Paul Coverdell Forensic Science Improvement Grants Program

CFDA No. 16.742

Submitted by the

Ventura County Sheriff's Office

Forensic Services Bureau

Ventura, CA 93009

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STATEMENT OF THE PROBLEM

The Ventura County Sheriff's Office Forensic Services Bureau (FSB) is an internationally accredited, full-service, regional crime laboratory supporting all law enforcement agencies in Ventura County. The FSB provides forensic analysis in the disciplines of forensic toxicology (including blood alcohol analysis), controlled substances and breath alcohol calibration, crime scene investigations and fingerprints, forensic biology and DNA, firearms and toolmarks, and comparative analysis. The FSB typically processes over 14,000 cases a year and serves a population of approximately 855,000 people, including cities, unincorporated areas, and state and federal installations.

As with many forensic laboratories across the country, the Ventura County Sheriff's Office Forensic Services Bureau is struggling with budgetary restrictions that impact our operation. Increasing backlogs, aging technologies, and the loss of key personnel all affect our ability to provide the highest quality and timeliness of our forensic services that is justifiably expected of us. Although we have been extremely fortunate up until this point, we cannot risk the very real possibility of our backlogged cases resulting in cases being dismissed by the criminal justice system that we work so hard to serve.

The proliferation of heroin and synthetic opioids like fentanyl have had a crushing effect on our crime laboratory causing huge backlog issues. Patrol officers and investigators throughout the County were mandated to stop drug testing (color test by NiK kit) in the field. All samples collected now come to the laboratory for analysis and patrol officers no longer can testify at preliminary hearings to their preliminary results by color testing. This has significantly impacted lab resources. In addition, synthetic opioids are more difficult to analyze than

traditional opiates and validating methods for new drugs as they emerge slows the processing of these samples. See the history of drug cases received at the end of this narrative.

The staff of the Controlled Substances Unit is in a constant state of stress because of the backlog. The unit is currently running at maximum capacity and simply cannot keep up with the incoming cases while simultaneously addressing the growing backlog. One person is out on medical leave. This means that the section will be down one out of five full-time staff (20%) resulting in dramatically increased backlog. This will drastically affect their capacity to not only process the thousands of controlled substances cases they receive each year, but also prevent them from meeting court deadlines.

The backlog in the Controlled Substance Unit ballooned to over 2500 cases and the turnaround times have lengthened substantially from 25 days to 102 days. This was not only caused by the lack of personnel and the loss of patrol officers being able to testify at preliminary hearings, but it is combined with Proposition 47 enacted by the State of California in 2016 and the implementation of a new Laboratory Information Management System (LIMS) in 2019. Without assistance, we are projecting that these numbers will continue to climb. However, we are highly optimistic that these challenges can be overcome if given the right resources.

Through the use of the requested grant monies, the Ventura County Sheriff's Office Forensic Services Bureau aims to improve the quality and timeliness of our forensic services and reduce the number of backlogged cases by means of adding additional personnel.

PROJECT/PROGRAM DESIGN AND IMPLEMENTATION

Controlled Substances

In recent years, the forensic sciences have come under increasing scrutiny to ensure the strength and reliability of forensic science in our courtrooms. Indeed, the Criminal Justice and Forensic Science Reform Act (S. 2177) introduced by Senate Judiciary Committee Chairman Patrick Leahy (D-Vermont.) and Senator John Cornyn (R-Texas) three years ago proposed sweeping legislation to improve the quality of forensic science by promoting national accreditation and certification standards for crime laboratories and forensic practitioners, as well as the development of best practices and a national forensic science research strategy.

Moreover, the National Commission on Forensic Science – a joint initiative between the U.S. Department of Justice and the U.S. Department of Commerce National Institute of Standards and Technology (NIST) – will have profound implications on the future of forensic science across the United States. The resulting Organization of Scientific Area Committees (OSAC) will or has established standards that will include most of the forensic science disciplines – including controlled substances.

The Controlled Substances section meets national standards but would benefit greatly from a concentrated effort to reduce backlogs to address the best practices highlighted in this legislation. The morale within the participating section will increase by creating a positive teamwork atmosphere with each employee performing at the highest level.

