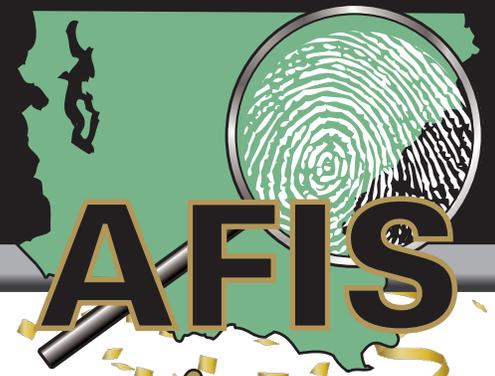


# King County Regional Automated Fingerprint Identification System



*Celebrating 30 Years!*



2018 ANNUAL REPORT

# Mission

*The Regional AFIS Program promotes public safety and contributes to crime reduction by providing expert fingerprint identification services to criminal justice agencies throughout King County.*

King County's Automated Fingerprint Identification System (AFIS) is a countywide program that provides the staff and technology to support criminal fingerprint identification services for all 39 cities and unincorporated areas. This regional approach provides enhanced services through shared resources.

1. To quickly identify arrested individuals, preventing the wrongful release of those using false names, and establish accurate criminal history records.
2. To identify crime scene fingerprints and palmprints that aid in investigations and provide evidence in court.



## Technology

- The AFIS database searches and stores biometric records
- 54 Livescan devices capture prints, photos and demographics for transmission to the local, state, and federal identification systems
- 260 Mobile ID devices, used by officers in the field to identify people within minutes

## Strategic Benefits

- Invests in centralized staff and technology with an overall lower cost than agencies funding their own
- Contributes to information sharing between agencies
- Supports task forces, special initiatives, and major crime investigations

## Staff Services

Arrest Identification • Crime Scene Processing • Latent Print Analysis  
Technology Management • Customer Support & Training • Information Sharing

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*Confetti Image (cover) provided by freepik.com*

# Message from the AAC Chair

On behalf of the **King County AFIS Advisory Committee**, I am pleased to share with you the King County Regional AFIS program's 2018 annual report. AFIS technology has become heavily relied upon within the law enforcement community. Over the course of my 30 year career with the Seattle Police Department, fingerprint collection has evolved from black powder and a brush into an array of sophisticated tools that encompass photography, computer processing and chemical processing (although black powder and a brush are still useful). This report details some of the exceptional work and solved cases that have resulted from utilization of the AFIS program.

While advances in technology and new equipment or facilities are important, the King County AFIS program succeeds because of its people. The levy supports highly skilled forensic examiners, technicians and other specialists. They play a vital role in the investigative process, and we are grateful for their dedication and professionalism.



**Scott Bachler**  
Lieutenant  
Seattle Police Department

You may also find this report online at [www.kingcounty.gov/afis](http://www.kingcounty.gov/afis)

## AFIS Advisory Committee

### Chair

Lieutenant Scott Bachler  
Seattle Police Department

### Vice-Chair

Andrew Bauck  
Executive Analyst  
King County Office of Performance,  
Strategy & Budget

*A special thank you to  
our outgoing members:  
Greg Doss & Joe Kessler*

### Members:

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Bellevue Police Department

Chief Bill Pierson  
Auburn Police Department

Chief Steve Sutton  
Lake Forest Park  
Police Department

Rob Wyman  
City Manager  
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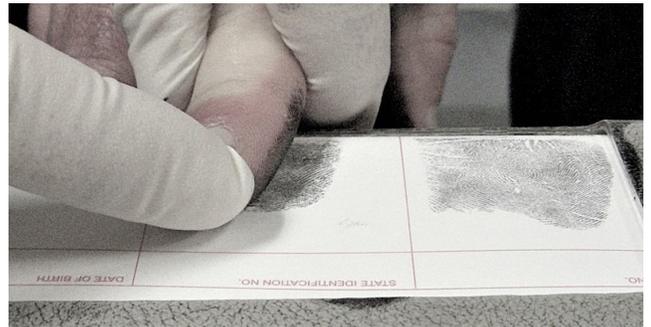
## AFIS then...

The first levy to support the King County Regional Automated Fingerprint Identification System (AFIS) was approved by voters in 1986. The funds were used to acquire and implement the county's first AFIS computer. Many years worth of inked fingerprint cards were collected from law enforcement agencies all over King County and scanned into the new system.

