court's *Melendez-Diaz* decision and to reduce administrative expenses by 2 FTEs and \$271,983 and \$282,728 in the respective years of the biennium. The current DFS FY11 federal fund appropriation is \$1,505,984.

#### **4. Actions to foster and promote coordination and cooperation between the Department and the user programs which are served**

##### **Review of programs; recommendations, if any:**

##### **Conferences, Presentations, etc.**

DFS representatives have attended regional meetings and statewide conferences of its user agencies to give presentations on relevant forensic science issues and be available for feedback and comment on the services that the Department is providing. This included meetings and conferences for investigators, sheriffs, chiefs of police, and commonwealth's attorneys. DFS also continues to organize the Virginia Forensic Science Academy Annual Retraining Seminar, held this year from August 31 to September 3, which provides Academy graduates updates on DFS services and practices and serves as a mechanism for DFS to receive feedback on the services it provides to user agencies.

Importantly, on August 31, 2010, DFS presented the first of a continuing series of 8-hour Crime Scene Investigation workshops to help Forensic Science Academy graduates prepare for the examination to qualify as Certified Crime Scene Investigators (CCSI) by the International Association for Identification (IAI). The workshops are presented by DFS trainers, who themselves are qualified as International Association for Identification Certified Crime Scene Analysts.

## **Backlogs**

### **Status of Backlogs on October 1, 2010**

Section	Ending Backlog (cases)	Average Turn Around Time (days)	Cases Over 30 days
Controlled Substances	1534	22	157
Firearms	293	30	86
Forensic Biology	996	107	685
Latent Prints	656	69	411
Questioned Documents	13	27	4
Toxicology	1312	47	669
Trace Evidence	149	46	69

### **Impact of the United States Supreme Court's Decision in *Melendez-Diaz v. Massachusetts***

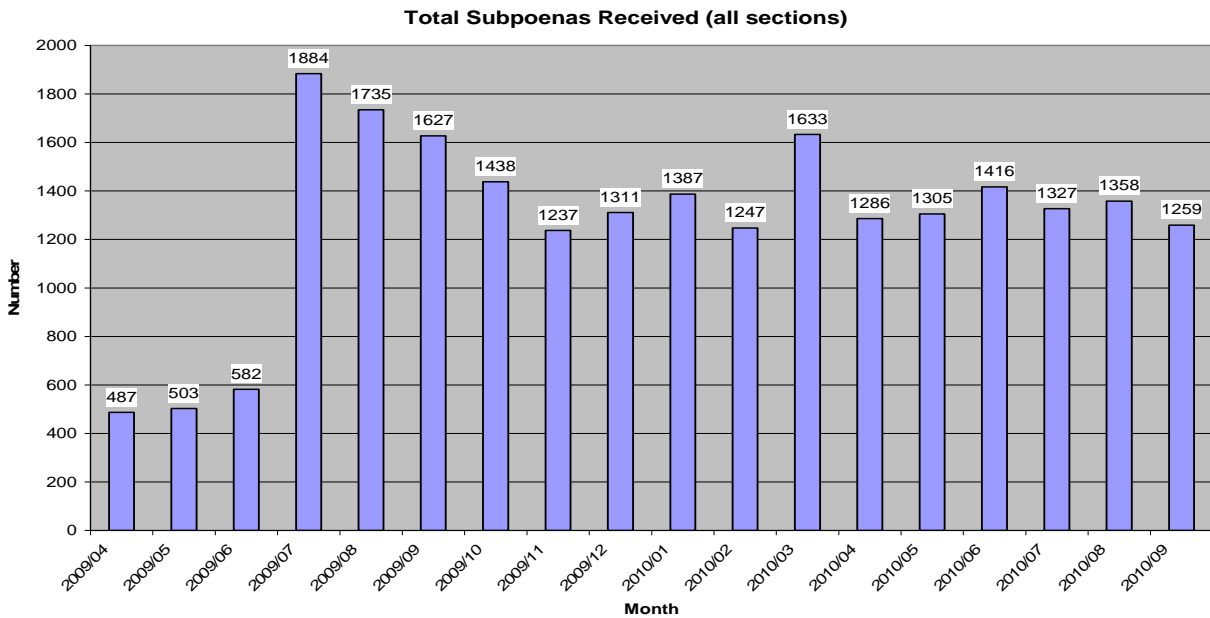
On June 25, 2009, the Supreme Court of the United States issued a decision in *Melendez-Diaz v. Massachusetts*, holding that a Certificate of Analysis issued by the state forensic laboratory in Massachusetts could not stand alone as evidence of the nature and weight of a controlled substance in a criminal case for drug distribution. The Court held that in order to preserve the defendant's Sixth Amendment right to confront witnesses against him, the analyst must appear in person to testify. The majority opinion also spoke approvingly of "notice-and-demand" statutes that require prosecutors to give pretrial notice of their intent to proceed on a Certificate of Analysis alone and allow the accused a period of time prior to trial to object and require the presence of the analyst.

