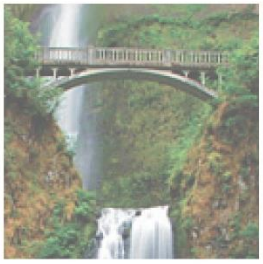
Secretary of State

Oregon Audits Division












Oregon State Police

Forensic Division Has Taken Appropriate Steps to Address Oregon's Sexual Assault Kit Testing Backlog

May 2018

Report 2018-16

Secretary of State Dennis Richardson

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Audit Highlights

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Forensic Division Has Taken Appropriate Steps to Address Oregon's Sexual Assault Kit Testing Backlog

Report Highlights

Oregon State Police (OSP) has taken appropriate steps to manage an influx of Sexual Assault Forensic Evidence (SAFE) kits sent by local law enforcement agencies after Melissa's Law passed in 2016, including adding staff and equipment, changing how they prioritize the testing of DNA evidence, and using more efficient technologies for DNA processing. Many of these changes occurred too recently to definitively determine whether they will successfully eliminate the remaining backlog. However, the actions taken are aligned with best practices and OSP officials estimate they will largely eliminate the backlog by the end of 2018.

Background

The Forensic Services Division of OSP provides Oregon's only full-service forensic lab system. The intent of Melissa's Law is to prevent a future SAFE kit testing backlog at local law enforcement agencies by mandating all non-anonymous kits be sent to OSP for testing.

Purpose

The purpose of this audit was to report on whether OSP has taken actions consistent with statute and best practices to address the SAFE kit backlog.

Key Findings

1. OSP has complied with Melissa's Law by increasing lab capacity and reporting results to legislators on efforts to reduce the SAFE kit backlog.
2. OSP is following best practices outlined by the National Institute of Justice for forensic labs that process SAFE kits. For example, OSP's "high-throughput" approach to obtaining DNA profiles from SAFE kits is recommended for decreasing kit backlogs.
3. The agency's decision to suspend DNA processing of property crime evidence to focus on SAFE kits could lead to a backlog of DNA evidence of this type at local law enforcement agencies. Local law enforcement agencies are eager for OSP to resume accepting DNA evidence for property crimes.
4. As of January 2018, many of OSP's capacity-building and process improvement efforts have been implemented. Since then, OSP has shown substantial improvement in the number of kits processed each month. Also, there has been a significant reduction in the statewide backlog. A 2017 survey of local law enforcement agencies found approximately 1,100 kits needing testing, down from approximately 4,900 in 2015. For these reasons, OSP believes it can eliminate the backlog by the end of 2018.

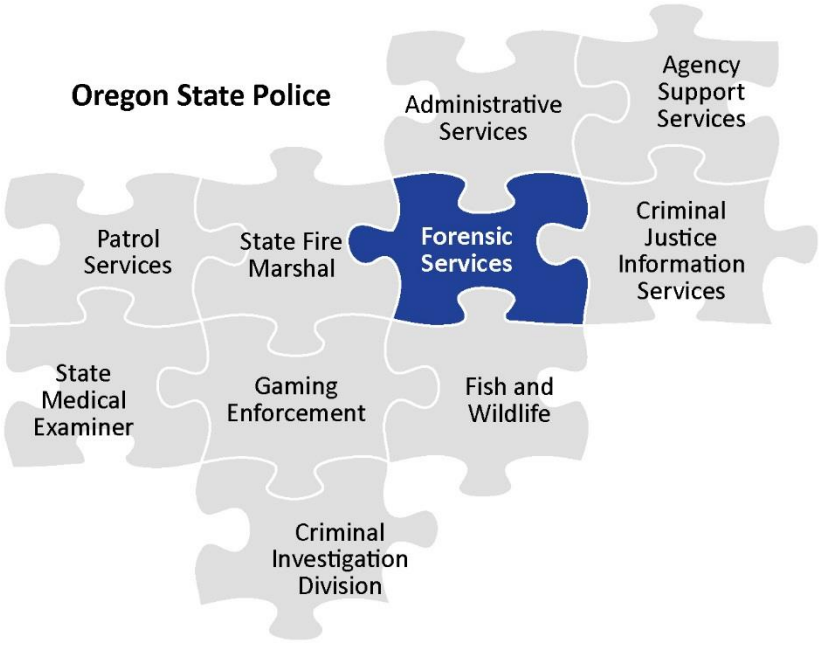
Recommendations

We recommend that OSP publicly post backlog status reports, examine options for a statewide SAFE kit tracking system, and plan for reintroducing DNA testing in property crimes.

OSP generally agrees with our recommendations. The agency's response can be found at the end of this report.

Introduction

Oregon had a significant statewide backlog of approximately 4,900 unprocessed Sexual Assault Forensic Evidence (SAFE) kits in 2015. The Legislature, Oregon State Police (OSP), and local law enforcement agencies have made efforts to address this backlog. The purpose of this audit was to assess the current status of the statewide backlog and evaluate OSP's efforts to reduce the backlog.



SAFE kits collect DNA evidence of a sexual assault

A sexual assault kit, otherwise referred to in Oregon as a SAFE kit, is a standard package of items medical professionals use to gather and preserve biological evidence from an alleged sexual assault. The contents of these kits vary around the country.

SAFE kits are collected during a medical-forensic examination. In Oregon, this exam is conducted by a physician or a specially trained nurse called a Sexual Assault Nurse Examiner and can take up to eight hours to administer. This specialized training covers evidence collection, injury detection methods, and chain-of-custody requirements as well as methods to avoid re-traumatizing a victim during what can be a painful and intrusive process. These medical professionals also provide care focused on preventing pregnancy and sexually transmitted infections.