In 1988, King County's AFIS went "live", establishing faster and more expansive fingerprint identification services to agencies across the county. The new system dramatically increased the ability to identify crime scene prints, and determine the identity of arrested individuals. AFIS later added jail booking identification to ensure prints were taken for every person booked into a county jail, and added crime scene processing so law enforcement agencies could call in fingerprint experts for crime scene assistance.



AFIS flagship office, 1988



Inked tenprint fingerprints



First livescan model used in King County, 1999

*AFIS is a computer database for storing, coding and indexing millions of fingerprint images. It uses minutiae and algorithms to find the most likely matches to new prints entered into the system, narrowing the search parameters and replacing the time-consuming and less effective process in use before computerization.*

*AFIS technology allows a print to be compared to hundreds of thousands of prints in just a few minutes, and generates a list of potential candidates for examiners to scrutinize in more detail during their final analyses. It has dramatically increased the potential for successful identification of suspects.*



*AFIS computer storage units, 1988*



*Basic pattern types*

*In addition to the evolution of computer technology, advances in latent processing techniques for visualizing crime scene prints includes using chemicals and various light sources.*



*AFIS computer storage disc, 1988*



*Printfinder (Laser Photonics), 1990*

## AFIS now...

Over the years, there have been several advances in AFIS technology like livescan and mobile ID, capturing fingerprints electronically and transmitting them for very fast results. What used to take weeks can now be done in minutes. Expensive equipment that filled an entire room can now fit into one server rack. In 2018, the King County Regional AFIS Program not only celebrated 30 years of continuous service and advancement, but signed an AFIS replacement contract that will take the AFIS technology securely into the cloud.

Accomplishments throughout the year also included securing levy funding through 2024, expansion of the processing unit service locations and hours, and digitizing thousands of records to reduce the need for storage equipment and space. Due to unexpected delays, construction for the processing lab replacement project did not begin until December. The revised plan is for completion and move-in during August 2019.

