Wisconsin Department of Justice

2024 Annual Report

Division of Forensic Sciences

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DFS Overview

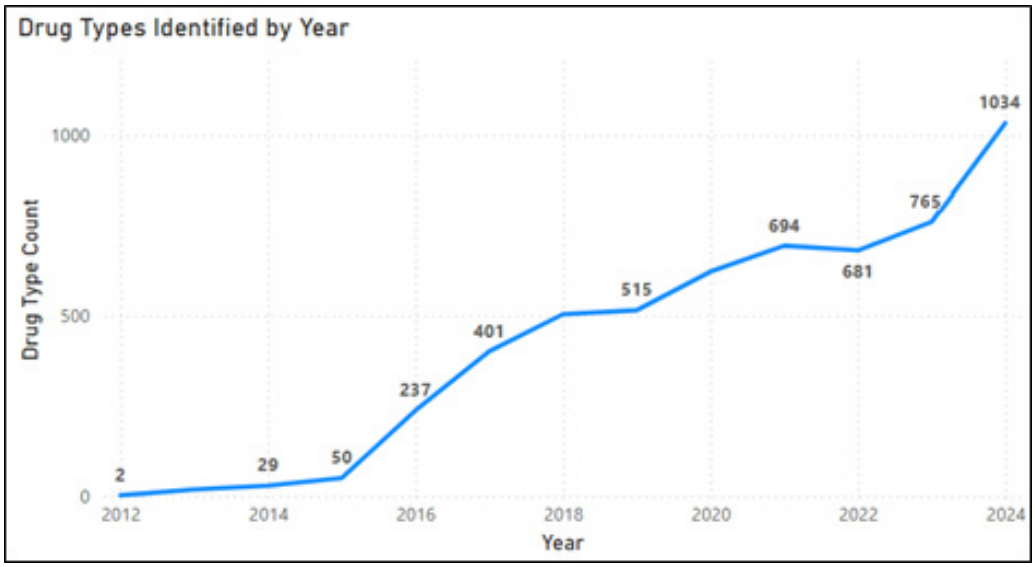
The Division of Forensic Sciences (DFS) was established as an independent division of Wisconsin Department of Justice (DOJ) in 2019, though the Wisconsin State Crime Laboratory (WSCL) was originally established in 1947. DFS employs over 190 people — including forensic scientists, technicians, evidence specialists, and crime scene response professionals — and offers impartial forensic analysis in the following areas: toxicology, drug identification, biology/DNA analysis, DNA database, trace evidence analysis, firearms examination, toolmark examination, latent print examination, footwear analysis, ten print comparison, forensic imaging, and video analysis. Samples sent to DFS for testing are not always able to be collected under ideal conditions, and forensic scientists are trained to use rigorously tested methods to produce accurate findings relevant to a criminal investigation, prepare a report of conclusions, and provide expert testimony in criminal proceedings. DFS also staffs on-call Crime Scene Response Units, located at each laboratory, to assist law enforcement at major crime scenes by processing the crime scene and maintaining evidence integrity.

Data on Items Processed

New to the report this year, data on the number of items processed is included. All of these items were examined and documented by WSCL staff, though not all of them underwent scientific analysis. Pursuant to a sample plan procedure required by accreditation, some items do not undergo scientific analysis because they belong to a population of items for which the use of a representative sample for analysis is scientifically sound, allowing WSCL to conserve resources.