Contents of a SAFE kit
Instructions
Information form
Application for payment
One plastic comb
One paper ruler
Seven white envelopes
Seven packages of sterile cotton tipped applicators (swabs)
Template for envelope labels
Printed manila envelopes
Red evidence tape

The examiner gathers information about the victim's medical history and the specifics of the assault, which helps determine the best evidence to collect. The evidence in the kit can include swabs from body cavities and other locations, as well as hair with follicles. Other items, such as clothing, can

be collected, but are not included as part of the kit. During the exam, a victim's advocate may provide resources and support that extend beyond the examination room.[1]

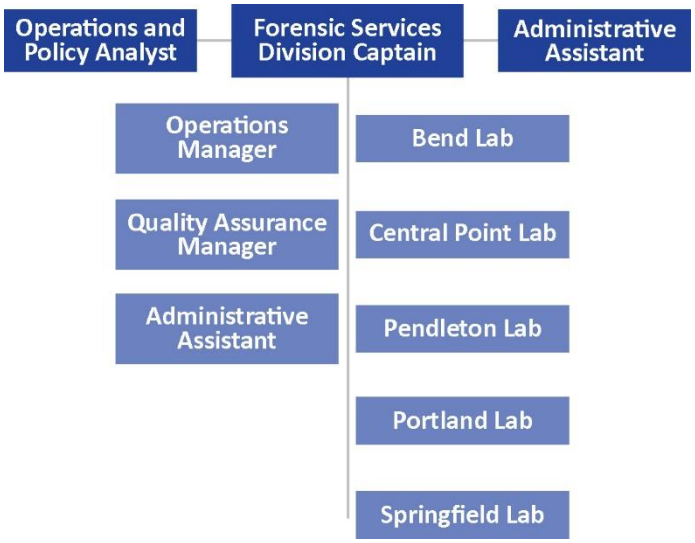
Once the examination is complete and the SAFE kit is collected, a local law enforcement official must pick up the kit within seven days. At any time, a victim can choose to report the crime to police. If the victim has notified police of a crime, then the local law enforcement agency must send the kit to one of five OSP forensic labs within 14 days. These requirements ensure a timely submission is made while maintaining appropriate chain of custody.

SAFE kits collected from victims who have not reported a crime are considered anonymous. The kit remains at a local law enforcement agency for up to 60 years or until the victim decides to pursue legal action. If a victim does come forward, then the SAFE kit is submitted to OSP for processing.

The OSP forensic lab system processes DNA from SAFE kits

OSP's Forensic Services Division provides Oregon's only full-service forensic lab system. The purpose of the division is to provide timely, accurate, scientific, technical, and investigative support for the criminal justice system. The vast majority of the division's work, 90%, is for agencies other than OSP. These services are generally provided at no cost.[2] Lab analysts collect, analyze, and evaluate evidence; interpret results; and provide expert testimony across many forensic disciplines. Analysts who work most closely with SAFE kit evidence are trained in the Biology and DNA disciplines.

Figure 1: The Forensic Services Division includes five labs



OSP operates five labs. These labs are located in Bend, Central Point, Pendleton, Portland, and Springfield. The Portland lab is the largest lab at 86 Full Time Equivalent staff. It is the only lab in the state that analyzes DNA evidence.

The division's sole key performance measure, across all forensic disciplines, is the percentage of analytical requests completed within 30 days of receipt.[3] The goal for this measure, with a target

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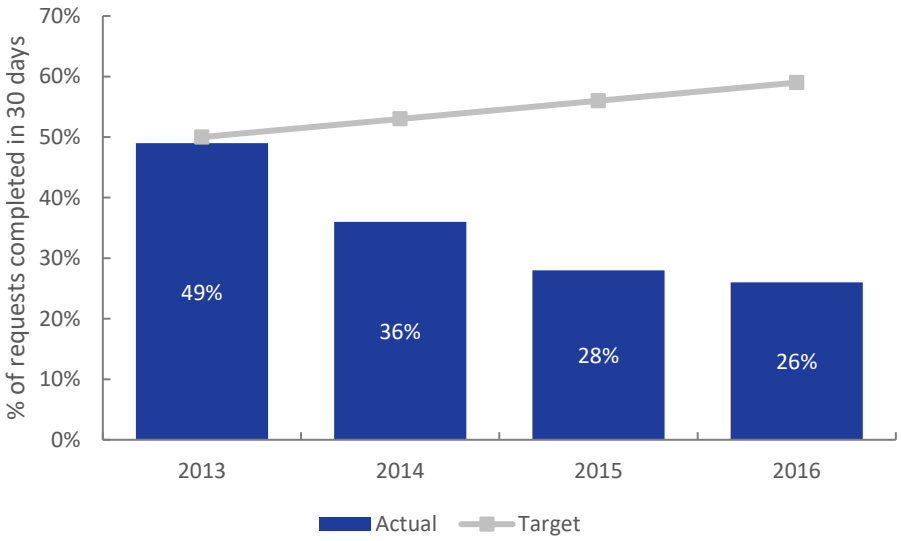
[1] Victim advocates can be employed by law enforcement or by prosecutors' offices, or they are employees or trained volunteers with a nonprofit organization.
[2] OSP charges fees for certain documentation related to records requests.
[3] The National Institute of Justice defines a backlogged case as one untested within 30 days of submission to a lab. In this report, the term backlog is used to describe any SAFE kit in local law enforcement agency custody, or pending analysis at OSP.

date of 2023, is to complete 80% of requests within 30 days. However, performance is trending away from meeting the 80% target. According to the agency, this is due to an increased volume of requests, inadequate staffing, and time spent on additional training to keep up with new technology. Even as the division has trended away from this target, they reported processing 1,689 more requests in 2016 than in 2013, despite spending 15,364 fewer hours on casework. In 2015, our office released an audit focused on OSP's forensic backlogs titled: "Forensic Services Division: Some Strategies to Help Address Delays in Evidence Testing."