The Court's decision had an immediate and measurable impact on DFS. The number of subpoenas for analysts to testify in criminal trials soon tripled, and the amount of time analysts were required to spend out of the laboratory, on court travel and appearances, rose dramatically.

The General Assembly met in a called Special Session barely eight weeks later, on August 19, 2009, to consider legislation aimed principally at addressing Virginia's "notice-and-demand" statutes. Emergency legislation was enacted that conformed Virginia laws more closely to the examples of other states' laws cited with approval by the Supreme Court. The Special Session legislation helped in establishing an orderly process for providing a defendant (i) notice of a prosecutor's intention to place a laboratory certificate of analysis or DUI breath-test result into evidence without the testimony of the analyst or breath test instrument operator and (ii) the opportunity to object to the admission of the records and require that the person who performed the analysis or examination appear and testify. In the several months that followed, however, experience demonstrated that a number of clarifying amendments were still needed. These passed with relatively little controversy in the 2010 Regular Session. In particular, amendments clarified that (i) consistent with the majority opinion in *Melendez-Diaz*, a forensic laboratory report may be admitted into evidence at a preliminary hearing without the testimony

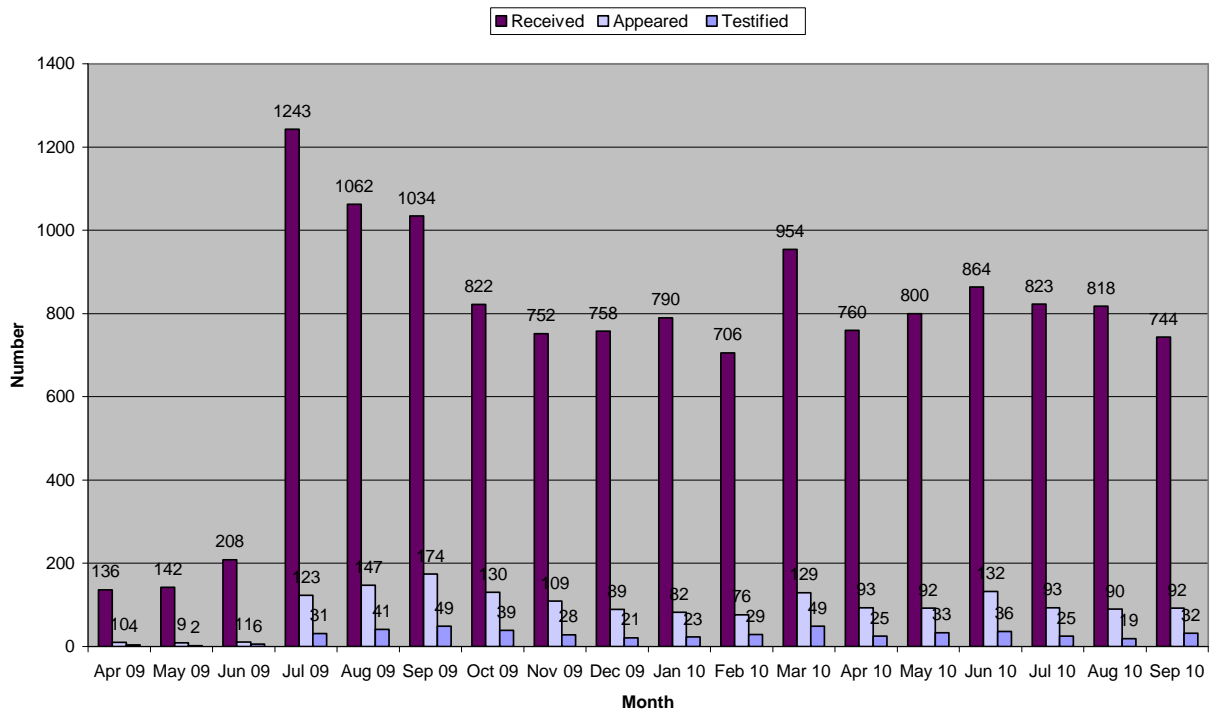
of the analyst who prepared the report, and (ii) when an analyst appears in court on the day of trial to testify, the analyst’s certificate of analysis shall be admissible. Legislation also was enacted providing procedures for testimony via two-way video conferencing and requiring that a defendant who demands the testimony of an analyst shall pay \$50 in court costs for expenses related to the analyst's appearance if the defendant is convicted.