# Program Technology

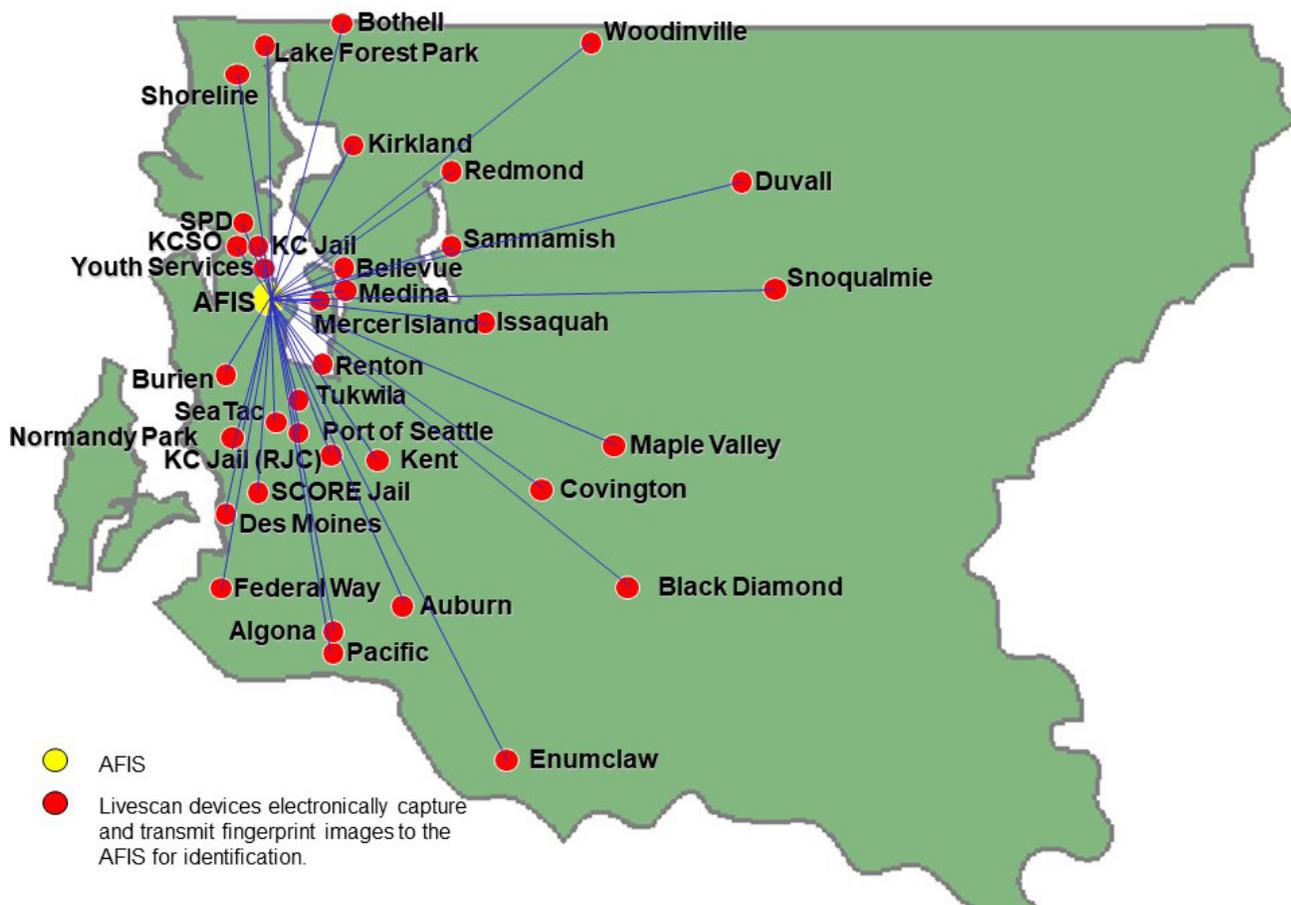
## AFIS Database

AFIS is a biometric identification system that uses digital imaging technology to obtain, store, and analyze print data. Replacement of this technology was approved in July and a contract signed with the existing vendor, IDEMIA (formerly MorphoTrak). The program provides AFIS search capability to support all law enforcement agencies within King County.

## Livescan

Biometrics4All livescan devices are used to electronically capture and transmit fingerprint and palmprint images to the AFIS database for identification. The prints are searched locally and transmitted to state and federal identification systems.

Livescans produce fast and accurate identification of arrested individuals. They are located primarily at law enforcement agencies throughout the county as shown on the map.



## Mobile ID

Mobile ID (also an IDEMIA product) consists of handheld fingerprint capture devices and software that allow officers in the field to search two fingerprints in the AFIS database and receive results within minutes. Identities can be quickly confirmed, enabling officers to make critical decisions on whether to detain subjects. The prints are searched through the King County AFIS, the state database through the Western Identification Network (WIN), and the FBI's Repository for Individuals of Special Concern (RISC). Fingerprints are not saved on the device nor stored in the AFIS database. Mobile ID is helping law enforcement personnel get identification results quickly in the field.



# Program Finances

## Program Funding

A voter-approved property tax levy supports the AFIS program, providing fingerprint services and technology to law enforcement agencies countywide.

Although agencies are typically responsible for costs associated with performing their own criminal identification functions, the investment in biometric technology, staff, equipment, and other resources is beyond the capacity of local jurisdictions to finance independently. The regional approach, made

<b>2018 Levy Rate</b>	
\$ .04153	per \$1,000 of assessed value
<b>Cost to King County Homeowner</b>	
\$19.46	for a home valued at \$350,000
<b>Revenue and Expenses</b>	
	<b>2018</b>
<b>Revenue</b>	
Property (Levy) Taxes	\$22,004,282
Investment Interest	\$519,892
Other (e.g. excise tax)	\$115,336
<b>Total</b>	<b>\$22,639,510</b>
<b>Expenses</b>	
Salaries & Benefits	\$10,179,275
City of Seattle	\$3,661,970
Intergovernmental Overhead	\$2,365,569
Supplies & Services	\$3,362,717
Capital Equipment	\$7,462
Lab Replacement Project	\$337,706
AFIS Replacement Project	\$2,002,000
<b>Total</b>	<b>\$21,916,699</b>

possible by the levy proceeds, takes the burden off of local agencies by providing them with core fingerprint services and technology.

## Taxpayer Value

The property tax levy approved in 2012 supported services from 2013-2018 with an initial levy rate of \$0.0592 per \$1,000 of assessed value. Due to increases in the assessed value of King County homes and to limits on increases in the total amount collected, the rate charged to property owners has fallen steadily throughout the levy period.

The 2013-2018 levy plan included financing to replace the outdated AFIS laboratory. Although this project is not yet complete, funds collected during this levy period have been retained to complete the project in 2019. In addition, conscientious financial management and efficient operations left the AFIS program with sufficient funding to expand the scope of the lab project by co-locating most AFIS staff in the new location and replacing the aging core AFIS computer. These significant capital expenses were not included in the 2013-2018 plan, and represent a return to taxpayers beyond what was included in the 2012 ballot measure. Approximately \$17 million will be carried over to the next levy period, after accounting for these additional capital expenses.