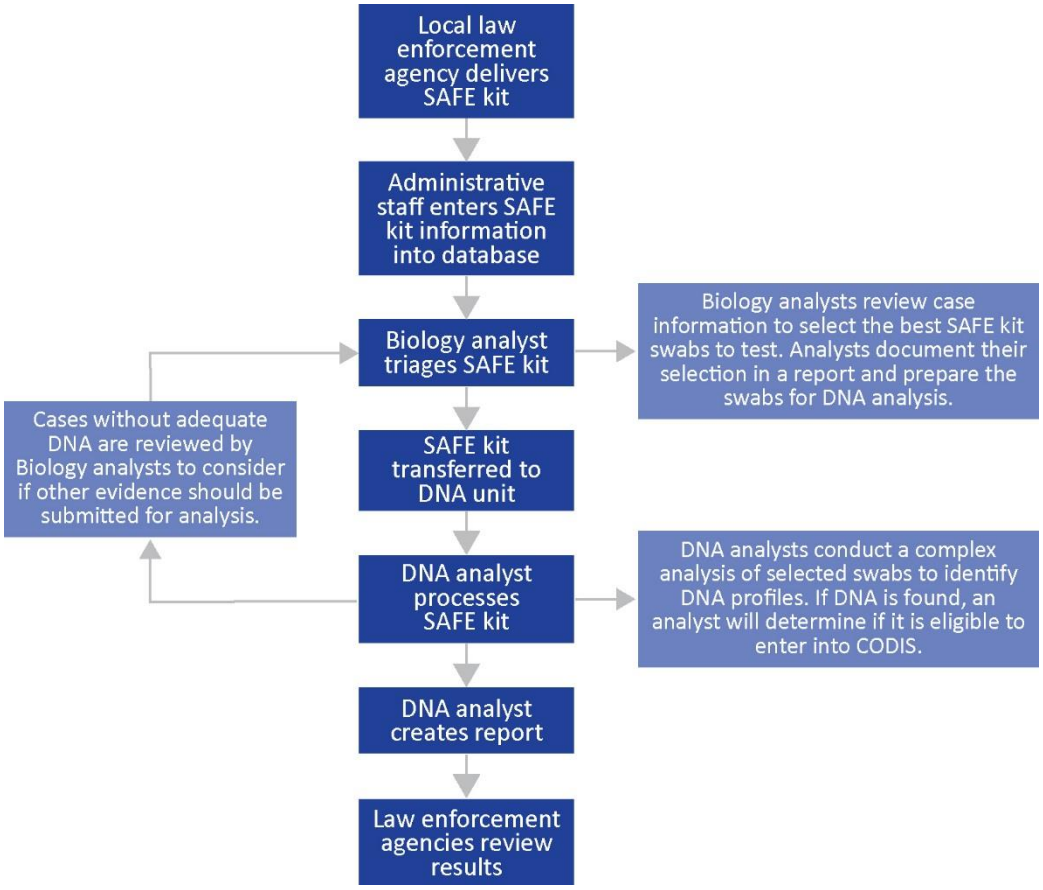
Figure 2: The percentage of forensic requests completed within 30 days has decreased since 2013



Source: OSP's 2017 Annual Progress Report

The division's process for handling SAFE kits is extensive, as shown in Figure 3, with several starting and stopping points. Once a SAFE kit is submitted to a lab, an administrative staff member records receipt in the forensic division's internal database. At this point, the SAFE kit is considered pending and awaiting analysis.

Figure 3: The division's process for handling SAFE kits has multiple steps



Forensic Services Division
2015-2017 Legislatively Approved Budget
$41,974,623
Staff Positions: 136

2017-2019 Legislatively Adopted Budget
$45,929,471
Staff Positions: 136

SAFE kits are first triaged in the Biology Unit and then sent to the DNA Unit for processing. DNA analysts look for eligible DNA profiles to enter into the Federal Bureau of Investigation's Combined DNA Index System, otherwise known as CODIS. This system also stores DNA results from convicted offenders and, in states where the law allows, some arrestees.[4] In Oregon, state law only allows DNA profiles from people convicted of felonies and misdemeanor sex crimes to be stored in CODIS.[5] A match in the database can result in finding an unknown perpetrator. Matches among several profiles can link crimes together, potentially catching a serial offender. These are commonly referred to as CODIS "hits."

Analysts follow criteria established by the FBI to determine if the DNA profile is CODIS eligible. Most analyses do not result in a CODIS hit. Many samples do not have enough usable DNA to make a profile, or the DNA cannot be attributed to a suspect. In 2017, 37% of SAFE kits processed by OSP resulted in a profile being entered into CODIS and 11% resulted in a CODIS hit.

[4] National Conference of State Legislatures, "Convicted Offenders Required to Submit DNA Samples", 2013, From http://www.ncsl.org/Documents/cj/ConvictedOffendersDNALaws.pdf
National Conference of State Legislatures, "DNA Arrestee Laws", 2013, From NCSL website: http://www.ncsl.org/research/civil-and-criminal-justice/dna-arrestee-laws.aspx
[5] ORS 137.076 & ORS 419C.473

Once the analysis is complete, DNA analysts enter reports into a database that is accessible to local law enforcement agencies. At that point, the results are ready for local law enforcement to determine how to move forward with the case.

Local law enforcement agencies were not previously required to submit kits for testing, contributing to a statewide backlog

Statewide SAFE kit backlog was largely unknown until 2015

The current requirements for testing SAFE kits in Oregon have only been in effect for a little over a year. Until January 1, 2017, local law enforcement agencies were not required to submit non-anonymous SAFE kits to OSP for forensic testing. This meant many kits were sitting unprocessed on evidence locker room shelves.

In 2015, OSP surveyed local law enforcement agencies for the first time and identified 5,652 kits, including 4,902 considered non-anonymous, that were unprocessed.

Previously, local law enforcement determined whether to submit SAFE kits based on various factors

Without a legal mandate, submission of SAFE kits was left to the discretion of local law enforcement. Local law enforcement officials considered a variety of factors to determine whether to submit a SAFE kit to OSP for testing:

- *The facts of the case.* For example, if both people agreed that sex occurred, a SAFE kit would most likely not be submitted. Testing evidence from the kit can only demonstrate that sex occurred; it cannot help determine if that sex was consensual. Also, a SAFE kit would not be sent if a victim recanted their story.
- *Availability of other evidence.* If other types of evidence were available for DNA testing and were considered more useful to solving the case, a kit might not be submitted. Understanding that OSP has limited resources, local law enforcement officials were conservative in what evidence they submitted. They might have sent other items such as clothing or bedsheets for DNA analysis instead of a SAFE kit.
- *Law enforcement judgment.* In the past, local law enforcement officials might not submit a kit if they did not believe a victim's story was credible.

Reducing the backlog benefits both victims and the criminal justice system

Testing a SAFE kit can be a form of validation for a victim. After enduring an intrusive examination, learning a SAFE kit was not tested can be disheartening. The victim may feel they are not being taken seriously. Testing the kit, no matter the result, can offer the victim assurance that something is being done related to their case.

Further, adding more forensic profiles to the national CODIS database enhances a critical tool used by law enforcement agencies across the country to identify unknown or serial offenders.

The OSP SAFE kit survey publicly disclosed the magnitude of the backlog during a time of increased public focus on the issue. Advocates, lawmakers, law enforcement officials, and members of the judicial system worked together to find a solution to eliminate the backlog.

Oregon has taken steps to address the backlog

Melissa's Law now requires non-anonymous SAFE kits be submitted for analysis

In 2016, the Oregon Legislature passed Senate Bill 1571, referred to as Melissa's Law. The intent was to prevent missteps that can happen in the investigation of sexual assaults and prevent future backlogs by eliminating law enforcement discretion for testing SAFE kits.