Project Timeline

Schedule	Topic
Read SWGDRUG Guidelines (1 week)	SWGDRUG Guidelines
DRG-TRG-002 (2 weeks)	Complete Controlled Substances Analysis Introduction
DRG-TRG-003 (2 weeks)	Complete Color Test Training
DRG-TRG-004 (2 weeks)	Complete Microcrystal Test Training (**can complete later in program**)
DRG-TRG-005 (2 weeks)	Complete Infrared Spectroscopy Training
DRG-TRG-006 (2 weeks)	Complete Gas Chromatography Training
DRG-TRG-007 (2 weeks)	Complete Mass Spectrometry Training
DRG-TRG-008 (2 weeks)	Complete Extraction Training
DRG-TRG-009 (1 week)	Complete Marijuana Training
DRG-TRG-010 (1 week)	Complete Pharmaceutical Training
DRG-TRG-011 (1 week)	Evidence Handling Training
DRG-TRG-012 (1 week)	LIMS Training
DRG-TRG-013 (3 weeks)	Courtroom Testimony Training
DRG-TRG-014 (1 week)	RAMAN Training (**can complete later in program**)
3 to 4 weeks	Competency Testing and Mock Trial
Months 6 through 9	Independent Casework
Months 10 through 36	Independent Casework Including Reviews

The proposed training program is expected to be completed in 22 weeks. The person would be signed off to work independently after this period. In addition, after three months of independent casework the employee will be given some cases to start technically reviewing. The employee will need to review at least 20 cases before being signed off as a technical reviewer. We expect that this employee will be able to complete about 50 cases a month after the initial training period and this production will increase to about 100 cases per month. In total, the employee will be able to complete about 2700 cases during the three-year grant period. The newly hired employee would gain considerable experience and would be employable at our laboratory or other laboratories throughout the nation. The new employee would absolutely help in reducing the backlog.

The FSB will remain steadfast in addressing cases needed for court proceedings to avoid the catastrophe of a dismissed case caused by any delay in the analysis expected of us.

The grant funds would be a major factor in increasing the ability of the Controlled Substances section to provide high quality, controlled substances forensic laboratory reports. It would enable the current staff to remain efficient and would also decrease the turnaround time of cases.

We realize that there must be something in place to sustain the reduction of backlog after the three-year grant period is over if the person that is hired does not get absorbed into the budget. The laboratory has validated and implemented a device "TruNarc" that can be used in the field safely. TruNarc uses generally accepted Raman spectroscopy technology to identify chemicals, including suspected illicit drugs. Raman Spectroscopy is recognized by the Scientific Working Group for the Analysis of Seized Drugs ("SWGDRUG") as a technology that may be applied to the analysis of illicit drugs. Forensic laboratories across the country utilize Raman spectroscopy

to identify chemicals, including illicit drugs. The device is in use in 37 law enforcement agencies in California. This device allows officers to perform presumptive testing with ***non-contact*** sampling by scanning through plastic or glass minimizing contamination, reducing exposure, and preserving evidence. The non-contact presumptive testing protects officers from being exposed to unknown chemicals and drugs during DUI/DUID arrests. This handheld device provides automated, tamper-proof records with scan results, including time-and-date stamps to establish probable cause for arrests and expedite prosecution. The device allows officers to once again present preliminary findings in court and thus will reduce the number of future submissions to the laboratory.

In summary, as with many forensic laboratories across the country, we continue to struggle with budgetary restrictions whilst striving to provide the highest level of quality and timeliness of forensic analytical results for our customers. We believe that we can address and improve the quality and timeliness of our forensic services and reduce the number of backlogged cases by hiring another individual to help increase throughput and decrease the backlog and turnaround time.

CAPABILITIES/COMPETENCIES

- The Controlled Substances Unit is staffed by one Supervising Forensic Scientist (Trevor Booth) and "five" Forensic Scientists. There are six listed below because one member rotates into blood alcohol each month.
    - Sarah Bedard – Forensic Scientist I. Sarah has 2 years of forensic experience.
    - Eileen Boyd – Forensic Scientist III. Eileen has 20 years of forensic experience.
    - Maria Contreras – Forensic Scientist III. Maria has 12 years of forensic experience.
    - Regina Davidson – Forensic Scientist III. Regina has 19 years of forensic experience.
    - Emily Dalton – Forensic Scientist III. Emily has 12 years of forensic experience.
    - Arsenio Ricafrente – Forensic Scientist III. Arsenio has 33 years of forensic experience.