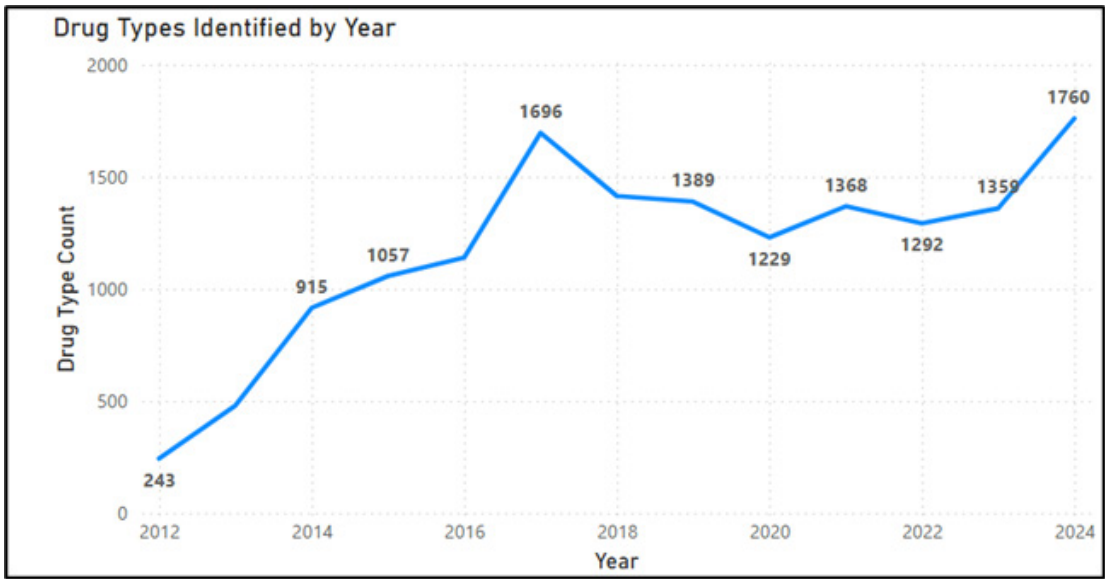
Drug Trends

The number of WSCL cases in which evidence tested positive for fentanyl or a fentanyl analogue increased from 2023 to 2024. In 2014, there were 29 such cases, while there were 765 of these cases in 2023 and 1,034 of these cases in 2024.



WSCL cases worked by the Controlled Substances Unit in which fentanyl or a fentanyl analog was identified. Access the WSCL Drug Case Dashboard: https://www.wisdoj.gov/Pages/CriminalJusticeServices/drug-case-dashboard.aspx

The number of WSCL cases in which evidence tested positive for methamphetamine also rose from 2023 to 2024. In 2024, there were 1,760 of these cases, which is higher than the number from 2017, when there was a spike of these cases to 1,696.



WSCL cases worked by the Controlled Substances Unit in which methamphetamine was identified. Access the WSCL Drug Case Dashboard: https://www.wisdoj.gov/Pages/CriminalJusticeServices/drug-case-dashboard.aspx

DFS identified Xylazine in 147 samples originating from 123 unique cases in 2024. This is an increase from 2023, in which DFS identified Xylazine in 69 samples originating from 64 unique cases.

Laboratory Information Management System

After a significant investment of staff time throughout 2024, in March 2025 the first phase of the new Laboratory Information Management System (LIMS) was implemented. The new LIMS will enable more comprehensive data collection, which will assist with assessing the operations of the laboratory. DFS is preparing to launch a new feature in LIMS in 2026 that will enable law enforcement agencies to electronically submit case and evidence descriptions in advance of, or in conjunction with, physical evidence submission. This will streamline intake processes by allowing for preliminary review and acceptance of evidence submissions.

Laboratory Construction Continues

Progress was made on the construction of the new Southeast Regional Crime Laboratory in 2024, with occupancy scheduled for 2026. The new laboratory is being engineered to meet the environmental and technical requirements of complex analytical systems such as the LC/MS/MS and LC-QTOF. This includes precise temperature and humidity control, dedicated power supplies, vibration isolation, and advanced clean air handling systems, which are all critical components for optimal instrument performance and data integrity. Through both mechanical infrastructure and adaptable workspaces, the new laboratory will support more efficient workflows and more easily accommodate the expansion of services as scientific innovation, technologies, and case demands evolve.

Construction of the new Southeast Regional Crime Laboratory.

Greater Detection of Drugs and Metabolites

In 2023, DFS acquired Triple Quadrupole Liquid Chromatograph/Mass Spectrometers (LC/MS/MS). Following installation, the instruments underwent performance checks, staff completed initial training, and method validation efforts started.

The addition of LC/MS/MS technology has enhanced the Toxicology discipline's capabilities, enabling the detection of lower concentrations of drugs and identification of emerging novel substances — drugs that are newly synthesized or modified compounds that are often designed to mimic controlled substances and attempt to avoid detection by traditional testing methods. Several new analytical methods have been validated for drug classes such as benzodiazepines, fentanyl and its analogs, cannabinoids, nitazenes, stimulants, and hallucinogens. Future method development will focus on opiates (excluding fentanyl, which has already been addressed) and a select group of drugs that do not fall within existing classes.