DFS has closely monitored the continuing impact that the *Melendez-Diaz* decision has had on the number of subpoenas received by Department forensic analysts, the frequency with which analysts in fact are required to appear at hearings and trials, the amount of time they spend out of the laboratory for court travel, and the resulting impact on section backlogs. One statistic remains very clear – the numbers of subpoenas received by forensic analysts has plateaued at a level greatly exceeding pre-*Melendez* numbers. Specifically, for the most recent quarter (July through September 2010), DFS analysts received 2.5 times the number of subpoenas for court appearances than they did in the quarter just preceding the issuance of the Court’s decision (April through June 2009). The greatest impact over the past year was experienced by the Controlled Substances, Toxicology and Breath Alcohol Sections, with Controlled Substances analysts continuing to spend ten times the number of hours each month on court travel than they did prior to the decision. The other DFS sections, possibly as a consequence of legislative changes, appear to be experiencing a downward trend in terms of subpoenas received and appearances required.



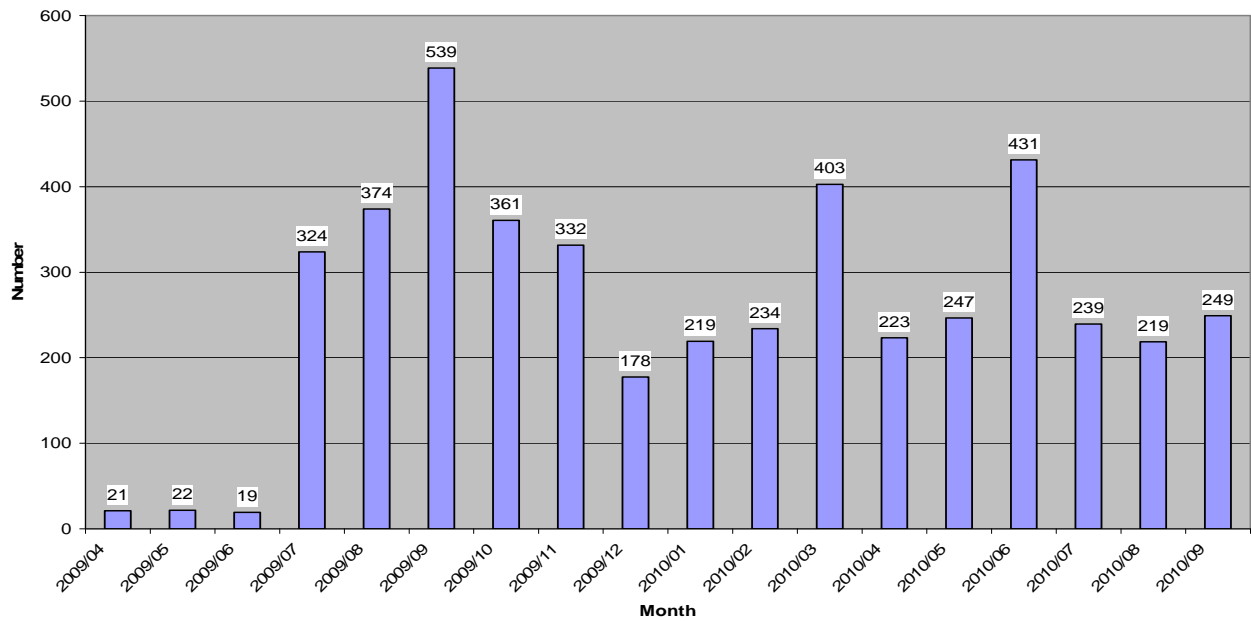
Ex. 1

### Controlled Substances Subpoenas



Ex. 2

### Controlled Substances Hours Out of Laboratory



Ex. 3

## **Toxicology Department Staffing**

DFS has kept the Forensic Science Board apprised in 2009 and 2010 of its staffing levels and recruitment efforts with regard to the Department's Toxicology Section. Toxicology has been one of the sections that experienced an increase in subpoenaed appearances after the *Melendez-Diaz* decision was issued. It became a focus of concern as DFS faced various challenges in its effort to recruit and retain doctoral-level toxicologists to provide interpretive pharmacological testimony and support the Office of the Chief Medical Examiner in their death investigations.

The November 1, 2009 Report reflected the departure for other professional opportunities of five DFS Toxicology staff members during the preceding year. It also noted the efforts undertaken by the Department to recruit and fill vacant positions and otherwise support the Section. In that year, DFS hired a Toxicologist for the Central Laboratory, promoted two Forensic Laboratory Specialists to Toxicology Forensic Scientists, transferred two Controlled Substances Forensic Scientists to the Toxicology Section; and initiated recruitment efforts to fill a Central Laboratory Toxicology Supervisor position and Toxicologist positions for the Eastern and Northern Labs.