Key personnel for this grant include:

- Michael Parigian –Laboratory Manager. Mr. Parigian is responsible for budget tracking and reporting and has over 36 years of experience in forensic science, including more than twenty years as an Assistant Forensic Sciences Laboratory Manager. His duties include managing the bureau budget as well as oversight and preparation of reports for all grants.

Statements of Qualifications for these persons can be found in Appendix A.

IMPACT/OUTCOMES AND EVALUATION/PLAN FOR COLLECTING DATA FOR PERFORMANCE MEASURES

The FSB utilizes a Laboratory Information Management System (LIMS), which has the capability of identifying the number, identity, and types of examinations pending. It also tracks the assignment, completion, turnaround time, and other information related to these cases through its statistical functions. It readily exports this information into reports. From the LIMS data, the FSB will track the turnaround time and the number of cases completed by the Controlled Substances Unit.

The Administrative Assistant of the FSB is responsible for accumulating and reporting all the statistics related to the productivity of the laboratory. This individual, Sarah Luna, reports directly to the Forensic Services Bureau Manager. She provides monthly reports related to backlog, turnaround time, and completed work as part of her regular duties. She also tracks historical data regarding these same statistics. The historical data is retained electronically and goes back to 2003.

OTHER/PART 1 VIOLENT CRIMES DATA

As can be seen in the accompanying data, Ventura County is a relatively safe place to live within the State of California. Indeed, two of the largest cities in Ventura County with a population of over 100,000 (Thousand Oaks and Simi Valley) consistently rank as two of the safest cities in the country. However, it is of vital importance to note that their ranking is no accident. There is a very strong commitment to law enforcement and criminal justice from all the law enforcement agencies within the county and from the District Attorney's Office. This includes well-forged relationships with the Ventura County Forensic Services Bureau. The professionalism, expertise, and commitment of our staff are part of the key to successfully ensuring public safety for all residents of Ventura County. However, as we have described above, this does not mean that we do not need assistance in achieving our vision – very much the opposite. Without your support, the safe environment that our residents enjoy to live, work, and raise their families in is in jeopardy. We highly depend upon and utilize grant monies to ensure that we provide the very best service to all of those who depend on us.

STATE OF CALIFORNIA UNIFORM CRIME REPORTING STATISTICS, 2019-2022

Year	Population	Murder and Non-negligent Manslaughter	Forcible Rape	Robbery	Aggravated Assault	Burglary	Larceny-Theft	Motor Vehicle Theft	Violent Crime Total	Property Crime Total
2019	32,349,628	1,303	12,271	45,873	80,720	121,489	538,123	117,617	140,167	777,229
2020 *	Not Available									
2021	Not Available									
2022	Not Available									

Rates are the number of reported offenses per 1,000 population.

Sources: FBI, Uniform Crime Reports, prepared by the National Archive of Criminal Justice Data.

*Switch to NIBRS reporting system after 2019. https://www.fbi.gov/how-we-can-help-you/more-fbi-services-and-information/ucr/publications#NIBRS