At the annual American Society of Crime Laboratory Directors Symposium in April 2025, the Toxicology Section of DFS was awarded the Forensic Research Committee's Outstanding Evaluation/Validation award for its work validating new WSCL methods on the LC/MS/MS instrumentation.

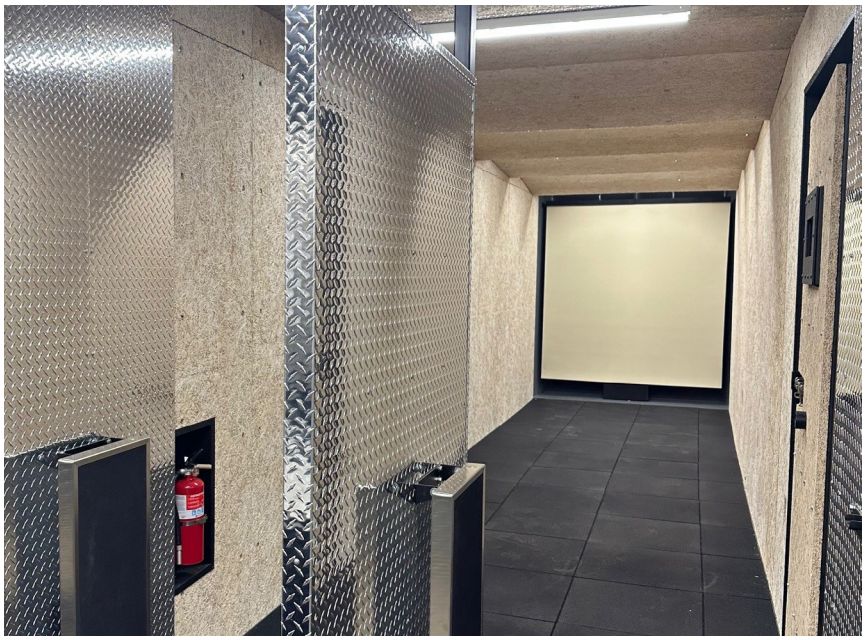
Continuing Need for Investment

Over a span of years, DOJ has repeatedly advocated for additional positions for the crime labs. DOJ requested 19 additional positions for DFS in the 2025-27 biennial budget, but that budget did not include any additional positions for DFS. Once again, DOJ calls for additional investment in the crime labs.

Expansion of Firearms Services to the Wausau Crime Laboratory

A new firing range equipped with rubberized flooring, acoustic sound boards, and a bullet trap were acquired and installed in 2024, allowing the Wausau Crime Laboratory to expand services to include a Firearms and Toolmarks Unit that was fully operational in May 2025. Prior to this expansion, all firearms and toolmarks analysis was done by analysts in the Southeast Regional Crime Laboratory.

The expansion of the Firearms Unit to the Wausau Crime Laboratory offers logistical benefits. Travel time is reduced for a number of agencies that choose to submit evidence in person. Firearms examiners also travel to testify in court, and having examiners located in the Wausau area makes attending many court proceedings more efficient than it would be if an examiner had to travel from southeast Wisconsin.



Photograph from inside the new firing range in Wausau.