The law established the Joint Legislative Task Force on the Testing of Sexual Assault Forensic Evidence Kits. The task force's charge is to improve the process for gathering and analyzing SAFE kits, improve victim's access to other evidence such as police reports, and identify any additional victims' rights not covered in Melissa's Law.

The law outlines specific responsibilities for those involved in collecting and processing SAFE kits, including medical facilities, law enforcement agencies, and OSP.

Melissa's Law
The bill is named after Melissa Bittler, a 14-year-old girl who was raped and murdered in Portland in 2001. During the investigation into her murder, prosecutors identified similarities to two rape cases where a SAFE kit was collected but not sent to OSP to be tested. If the kits had been processed earlier, the rapist may have been caught and Melissa's murder may have been prevented.

Melissa's Law requires OSP to:

- test all non-anonymous SAFE kits;
- develop rules prioritizing the testing of SAFE kits;
- appoint a contact person for law enforcement agencies and victims concerning testing;
- enter test results into CODIS as soon as practicable;
- report the status to the Legislative Judiciary Committees by July 1, 2019;
- give yearly progress reports to the Legislature on the status of the backlog and testing of SAFE kits; and
- hire additional staff using $1.5 million in General Fund dollars allocated to OSP.

The law aims to prevent a future backlog but does not provide local law enforcement agencies direction on what to do with SAFE kits collected and stored before the law came into effect. Some local agencies have taken it upon themselves to address their backlogs.

Outsourcing alleviated half of the state's SAFE kit backlog

In 2015, Multnomah County District Attorney Rod Underhill and Multnomah County law enforcement agencies took steps to address the state's backlog.

DANY grant statistics
As of January 2018, a total of 2,610 SAFE kits have been sent to Sorenson lab to be tested. Of these, 390 resulted in DNA profiles entered into CODIS and 153 CODIS hits. There have been four indictments resulting from kits processed through the DANY grant.

With a grant of nearly $2 million from the District Attorney of New York (DANY), Underhill coordinated an effort to send nearly 3,000 SAFE kits dated 2014 or older from Multnomah, Lane, and Marion counties to a private forensic lab to be tested. In early 2018, an additional 335 kits from 14 other counties were sent using the same funds.

This effort substantially reduced the number of SAFE kits submitted to OSP for testing. As the FBI has not authorized private forensic labs to enter DNA profiles into CODIS, any viable DNA results from the private lab are sent to OSP for technical review and potential entry into CODIS.

The Portland Police Bureau also received nearly $1.2 million in Sexual Assault Kit Initiative grant funds from the U.S. Department of Justice. Part of the funds helped the Bureau develop a SAFE kit tracking system that logs detailed information on the type of crime and results of SAFE kit testing so that detectives can identify similarities in victim profiles and crimes. The remaining funds were used to train detectives and create a more robust system for victim notification and advocacy.

Although outsourcing substantially reduced the backlog, OSP and local law enforcement have additional work to do to address the remaining backlog throughout the state. In December 2017, a survey conducted by the Oregon Association of Chiefs of Police found about 1,100 non-anonymous kits in local law enforcement possession.

Objective, Scope, and Methodology

Objective

The objective of this audit was to report on whether Oregon State Police (OSP) has taken actions to address the SAFE kit backlog consistent with best practices and statute.

Scope

This audit focused on efforts made by the OSP Forensic Services Division to address the SAFE kit backlog.

Methodology

To address our objective, we executed a methodology that included but was not limited to: conducting interviews, reviewing documentation, and observing lab practices.

We conducted interviews with multiple stakeholders including the Multnomah County District Attorney's Office, Sexual Assault Support Services of Lane County, the Oregon Attorney General's Sexual Assault Task Force, the Joint Legislative Task Force on the Testing of Sexual Assault Forensic Evidence Kits, and the Oregon Association of Chiefs of Police. We also spoke with representatives from the following local law enforcement agencies: the Salem Police Department, the Baker City Police Department, the Carlton Police Department, the Pendleton Police Department, the Josephine County Sheriff, and the Deschutes County Sheriff. We also interviewed management and staff of the OSP Forensic Services Division.

To gain an understanding of practices in other states, we interviewed representatives of, and reviewed supporting documentation from, the following public forensic labs: The Houston Forensic Science Center, the Washington State Patrol Crime Laboratory Division, Illinois State Police Forensic Services, and the Idaho State Police Forensic Services Division.

We reviewed state laws and administrative rules related to OSP and our audit objective. We also reviewed the agency's performance measures, annual reports, planning documents, and manuals outlining forensic policies and procedures. We reviewed agency budget documentation prepared by the Legislative Fiscal Office.

We collected national best practices for processing SAFE kits from the National Institute of Justice and the Scientific Working Group on DNA Analysis Methods.

We observed the biology and DNA lab process for SAFE kits at OSP's Portland forensic lab. We also reviewed summary data from the agency related to SAFE kits received, completed, and pending for 2016 and 2017, as well as staffing data for the DNA Unit. We determined that these data were sufficiently reliable for the purposes of this report.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective. We believe that the evidence obtained and reported provides a reasonable basis to achieve our audit objective.

We sincerely appreciate the courtesies and cooperation extended by officials and employees of OSP during the course of this audit.

Audit Results

OSP has taken actions consistent with statutory requirements and national best practices to address the SAFE kit backlog. Actions taken include adding staff and equipment, prioritizing testing of SAFE kits, and using efficient technology for DNA processing.

Implementing these changes has contributed to the recent increase in the backlog of SAFE kits pending analysis. Training new staff, incorporating new DNA equipment and ensuring compliance with FBI requirements initially reduced OSP's capability to process SAFE kits. In addition, to expedite the resolution of the SAFE kit backlog, OSP decided to suspend DNA analysis of property crime evidence. As a result, there is now a risk that a backlog of DNA evidence for property crimes is building at local law enforcement agencies.

It is too soon to tell if these actions will eliminate the current backlog, as many of these changes occurred recently. Yet OSP has shown substantial improvement in the number of kits processed in late 2017 and early 2018 while the statewide backlog has been significantly reduced. OSP's approach is aligned with best practices.

OSP officials estimate they will largely eliminate the backlog by the end of 2018. Our office will assess and report progress on the backlog when we perform follow-up work for this audit report.