## Looking Ahead

In August 2018, King County voters approved the renewal of the AFIS property tax levy for another six years. This levy will fund existing operations from 2019 through 2024, and includes \$6.9 million in staffing reductions. The levy authorizes King County to collect property taxes starting at a rate of \$0.03501 per \$1,000 of assessed value in 2019. This rate will be recalculated each year based on limits to the total amount collected; if property values continue to increase, the tax rate will likely continue to decline, as it did during the 2013-2018 levy.

# Program Services

## Arrest Identification Services

Livescan devices are used at correctional facilities and police agencies to electronically capture and transmit finger and palm print images to the AFIS database for identification 24 hours a day, seven days a week. Anyone found to be using a false name is immediately reported to the arresting officer or detention facility. This process ensures that people arrested are positively identified prior to release from custody, preventing individuals from hiding criminal records or evading warrants, or preventing agencies from detaining the wrong individual.

AFIS staff provide arrest information to update state and federal rapsheets. Arrest data is reported quickly so that courts, law enforcement, and licensing agencies have access to the most current criminal history record information possible. These records are used for criminal and background investigations, sentencing determinations, and some types of applicant checks.

## Crime Scene Identification Services

Prints left unintentionally on a surface are referred to as latent prints because they are not visible. These prints need chemical or photographic processing to be visualized. Staff with specialized training process crime scenes, and items from crime scenes for latent prints.

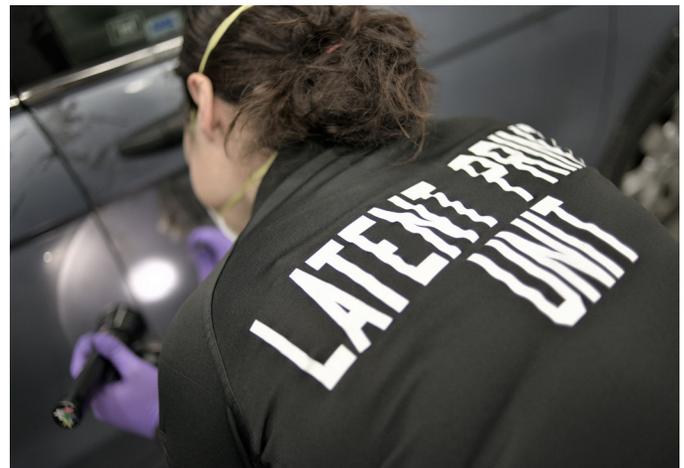
Once developed, latent prints are compared to known subjects or searched through the local, state, and/or federal AFIS databases to determine who may have been present and left the prints. Latent prints that are identified as part of an investigation may result in AFIS staff testifying in court to their findings.

## Photography Services

The KCSO and SPD Photography Units provide specialized expertise for forensic and public relations purposes. The AFIS levy does not fund these units, but provides minimal supplemental funding due to the volume of forensic photography work performed for the program.



*In addition to taking finger and palm prints, AFIS staff capture booking photos and collect DNA samples as required by law. Other services include working with victims of identity theft and identifying injured, unconscious, or deceased individuals.*



*Both the King County and SPD laboratories are accredited to international standards through the ANSI National Accreditation Board.*



## Technology Support & Training

The AFIS Program provides technical and helpdesk support for all users of the AFIS, livescan, and mobile ID services. Staff also organize fingerprint related training for officers and examiners, facilitate communication among stakeholders throughout the county, and participate in community events.

## Community Involvement

An important part of the AFIS Program is sharing information with the public. This is done through school science fairs, festivals, community picnics, National Night Out events, forensic and science classes, and career conferences. At these events, AFIS staff share information about their jobs and the work they perform. They also educate audiences about the forensic field and how AFIS contributes to community safety.

## Program & Technology Management

AFIS program management oversees daily operations, acquisitions, budget, and the use and maintenance of fingerprint technology throughout the county. The project team ensures compliance with state and national industry standards, administers program initiatives, and responds to issues in the ever-changing biometric and forensic disciplines.



## Statistics...

88,264 Livescan Records Searched Through AFIS...

72.7% "Hit" Rate

5,902 Mobile ID Records Searched...

3,794 Identifications

3,910 Latent Cases Worked...