DFS Case Intake Statistics

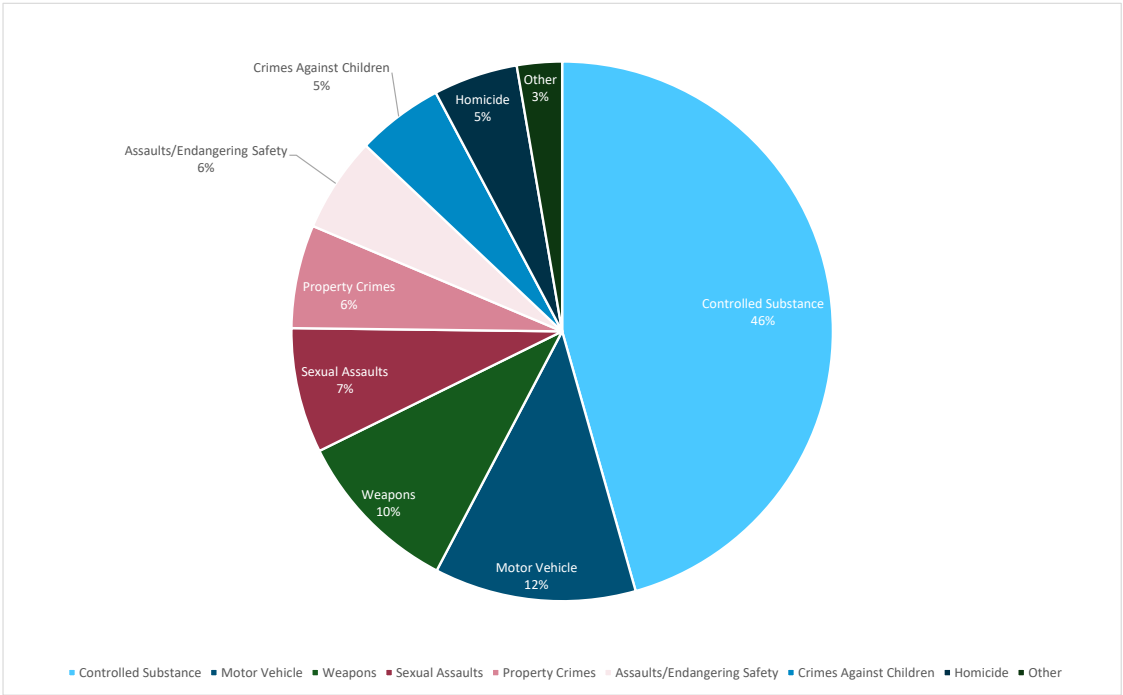
In 2024, DFS received 8,965 case submissions. Cases often consist of numerous items of evidence and can be worked by multiple units. For instance, sexual assault cases may require assignments in both the DNA Casework and Toxicology Units; those cases would be counted independently in the case intake and output for both units.

Receipted Cases	2022	2023	2024
Madison	3234	3123	3166
Milwaukee	3667	3861	3396
Wausau	2396	2404	2403
Total	**9297**	**9388**	**8965**

New Assignments	2022	2023	2024
Madison	5609	4901	4532
Milwaukee	6370	5958	5080
Wausau	2752	3048	2832
Total	**14731**	**13907**	**12444**

Items Submitted	2022	2023	2024
Madison	28416	26366	24572
Milwaukee	35797	37880	28294
Wausau	8475	7034	6592
Total	**72688**	**71280**	**59458**

Evidence Submitted to WSCL by Case Type in 2024



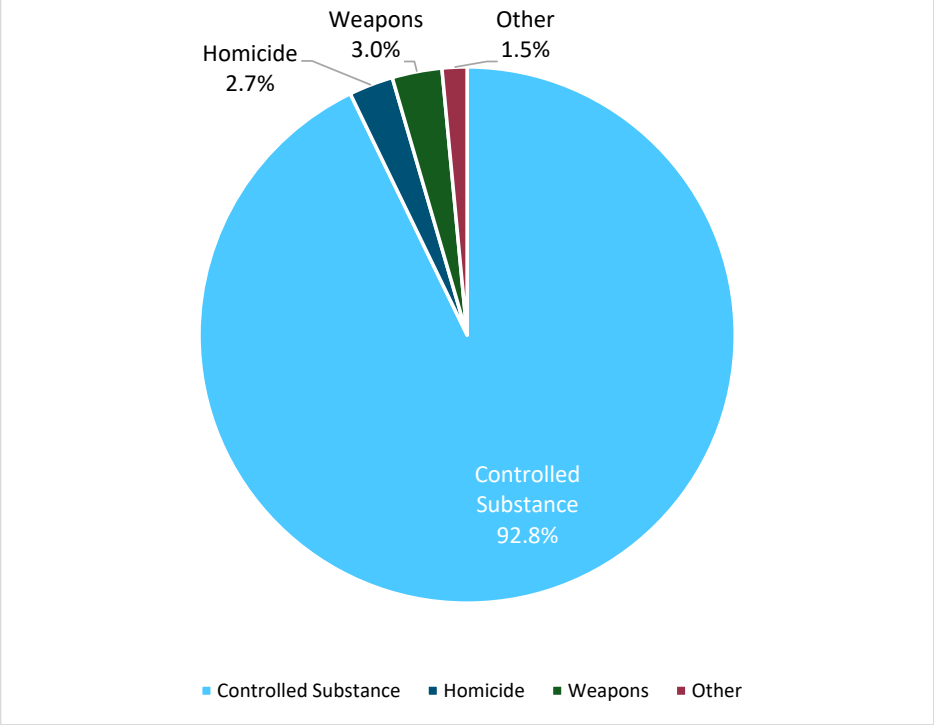
Controlled Substances

The Controlled Substances Unit analyzes evidence for the presence (or absence) of controlled substances as defined in the Uniform Controlled Substances Act, Chapter 961.