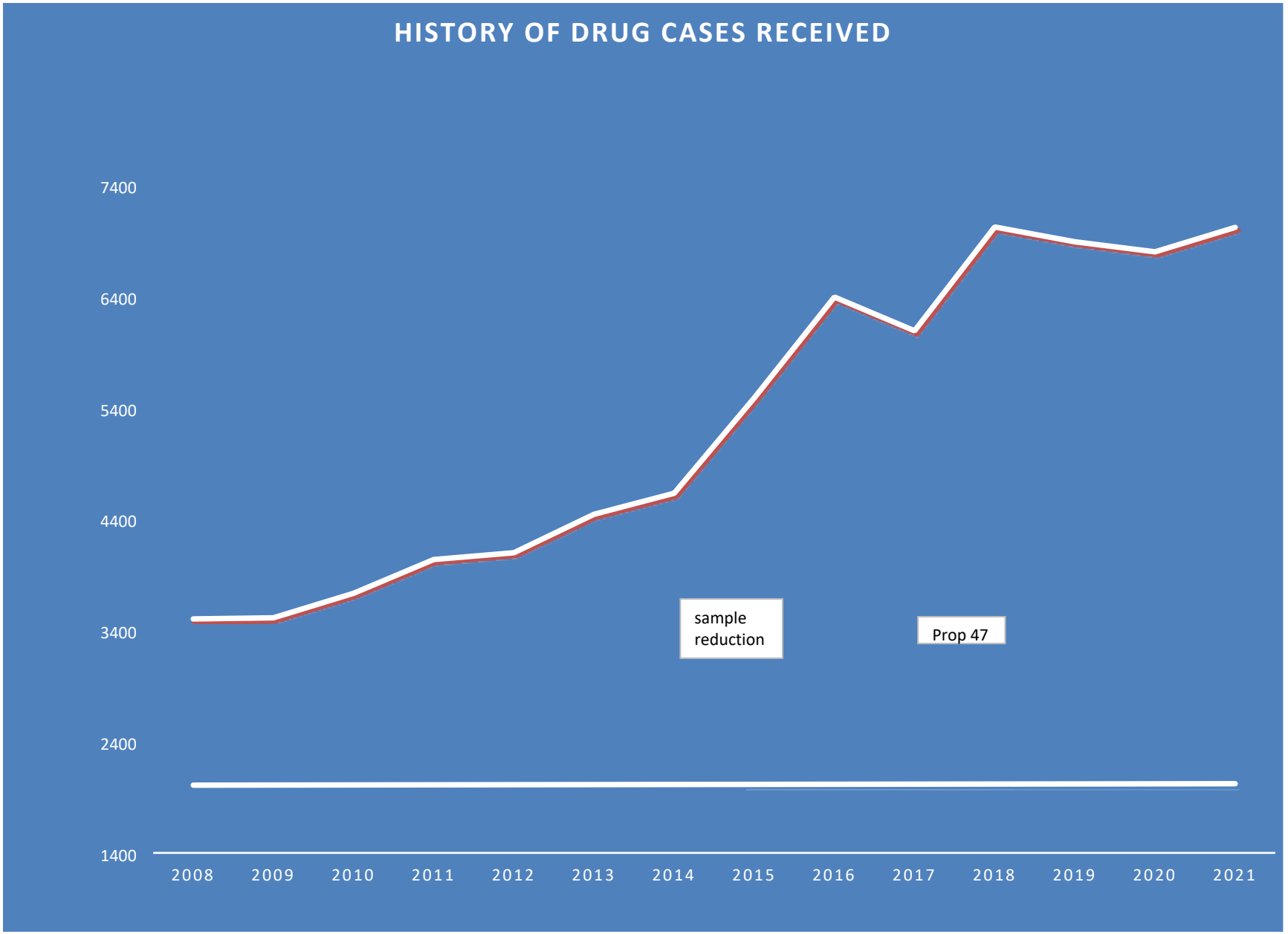
VENTURA COUNTY UNIFORM CRIME REPORTING STATISTICS, 2019-2021

Year	Population	Murder and Non-negligent Manslaughter	Forcible Rape	Robbery	Aggravated Assault	Burglary	Larceny-Theft	Motor Vehicle Theft	Arson*	Violent Crime Total	Property Crime Total	Violent Crime Rate	Property Crime Rate
2019	846,050	24	229	526	1,043	1,902	9,214	1,199	90	1,822	12,405	2.15	14.66
2020	842,888	19	222	492	943	1,017	9,448	1,537	114	1,676	13,016	1.99	15.44
2021	834,918	20	210	408	1,014	1,593	8,847	1,118	138	1,652	11,696	1.98	14.01
2022	833,652	20	172	400	1,115	1,620	8,462	1,361	115	1,707	11,558	2.05	13.86

Rates are the number of reported offenses per 1000 population.

*Arson: additional recorded information.

Source: Cumulative of FBI UCR Publication Years 1991 through 2010, 2011-2022 information provided by local jurisdiction; Ventura County Sheriff's Office Crime Analysis Unit.


HISTORY OF DRUG CASES RECEIVED
7400
6400
5400
4400
3400
2400
1400
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
sample reduction
Prop 47