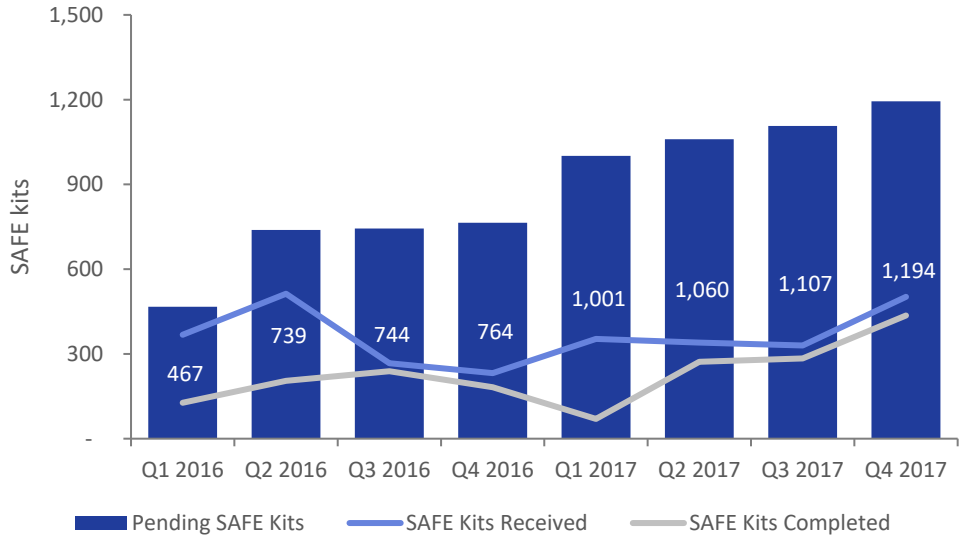
OSP has increased lab capacity and publicly reported on the backlog status in compliance with Melissa's Law

As the extent of the statewide backlog became apparent, it was clear that OSP did not have the capacity to handle the influx of SAFE kits in addition to the work lab analysts were already performing. OSP and stakeholders advocated for the agency to receive additional funds as part of Melissa's Law. In response, legislators provided OSP with an additional $1.5 million to fund five additional positions in the DNA Unit, three biology analysts, and one administrative staff position.

OSP reports on the status of their backlog and testing of SAFE kits

Melissa's Law requires OSP to provide a written report annually to the Legislature that describes the number of SAFE kits it received and completed during the previous calendar year, as well as the number of kits still pending analysis, as shown in Figure 4. OSP released reports in both 2017 and 2018 as required. The 2018 report also includes the number of technical reviews completed, CODIS profiles entered, and CODIS hits obtained by OSP analysts from the SAFE kits outsourced under the DANY and Sexual Assault Kit Initiative grants. In 2017, OSP completed 416 of these technical reviews.

Figure 4: OSP has seen a steady increase in the number of pending SAFE kits over the last two years



Source: SAFE kit performance data obtained from OSP Laboratory and Information Management System

OSP has seen a steady increase in the number of pending SAFE kits over the last two years. The agency ascribes much of the increase to a surge in submissions from local law enforcement as they clear their inventory of unprocessed kits. Training new analysts and converting to new FBI requirements have also played a role in this increase, according to the agency. The number of SAFE kits completed increased substantially over the course of 2017.

While the number of kits awaiting processing at OSP has increased overall, the statewide backlog has fallen considerably, from approximately 4,900 in 2015 to approximately 1,100 at the end of 2017.

Much of the increase in SAFE kits pending at OSP is due to a surge in submissions of older kits held by local law enforcement agencies.

A key challenge for the agency has been finding an effective method to track SAFE kits. Historically, the agency has tracked lab performance by unit, not evidence type. Since SAFE kits pass through both the Biology and DNA Units the agency had to develop a new method for tracking them to comply with Melissa's Law. The agency has continued to refine their SAFE kit reporting, correcting errors as they are identified.

For example, in early 2018, staff discovered an error that led to underreporting approximately 350 SAFE kits submitted from 2016 and 2017. This was corrected prior to the release of the 2017 report and the agency has developed procedures to detect and correct the error going forward.

OSP does not regularly report SAFE kit performance on its website. In addition to the annual legislative updates, and with the goal of transparency, OSP should consider reporting SAFE kit performance regularly on its website so that progress can be monitored by the public and policymakers. Other public labs in Houston, Idaho, and Florida publish SAFE kit performance information more frequently on their websites.

OSP is following best practices outlined by the National Institute of Justice for processing SAFE kits

In response to federal legislation passed in 2013,[6] the National Institute of Justice (NIJ) convened a multi-disciplinary working group to develop a set of best practices for collecting and processing SAFE kits. The group's membership included victims, advocates, sexual assault nurse examiners, forensic scientists, law enforcement officials, prosecutors, and judges. The NIJ released a report in 2017 that outlines best practices the working group identified for various stages of the SAFE kit process, from collection and monitoring, to lab testing, investigation, and follow-up.[7]

We focused on best practices related to the lab processing of SAFE kits and how OSP's processes compare to the report's recommendations. We found that OSP's methodologies are in line with these best practices. Several of these practices were in place prior to the increased focus on SAFE kits, such as increasing the use of automated lab processes, while others have been more recent, including a shift to a more efficient method for kit processing.

By implementing these practices, OSP's process for analyzing SAFE kits can be defined as a "high-throughput" approach. The goal of a high-throughput approach is to work SAFE kits in the most efficient manner possible to obtain DNA profiles eligible for the CODIS system. Incorporating a high-throughput approach is recommended to decrease SAFE kit backlogs, according to NIJ.

OSP established clear evidence submission and prioritization guidelines for SAFE kits

Evidence submission and prioritization policies help a public forensic lab maintain its independence and neutrality. OSP has established clear policies for both evidence submission and prioritization that meet the standards outlined by the NIJ.

OSP provides local law enforcement agencies with detailed guidelines on how to prepare and submit evidence, including how to properly fill out the required testing request form. The form provides OSP with information related to the crime, the evidence submitted, and the type of forensic testing requested. When OSP staff identify errors in evidence submission, they either return the evidence with a form outlining the error, or contact the law enforcement agency to address the issue.

OSP has also established clear guidelines for prioritizing biology and DNA requests that include SAFE kits. Cases are prioritized in the following order:

- cases with a pending trial date or a public safety concern;
- those related to a homicide or attempted homicide;
- assaults involving a weapon or injury requiring medical attention;
- cases where the victim is under the age of 14, is 65 or older, or who suffers from a mental disorder that renders them incapable of appraising the nature of the conduct of the person committing the crime;
- any other person-related crime, including SAFE kits that do not fall into the other categories; and
- requests related to property crimes.