Controlled Substances	2022	2023	2024
New Assignments	4360	4561	4529
Approved Reports	3432	3624	4342
Items Processed	6865	6842	8806
Mean TAT[1]	84	110	90
Median TAT	65	65	61

Drug Case Dashboard
A WSCL Drug Case Dashboard is available on the DOJ website and provides information on the drugs identified by county in the Controlled Substances Unit. Access the dashboard: https://www.wisdoj.gov/Pages/CriminalJusticeServices/drug-case-dashboard.aspx

Types of Criminal Cases Involving Controlled Substances Analysis in 2024



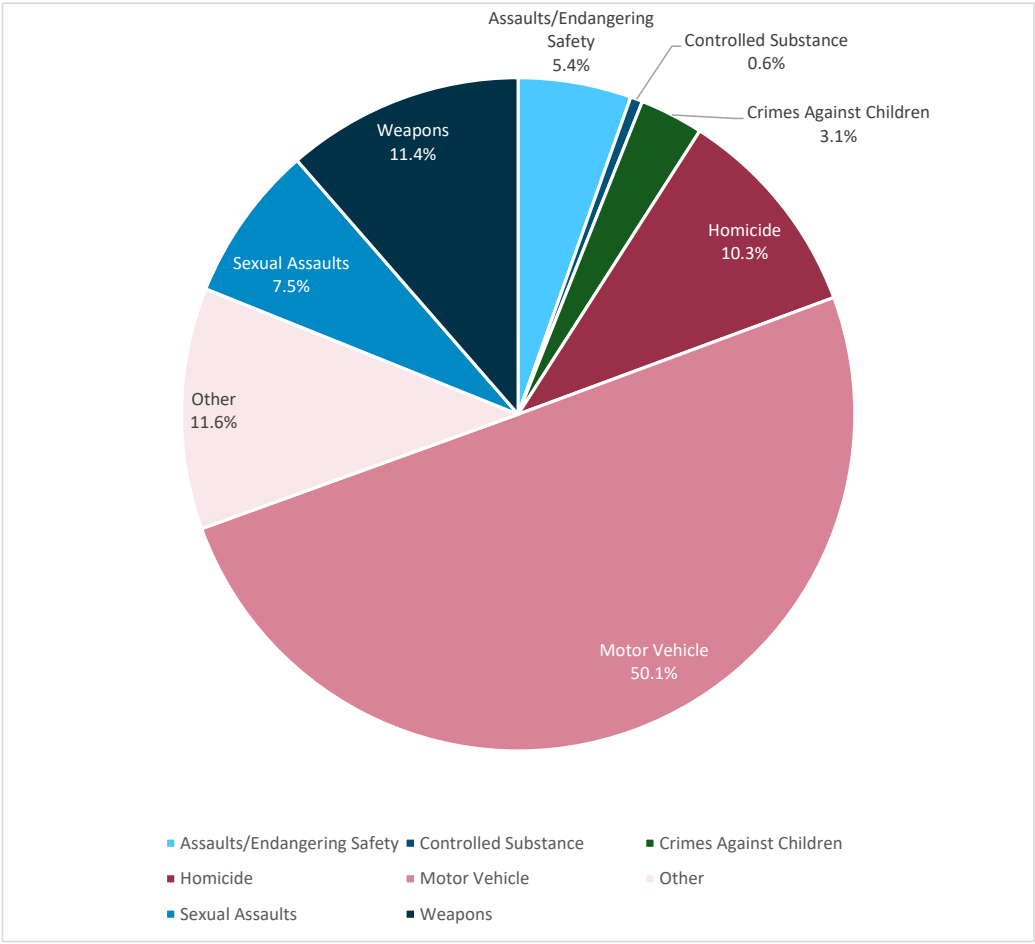
1 **Turnaround time**: DFS defines the turnaround time on a case to include a start time from when the laboratories accept a case for testing and initiate an assignment to when a report is issued. DFS adheres to ISO/IEC 17025:2017, which allows the laboratory to have clarifying communication with a customer prior to laboratory activities (which may include, but is not limited to, differences between the request and submission guidelines, inappropriate or out of date methods testing requests, and requests outside the scope of capacity).