Even in the face of three departures from the Section in 2010, the recruitment momentum continued. The Toxicologist hired in 2009 to fill the vacant position in the Central Laboratory resigned in February 2010 to enter the research field. That vacancy was filled in August 2010. The vacant Central Laboratory Toxicology Section Supervisor position was filled in May 2010.

The two additional Toxicology positions, recruited for the Eastern and Northern Laboratories, were filled in June 2010. An additional Toxicologist position was approved for the Central Laboratory, and a candidate was selected who started employment in October 2010.

In the last quarter of calendar year 2010, there are only two vacancies in the Toxicology Section statewide. One of the Forensic Laboratory Specialists, who was trained and promoted to Forensic Scientist in the Western Laboratory, resigned. The recruitment process to fill that position is in the final stages. Finally, a Toxicology Group Supervisor resigned from the Central Laboratory in August 2010 to work in the private sector. Applications for this position have been received, and the candidate selection process is in progress.

### **5. Rules and Regulations necessary to carry out the purposes and intent of this chapter**

**Review of new rules and regulations; recommendations, if any:**

#### **Regulations for Obtaining Information From the DNA Data Bank and Procedures for Verification and Authorization of Persons Requesting Information From the Data Bank (6 VAC 40-60)**

At its January 6, 2010 meeting, the Board voted to withdraw from the ongoing regulatory process regulations initially proposed in 2007 to comply with Virginia Code §19.2-310.5, which

requires that regulations be adopted by the Department of Forensic Science that outline the method of obtaining information from the Virginia DNA data bank and procedures for verifying the requestor's identity and authority to request such information. As originally proposed, the regulations were limited to detailing the method law enforcement officers would use to obtain information from the Virginia DNA data bank regarding whether or not a specific individual's profile is in the data bank. A concern arose among Board members, however, that the regulations were, in fact, too narrowly drawn. At its May 12, 2010 meeting, the Board considered a draft of revised regulations and voted to proceed with a new Notice of Intended Regulatory Action (NOIRA). The revised draft regulations broadly address methods of obtaining any information from the Virginia DNA data bank. The Department submitted the NOIRA to Virginia's Town Hall on June 3, 2010. The public comment period closed September 1, 2010. On October 15, 2010, the Board voted to submit the proposed regulation to the Virginia Town Hall for administrative review and public comment.