1,431 Suspects Identified

# The Year In Review...

## Homicide

An older man living alone in his secluded Renton house was found by his handyman in his backyard shed murdered, bound, and rolled up in an area rug. AFIS processed the scene for prints and produced the names of two suspects. Police followed a trail of credit card use by the suspects to confirm their involvement. It turns out the victim was randomly staked out and targeted by the Pierce County couple who killed him to steal his house so they could live in it.

## Homicide

A motel clerk was shot and killed during a robbery. The suspect jumped over the counter and AFIS staff were able to lift his palm print from the counter and identify him. He was found in Ohio where he is being held until extradited to Washington on these charges.

## Mobile ID Pharmacy Thieves Identified

WSP troopers stopped a vehicle for multiple violations on I-90. The driver was observed to be impaired and didn't have a driver's license on him. The troopers questioned the driver and passengers separately. When their stories didn't match they used mobile ID to identify the driver. They arrested the driver for DUI, seized the vehicle, and obtained a search warrant. The troopers found a loaded pistol in the glove box; 30+ gift, credit, and debit cards; and one full plus several empty drug bottles. Based on the identities of the driver and passengers along with the clothing and evidence found, the troopers contacted the KCSO regarding an ongoing investigation into a pharmacy break-in, in Covington. The KCSO was able to link the suspects to their investigation and took over the case. The case was later taken on by the ATF.

## SPD Home Invasion Robberies

In separate daytime home invasion robberies, a suspect held a female at knife point while he demanded jewelry, cash and cell phones. On both occasions, the suspect fled and could not be tracked by K9. From the first scene, SPD officers recovered a knife the suspect held to the victim's throat. SPD Latent Unit processed it and a single print was recovered. They searched the print through the AFIS database and identified it to a subject. In the second occurrence, the female victim relinquished a jewelry box and cash to the suspect. On a search of the surrounding neighborhood, the jewelry box was recovered and processed for fingerprints. Several prints were found to match the same subject.

## Church Arson

Witnesses observed a subject throwing Molotov cocktails at a church in south Seattle, causing significant damage to the front of the church. SPD officers and crime scene investigators responded, collected unexploded bottles from the scene, and submitted them to the SPD Latent Unit for processing. With the help of witnesses and camera surveillance around the building, officers were able to detain a suspect. Multiple latent prints recovered from the bottles were identified to the suspect.

### **Mobile ID Success**

Officers were dispatched to a mall regarding a theft. An arrested male repeatedly provided a name and date of birth that was not on record. Another officer brought a mobile ID device to the scene. Within minutes, the device provided the correct name and date of birth along with a mug shot. The suspect had a warrant out of California for Felony Family Offense/Corporal Injury. He is in jail awaiting extradition. "Pretty neat device!", said the officers on scene. They were quite impressed.

### **Rape**

Detectives served a warrant and collected items belonging to a suspected rapist from a homeless camp in Maple Valley. AFIS staff assisted by searching through the items and found prints on a binder in a bag that confirmed they had the right suspect.

### **Lottery Theft**

A gas station clerk was robbed at gun point in Seattle. The suspect stole cash, cigarettes and lottery scratch tickets. That same day, the subject attempted to cash in two of the lottery tickets at a different gas station, but the ticket machine returned with a rejection message. The suspect fled on foot and left the stolen lottery tickets behind. Officers recovered the tickets and submitted them for latent print processing. Initially, normal processing techniques resulted in one low quality print. However, using new technology called the FSIS (Full Spectrum Imaging System), the examiner was able to yield 13 high quality prints. These prints were identified not only to the listed subject in the case, but also two other individuals generated through AFIS searches.

### **Robbery turned Homicide at Homeless Camp**

After a man invited the another person into his tent to stay warm, he was fatally stabbed in the femoral artery. Items from around the tent were submitted to SPD Latent Unit for rush processing. Latent prints were recovered and searched through the local AFIS database, yielding identifications. According to the lead SPD detective, "One of the identifications made in this case put us onto a previously unknown witness who provided us incredibly helpful information. I don't think we would have had any way of identifying this transient male without the fingerprint hit. It's huge. Thank you so much!"

### **50+ "Smash-and-Grab" Burglaries**

Fingerprints found at crime scenes across King and Snohomish County lines linked two young men (one from Kirkland, one from Seattle) to a string of more than 50 burglaries and expensive vandalism at small businesses throughout both counties. Ten businesses were hit in one night in Monroe. Both men were arrested.

## ***Looking Forward in 2019***

**The AFIS program will continue to focus efforts on the processing lab construction and move, and the AFIS database replacement. Additional projects include digitizing records and consolidation of SPD tenprint work to the King County AFIS section.**



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**King County**