Toxicology

The Toxicology Unit analyzes bodily fluids or tissue for alcohol and controlled substances. The table below includes both BAC (blood alcohol concentration) and drug toxicology assignments.

Toxicology	2022	2023	2024
New Assignments	3855	3042	2063
Approved Reports	3736	2758	2039
Items Processed	5648	5618	5125
Mean TAT	84	64	82
Median TAT	43	40	38

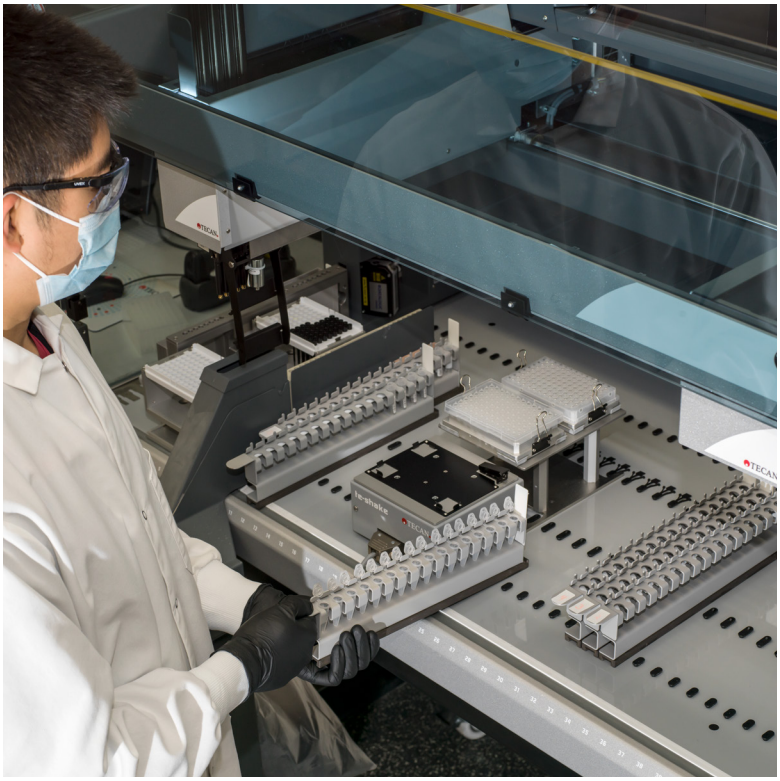
Types of Criminal Cases Involving Toxicology Analysis in 2024