## **6. Recommendations submitted to the Forensic Science Board or the Director by the Scientific Advisory Committee**

### **Scientific Advisory Committee recommendations and actions:**

- In completion of the Committee's review of the Department's Capillary Electrophoresis (CE) protocols for the Powerplex 16 instrumentation, additional data was requested and review undertaken of (i) the statistical basis for the 4-locus minimum for inclusion and (ii) the stochastic threshold, consistent with that being considered by the Scientific Working Group on DNA Analysis Methods (SWGAM), a group of forensic scientists that meets under the guidance of the Federal Bureau of Investigation (FBI). SWGAM is the body that proposes and recommends revisions to National Quality Assurance Standards. Ultimately, the Biology Subcommittee, chaired by Dr. Norah Rudin, recommended that the Department move forward on implementation.
- That in light of the National Research Council's National Academy of Sciences 2009 Report on *Strengthening Forensic Science in the United States*, that the Chairman of the SAC and Director Marone prepare a proposed work plan for the systematic review of all DFS protocols by the SAC. The work plan that was proposed and accepted involves the following:
  - When not tasked with other projects, the SAC will look at protocols of each of the forensic disciplines separately;
  - At each SAC meeting, a DFS Program Manager will make a presentation regarding present protocols;
  - The SAC Chair will appoint a subcommittee chair to preside over any protocol review undertaken and members may volunteer to serve on any review subcommittee created;



- Subcommittee members will review protocols and direct any questions, concerns or issues to the Committee Secretary for transmittal to the relevant Program Manager;
- Unresolved questions and issues will be reviewed at subcommittee meetings, with recommendations ultimately reported to the SAC.
- A Controlled Substances Subcommittee was established, chaired by Dr. José Almirall. It will review Controlled Substances protocols and report to the SAC in May 2011.
- At its August 10, 2010 meeting, the SAC elected Ms. Jo Ann Given to serve as Chair and re-elected Dr. D. Christian Hassell as Vice-Chair. The Committee also welcomed a new member to the seat reserved for a Forensic Chemist, Richard Meyers.
- The SAC voted to move its semi-annual meetings from January and August to May and October beginning in 2011.

**Forensic Science Board recommendations and actions:**

- For purposes of the Post-Conviction DNA Testing Program notification project, the Board voted to allow the participation of non-attorney volunteers, along with the pro-bono attorneys who are currently assisting in reviewing case records and locating suspects who are entitled to notice about the Testing Program.
- The Board voted in January 2010 to withdraw proposed Data Bank Regulation 6 VAC 40-60, which was in the final stage of the regulatory approval process, because it did not adequately address all circumstances in which DNA data bank information is requested and reported. In May 2010, the Board proposed that the regulatory process begin anew with a Notice of Intended Regulatory Action (NOIRA) for the purpose of promulgating a more comprehensive regulation.
- The Board granted DFS approval in January 2010 to submit grant proposals to the Department of Criminal Justice Services (DCJS) for Justice Assistance Grant funding for (i) acquisition of hardware and software for the Digital and Multimedia Evidence Section, and (ii) training and personal certification testing of Forensic Science Academy graduates, and to accept the grants if awarded.
- The Board also gave approval to DFS in 2010 to apply for and accept if awarded grants under the following programs: FY 10 NIJ Solving Cold Cases with DNA Program; 2011 Department of Motor Vehicles (DMV) Highway Safety Grant; FY 10 NIJ Using DNA Technology to Identify the Missing Program; FY 10 NIJ Forensic DNA Backlog Reduction Program; NIJ Forensic Science Training Development and Delivery Program; and the FY 10 Paul Coverdell Forensic Science Improvement Program (as sub-grantee under OCME).