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[6] The Sexual Assault Forensic Evidence Reporting Act of 2013 (SAFER Act), P.L. 113-4, § 1002, (o)(1).
[7] National Institute of Justice, "National Best Practices for Sexual Assault Kits: A Multidisciplinary Approach" August 8, 2017, from NIJ.gov: https://nij.gov/topics/law-enforcement/investigations/sexual-assault/Pages/national-best-practices-for-sexual-assault-kits.aspx

Because Melissa's Law mandates that all non-anonymous SAFE kits be processed, OSP has prioritized testing SAFE kits over other DNA-related evidence collected during a sexual assault investigation. If a kit does not yield a CODIS-eligible profile, additional DNA-related evidence, such as a victim's clothing, can be submitted for testing.

OSP introduced changes in DNA analysis methodology to more efficiently analyze SAFE kits

The NIJ recommends forensic labs consider incorporating several technical processes to more efficiently and effectively process SAFE kit evidence. These include integrating automated processes using robotic equipment, using enhanced statistical analysis software to improve the analysis of complex DNA results, and using what's known as a Direct-to-DNA method.

Automation allows for labs to increase the output and accuracy of testing results. Even before the increase in SAFE kit submissions, OSP included robotics into its DNA analysis process. For example, OSP uses automated liquid-handling systems to prepare dozens of samples at a time for further analysis. The automated system is also more accurate than an analyst working manually. Forensic DNA technology advances rapidly, and OSP recognizes the need to evaluate new robotic technologies to see if they can be implemented within their system.

The NIJ also recommends labs use specialized statistical analysis software to speed up interpretation of DNA results and increase the consistency of analysis. OSP incorporated this type of software into their process in late 2016, using a program called STRmix™.

Direct-to-DNA is a key method for increasing the efficiency and effectiveness of analyzing SAFE kit evidence by going directly to detecting the presence of DNA and only including other steps as necessary. Historically, analysts in OSP's Biology Unit would test evidence before DNA analysis to detect specific bodily fluids, such as semen or saliva, in sexual assault cases.

In May 2016, OSP implemented a Direct-to-DNA methodology using a practice called Y-screening for processing SAFE kits in cases of a male perpetrator. This practice allows for analysts to detect the presence of male DNA in a sample without extensive testing for specific bodily fluids. As a result, Y-screening has greatly reduced the amount of time OSP biology analysts spend preparing SAFE kits for DNA analysis. If no male DNA is detected, further testing of the sample can be halted, saving time and resources.

By including these three elements into its DNA analysis methodology, OSP is in line with national best practices for efficiently processing SAFE kits.

OSP made other process changes to improve efficiency

Along with improving technical testing methods, the NIJ recommends that labs review their business processes to identify areas for further improvement. OSP has policies in place that require annual reviews to identify areas for improvement.

OSP has made several key changes that help streamline the analysis of SAFE kits. For example, in October 2017, the DNA Unit was split into three teams. One team of eight analysts is dedicated to processing SAFE kits. Another team of two analysts is focused on the technical review of kits outsourced through Multnomah County. The final team, made up of the remaining DNA analysts, works on urgent cases with a pending trial date, cases with a public safety concern, and other major casework, such as homicides. Using this type of dedicated staffing model is a NIJ best practice.

The DNA Unit has made other changes to more efficiently process SAFE kits. For example, staff use Excel worksheets for documenting standardized case notes that automatically populate

relevant information. They also use Excel worksheets to combine samples from multiple analysts into larger batches, increasing the efficiency of the liquid-handling robots.

Further, the Biology Unit uses a report template and the DNA Unit uses standardized reporting language, allowing quicker report writing. This standardization of reporting also benefits local law enforcement. As they become more familiar with the format, they can more quickly interpret and act on the results.

In addition to the these self-guided improvements, the DNA and Biology Units are currently undergoing a LEAN Six Sigma process review funded through a federal grant program. Staff and management hope this review will help them identify additional areas where their processes can be streamlined. This process led to a significant backlog reduction at the Louisiana state crime lab.

LEAN Six Sigma
is a management and organizational process review that identifies and targets problem areas, streamlines processes, and works to eliminate bottlenecks in order to increase quality control and productivity.

OSP has processes for when a SAFE kit does not yield a CODIS-eligible DNA profile

Obtaining a CODIS-eligible DNA profile is the primary objective of SAFE kit testing, but this is not always possible. A sample may not have enough suspect DNA or the victim's DNA may cloud the results too much for a CODIS-eligible profile to be developed. In cases such as these, the NIJ recommends labs use additional DNA analysis techniques that may yield useful information for investigations. For example, when a male suspect's DNA is masked by a female victim's DNA, OSP may employ a technique called Y-STR, which analyzes DNA from the Y chromosome.[8] OSP only performs this analysis in cases where a DNA sample from a suspect has been provided for direct comparison.

The SAFE kit may not be the only piece of evidence with the potential to yield a useful DNA profile. OSP has implemented a process where analysts in the Biology Unit act as case managers to help ensure these additional pieces of evidence are analyzed. In this model, biology analysts review the DNA results using a tracking sheet. If a CODIS-eligible DNA profile is not developed from a kit, they review relevant case information and follow up with local law enforcement to help identify potential evidence for further DNA testing.

Other states and large cities take similar approaches to Oregon

Oregon is not the only state to address a SAFE kit backlog. Forensic labs in other states and large cities are using similar approaches to meet the NIJ standards. These include prioritizing SAFE kit testing, outsourcing, and switching to a Direct-to-DNA method. Each state or municipality's approach addresses their unique challenges. The changes OSP has made to their screening process and prioritization system are consistent with practices and approaches used in other states.

In 2013, **Houston, Texas** had a backlog of around 10,000 kits that was outsourced to two private labs. From 2013 to 2015, the city's forensic lab focused on reviewing the results that came in from those outsourced kits. Houston's lab also evaluated the DNA processing method analysts used. Previously they used a Direct-to-DNA Y-screening process similar to the process OSP uses, but felt it was not working for them. They have since

[8] Analyzing information from the Y chromosome, which is passed through the male genetic line, can allow DNA analysis in mixtures with an overabundance of female DNA. This analysis is not sensitive enough to identify a specific individual, but can help determine whether the DNA belongs within a family line.

switched to automated differential extraction, which is another Direct-to-DNA method.

Like Oregon, the **Illinois** Legislature passed a law in 2010 to address a backlog of around 4,300 kits, and to require law enforcement to send new sexual assault cases for lab analysis within specific time periods. New cases are analyzed using existing prioritization, but unlike OSP's prioritization system, the older cases were prioritized based on offense date, with a focus on meeting statute of limitations requirements. Like in Houston, the Illinois lab relied on outsourcing to process the majority of older kits. State officials sent around 3,500 kits to a private forensic lab for analysis.