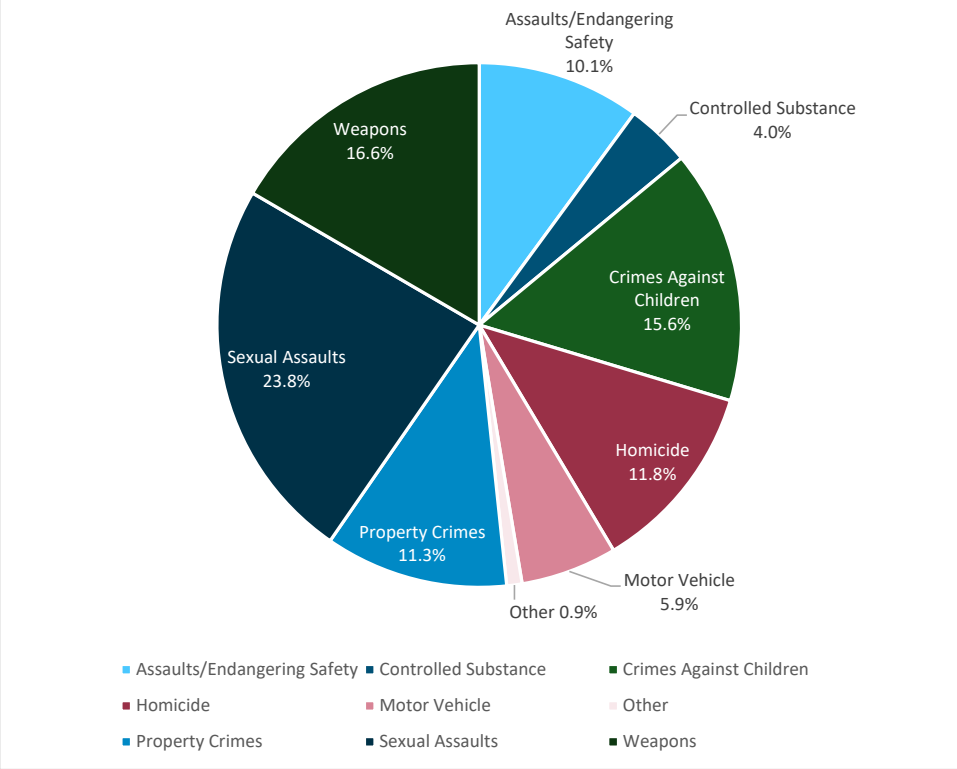
DNA Casework

The DNA Casework Unit examines evidence for the presence of biological material, develops DNA profiles utilizing scientific techniques, and analyzes and interprets the data.

DNA Casework	2022	2023	2024
New Assignments	4347	4439	4124
Approved Reports	3715	3572	3221
Items Processed	38076	38377	39992
Mean TAT[2]	84	108	129
Median TAT	61	94	112



Types of Criminal Cases Involving DNA Casework in 2024



2 In 2024, as it had previously, DFS outsourced the testing of a portion of sexual assault kit submissions when district attorneys had decided not to pursue a criminal prosecution — in other words, where the evidence was not part of an active criminal case — and DNA was not on file for the listed suspect. In those situations, DFS sends evidence to an accredited outside DNA laboratory for processing. If the outside laboratory obtains a positive DNA profile (i.e., a DNA profile associated with someone other than the victim), DFS evaluates the results and, where appropriate, uploads those results to CODIS, potentially creating leads in other cases. Any DNA profiles uploaded to CODIS meet the eligibility requirements as defined by the FBI National DNA Index System Operational Procedures Manual. Of the 235 DNA submissions outsourced by DFS in 2024, 63 resulted in a positive DNA profile subsequently evaluated by DFS.

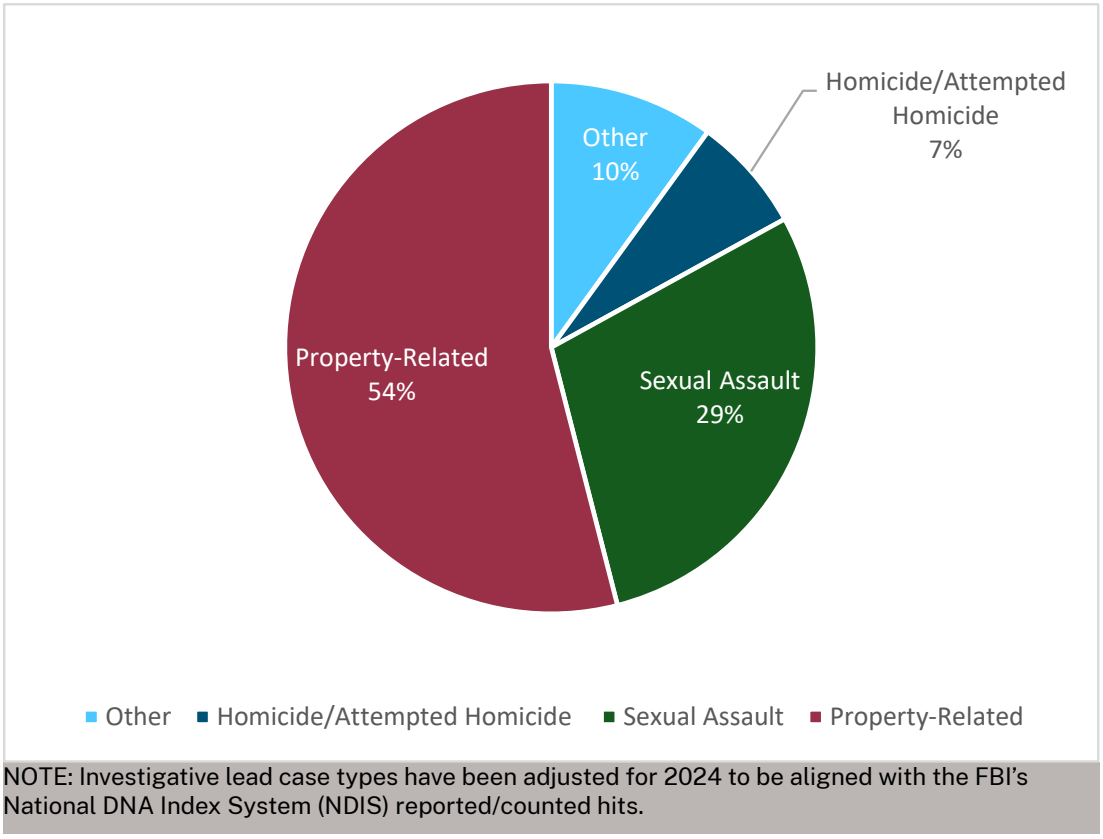
Consistent with past practice, only outsourced sexual assault kits with a positive DNA profile are included in the DNA case count and turnaround time. DFS defines the turnaround time for outsourced positive-DNA-profile sexual assault kits as the time from when DFS receives the result from the outside laboratory until the time when DFS issues a final report regarding CODIS eligibility and possible upload of any DNA profiles. When excluding the 63 outsourced positive-DNA-profile cases from the calculation of TAT for DNA cases in 2024, the median and mean TAT increased marginally to 114 days and 130 days, respectively.