- At its August 11, 2010 meeting, the Board elected Fairfax Commonwealth's Attorney Raymond F. Morrogh to a second term as FSB Chair and elected Dr. Leah Bush, Chief Medical Examiner of Virginia, to serve as Vice-Chair.

At the August meeting, the Board also asked DFS to study Familial DNA Searching, including existing software, cost of implementation, and the validation and efficacy of familial DNA searching, and to report to the Board at its October 15, 2010 meeting. At that meeting, the Board received a presentation from the Department and heard further comments from two Commonwealth's Attorneys in support of implementing familial searching. After discussion, the Board agreed to recommend to the General Assembly that it consider the implementation, funding and use of familial DNA searching in the Commonwealth.

## Attachment A

### **FORENSIC SCIENCE BOARD MEMBERS**

- Mr. Steven. D. Benjamin – Term: ending 6/30/2013  
Criminal defense attorney having specialized knowledge in the area of forensic sciences
- Dr. Leah Bush – Term: period in office or employment  
Chief Medical Examiner
- Dr. Dale Carpenter – Term: ending 6/30/2014  
Member of the Scientific Advisory Committee
- Mr. Garth L. Wheeler – Term: period in office or employment  
Director of the Department of Criminal Justice Services
- Mr. Alan Katz – Term: period in office or employment  
Designee for Attorney General Kenneth T. Cuccinelli, II
- Colonel W. Steven Flaherty – Term: period in office or employment  
Superintendent of the State Police
- Ms. Jo Ann Given – Term: ending 6/30/2013  
Member of the Scientific Advisory Committee
- Mr. Karl R. Hade – Term: period in office or employment  
Executive Secretary of the Supreme Court of Virginia
- Ms. Kristen J. Howard – Term: period in office or employment  
Designee of the Chair of the Virginia State Crime Commission
- The Honorable William R. Janis, Term: period in office or employment, Designee for  
Chairman of the House Committee for Courts of Justice
- Chairman of the Board of the Virginia Institute of Forensic Science and Medicine (VIFSM) – Position  
unfilled; VIFSM ceased to exist as of June 30, 2010
- Sheriff A.A. Lipka, Jr. – Term: ending 6/30/2013  
Member of Law Enforcement
- The Honorable Henry L. Marsh III – Term: period in office or employment  
Chairman of the Senate Committee for Courts of Justice
- Mr. Raymond F. Morrogh – Term: ending 6/30/2013  
Member of the Virginia Commonwealth's Attorney's Association
- Ms. Caroline Juran – Term: period in office or employment  
(Acting) Executive Director of the Virginia Board of Pharmacy

## **Attachment B**

### **SCIENTIFIC ADVISORY COMMITTEE MEMBERS**

- Dr. Jose Almirall – Term: ending 6/30/2014  
Trace Evidence Scientist
- Dr. Frederick Bieber – Term: ending 6/30/2011  
Population Geneticist
- Dr. John M. Butler – Term: ending 6/30/2013  
Molecular Biologist
- Dr. Dale Carpenter – Term: ending 6/30/2014  
Member of the International Association of Chemical Testing
- Ms. Jo Ann Given (Chair) – Term: ending 6/30/2013  
Member of the American Society of Crime Laboratory Directors
- Dr. D. Christian Hassell (Vice-Chair) – Term: ending 6/30/2011  
Director of a Private or Federal Forensic Laboratory
- Mr. Richard Meyers – Term: ending 6/30/2014  
Forensic Chemist
- Mr. Pete M. Marone – Term: period in office or employment  
Director of the Department of Forensic Science
- Dr. Alphonse Poklis – Term: ending 6/30/2014  
Toxicologist certified by the American Board of Forensic Toxicologists
- Mr. Thomas L.G. Price – Term: ending 6/30/2013  
Member of the Board of the Association of Firearms and Toolmark Examiners
- Dr. Norah Rudin – Term: ending 6/30/2011  
Forensic Biologist
- Currently vacant – Term: ending 6/30/2011  
Member of the Board of the International Association for Identification
- Ms. Jami J. St. Clair – Term: ending 6/30/2011  
Quality Assurance Regulation and Monitoring