In **Washington**, the system prioritizes analysis of sexual assault kits by focusing first on investigative need, and then by collection date. The highest priority kits are those with an active investigation. Any kits that were collected prior to July 24, 2015 are being outsourced. Washington officials are currently developing a kit tracking system that everyone from hospitals to the courts will be required to use.

In **Idaho**, a statewide kit tracking system was developed with input from a diverse group of stakeholders, including victim advocacy and resource groups and college campus representatives, among others. Kits are purchased by state police in bulk and distributed throughout the state as needed. Each kit come with a tracking number from the manufacturer. The system tracks kits from when they are purchased, through collection, processing, and adjudication to the final long-term retention with local law enforcement agencies. The system was intentionally designed for privacy so victims would not have to log in with identifying information. Anyone with a kit number can review its status. This information is used to create an inventory of all kits, and an annual report is provided to the Legislature.

In January 2017, OSP was awarded approximately $1 million to acquire a SAFE kit tracking system. The agency is still planning how to spend that money. Because of the dollar amount, the agency is subject to statewide information technology planning requirements. The agency has had internal challenges meeting these requirements and has yet to submit required documentation. In addition, legislation passed during the 2018 legislative session requires OSP to convene a committee to help plan the tracking system and monitor its implementation.

Increasing capacity to process SAFE kits resulted in a temporary decrease in analyst productivity and processing of other types of DNA evidence

Although capacity enhancements and process improvement efforts described above are positive, these efforts have come at a cost. Training new analysts, adding new equipment, and complying with new FBI requirements initially negatively affected OSP's ability to process SAFE kits.

In addition, OSP decided to suspend analysis of DNA evidence for property crimes to focus on SAFE kits. This creates a risk of a future backlog of property crime evidence at local law enforcement agencies.

Changes aimed at reducing the backlog initially reduced analyst productivity

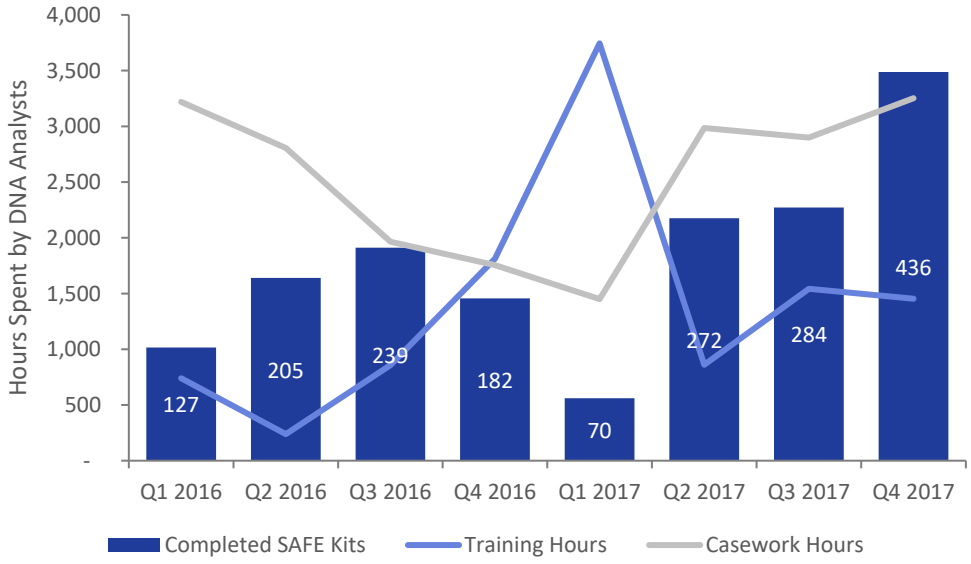
Adding new forensic lab analysts initially reduced the DNA Unit's productivity due to the time-intensive training required. Given the highly technical nature, sensitivity and importance of the work, it takes about a year to train a new DNA analyst. Because they are trained by another DNA analyst, two employees are essentially unavailable for analyzing DNA during training. Productivity of the lab hit a low point at the beginning of 2017, while newly hired staff were being trained. Since then, productivity has increased and surpassed the 2016 levels.

Adding new equipment and efforts to comply with new FBI protocols also reduced productivity. New equipment improves testing efficiency and effectiveness; however, introducing new equipment into the lab takes time, as does training staff on how to use it. In addition, the FBI modified the criteria for entering DNA profiles into CODIS and gave a deadline of January 1, 2017, for all public labs to implement this change.

The change required DNA labs to conduct a more rigorous analysis to create a DNA profile. To comply, OSP needed to both adopt and validate new equipment and train staff on its use. OSP had one team of five analysts validate the new equipment and learn how to operate it in late 2016, with the remaining 13 analysts trained on the new process during the first quarter of 2017.

This left only five analysts available for casework in early 2017. As the number of analyst training hours spiked in the first quarter of 2017, the number of completed SAFE kits declined significantly, but has since shown substantial improvement, as shown in Figure 5.

Figure 5: Analyst training reduced the number of SAFE kits completed



Source: SAFE kit performance data obtained from OSP Laboratory and Information Management System

Emphasis on SAFE kit backlog led OSP to suspend DNA processing for property crimes

To manage the expected increase in SAFE kit submissions, OSP decided to suspend DNA analysis for property crime evidence in December 2015, including the highly successful High Throughput Property Crimes (HTPC) pilot.

The HTPC program, introduced in 2013, was a pilot project to analyze DNA evidence for property crimes more efficiently by bypassing OSP's Biology Unit. OSP analysts trained law

enforcement agencies to collect evidence using specialized HTPC kits, which could then be sent directly to the DNA Unit in Portland. The process included strict evidence submission policies and limits on the number of samples that could be submitted for a given case. The pilot began with three local law enforcement agencies, and four more were added by 2014.

Local law enforcement officials indicated the suspension of property crime DNA testing has presented challenges to investigating property crimes. Other forensic units still process property crime evidence, such as fingerprint analysis, but these tests can be more time intensive than DNA analysis.

OSP intends to resume DNA analysis of property crime evidence once the SAFE kit backlog is eliminated. At that point, the agency plans to reinstate the HTPC program and expand it to all law enforcement agencies in the state.

While the program is suspended, OSP has encouraged law enforcement agencies in the HTPC program to collect and store samples so they can be tested when the program is reintroduced. It is also possible other law enforcement agencies have been storing other DNA-related property crime evidence in the hope that it can be tested in the future. This creates a risk that a backlog of property crime evidence may be developing across the state that will be sent to OSP if and when DNA testing of property crime evidence resumes.

Changes to the SAFE kit process are too recent to determine whether OSP will be able to eliminate the backlog, but current trends are promising

While our review of OSP SAFE kit lab practices found the agency is following national best practices, it is too soon to tell if the agency's efforts will be enough to eliminate the backlog in a timely manner. Newly hired DNA analysts have just begun to perform casework and some of the newer practices, such as dividing DNA staff into dedicated teams and the LEAN review, have only been implemented recently.

The upward trend in the number of kits processed is cause for optimism. In the first quarter of 2018, the agency completed an average of 220 kits a month, a significant increase from the 2017 average of 89 kits per month. OSP also completed 197 technical reviews of the kits outsourced under the DANY grant in January of 2018, almost double the number completed in any prior month.

Also, OSP expects the volume of older SAFE kits sent by local law enforcement agencies to decline. As of late 2017, the statewide backlog of kits that had yet to be submitted stood roughly at 1,100, down from approximately 4,900 kits reported in 2015.

OSP management and staff expressed confidence that the SAFE kit backlog will see a significant reduction by the summer of 2018, and will be fully eliminated by the end of the year. Our office will report on the status of the backlog when we perform follow-up work on this audit.

Recommendations

Melissa's Law addressed several of the root causes that led to the backlog of unprocessed SAFE kits. In addition to the agency's current efforts to reduce the backlog, we recommend that OSP:

1. Post SAFE kit processing status reports on the agency's website on a regular basis.

2. Examine available options for tracking SAFE kits, including efforts in other states, such as Washington and Idaho.

3. Create a plan to reintroduce DNA analysis for property crime evidence. Collect information from local law enforcement agencies about unprocessed property crime evidence to inform future OSP lab capacity planning.

Oregon
Kate Brown, Governor

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April 12, 2018

Kip Memmott, Director
Secretary of State, Audits Division
255 Capitol St. NE, Suite 500
Salem, OR 97310

Dear Mr. Memmott,

This letter provides a written response to the Audits Division's final draft audit report titled: "Oregon State Police Forensic Division Has Taken Appropriate Steps to Address Oregon's Sexual Assault Kit Testing Backlog."

Your team of auditors was patient and thorough. To a person, they were professional and good to work with. When they offered criticism it was clear, fair and constructive. Their findings are accurate and we have already begun to implement change based upon their recommendations.

Below is our detailed response to each recommendation in the audit.

RECOMMENDATION 1 Post SAFE kit processing status reports on the agency's website on a regular basis.		
Agree or Disagree with Recommendation	**Target date to complete implementation activities (Generally expected within 6 months)**	**Name and phone number of specific point of contact for implementation**
OSP agrees with this recommendation	April 30, 2018	Geoff Bock, OSP Forensic Services Division, Salem

Narrative for Recommendation 1
The OSP Forensic Services Division started on this project modeling the Houston website within a week of discussing the idea with the Secretary of State's audit team. Our web page is running and accessible using the Chrome browser, but additional enhancements may be forthcoming over the coming months.

RECOMMENDATION 2 Examine available options for tracking SAFE kits, including efforts in other states, such as Washington and Idaho.		
Agree or Disagree with Recommendation	**Target date to complete implementation activities (Generally expected within 6 months)**	**Name and phone number of specific point of contact for implementation**
OSP agrees with this recommendation	January 1, 2019	Rob Hilsenteger, OSP Forensic Services Division, Salem

Narrative for Recommendation 2

The OSP Forensic Services Division started looking for software tracking solutions in the early spring of 2016, as it appeared to be the quickest and most economical means of giving victims the information access required by SB-1571. We built our 2016 grant application upon the assumption that we would purchase tracking software that was already in use in another state. We were successful, with notice of the grant awarded coming to the Division in September of 2016, and related funding becoming available in January, 2017. While working through the lengthy state procurement process for software purchasing we became aware of a capable and economical app-based alternative being developed by the Portland Police Bureau (PPB) as part of their "SAMS" program development. We promptly reached out to PPB and we have been working with their IT leadership to determine the most efficient and cost-effective way to host and deploy the program at OSP. The "SAMS lite" tracking program is expected to ready for deployment before the end of 2018.

RECOMMENDATION 3 Create a plan to reintroduce DNA analysis for property crime evidence. Collect information from local law enforcement agencies about unprocessed property crime evidence to inform future OSP lab capacity planning.		
Agree or Disagree with Recommendation	**Target date to complete implementation activities (Generally expected within 6 months)**	**Name and phone number of specific point of contact for implementation**
OSP agrees with this recommendation	March 1, 2019	Stephenie Winter-Sermeno, OSP Forensic Services Division, Clackamas Lab

Narrative for Recommendation 3

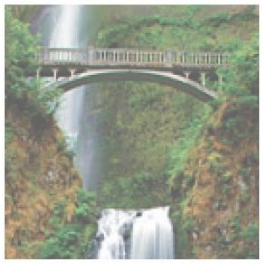
OSP is focused on fully eliminating the SAFE-kit backlog by the end of 2018. By the time the backlog has been retired, we should have sufficient experience with the balance between our DNA-analysis capacity and the increasing DNA request volume related to all crimes of violence. We need confidence in that balance before we can allocate capacity for DNA analysis on felony property crimes. Assuming we remain on our current trajectory, we could be accepting some DNA work on property crime investigations in early 2019.

Oregon's felony property crime volume is significantly higher than the volume of violent felonies, so accepting DNA analysis requests on ALL felony property crime would more than double the workload in our DNA unit. We are not staffed to manage that much volume, so we expect to gradually and incrementally restore DNA analysis on property felonies as capacity allows. Property crime requests will remain subordinate to work on violent crimes. Prioritization within the property crime pool will be based on multiple considerations, including a public safety risk assessment, custody status of the defendant and the request date.

Sincerely,

Alex Gardner, Captain
Director, Forensic Services Division
Oregon State Police







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About the Secretary of State Audits Division

The Oregon Constitution provides that the Secretary of State shall be, by virtue of his office, Auditor of Public Accounts. The Audits Division performs this duty. The division reports to the elected Secretary of State and is independent of other agencies within the Executive, Legislative, and Judicial branches of Oregon government. The division has constitutional authority to audit all state officers, agencies, boards, and commissions and oversees audits and financial reporting for local governments.

This report is intended to promote the best possible management of public resources.
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