DNA Databank

The DNA Databank Unit performs two major tasks: quality control of incoming reference DNA samples to build an accurate database (Combined DNA Index System, CODIS) and non-evidentiary comparisons against the database to provide investigate leads to law enforcement.

DNA Databank[3]	2022	2023	2024
Sample Intake	22195	24547	22818
CODIS Uploads	18692	21890	23781
Leads Reported	901	737	717
Mean TAT	26	41	49
Median TAT	26	29	48

Investigative Lead Case Types in 2024



NOTE: Investigative lead case types have been adjusted for 2024 to be aligned with the FBI's National DNA Index System (NDIS) reported/counted hits.

3 The DNA Databank Unit mean and median TAT represents the period of time from when a reference DNA sample is received and when it is uploaded to CODIS.

Wisconsin Case Identity Resolution (WiscIR)

Familial DNA search (FS) is a tool that deliberately searches for first order biological relatives of an unknown evidence profile obtained from crime scene evidence. This is an on-site search performed with the offender DNA profiles in the Wisconsin DNA Databank.

Forensic Investigative Genetic Genealogy (FIGG) is a technique that combines genetic testing of an unknown evidence profile obtained from crime scene evidence with traditional genealogical research. This search is performed using direct to consumer databases and identifies distant biological relatives. The genetic testing is not performed on-site at DFS.

The Wisconsin Identity Resolution team (WiscIR) provides guidance and act as liaisons to agencies seeking forensic investigative genetic genealogy (FIGG) and familial DNA search technologies. With members from the Division of Criminal Investigation and DFS, WiscIR is uniquely positioned to review cases, provide forensic DNA guidance, and assist with investigations. Importantly, both technologies have the potential to generate new investigative leads in previously unsolved major (homicide and sexual assault) crimes.

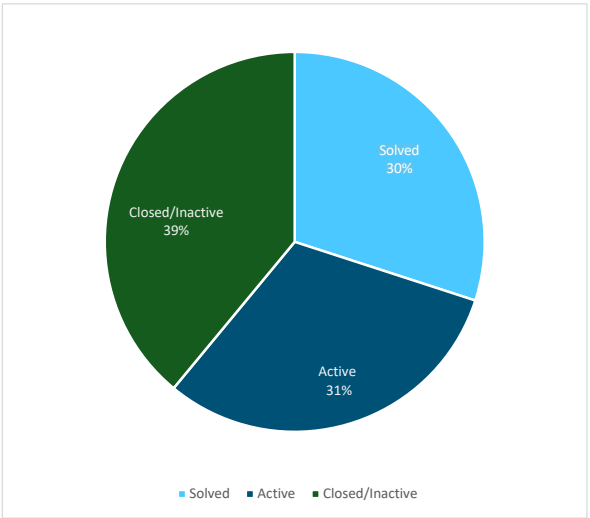
The Wisconsin familial DNA search program has been available to law enforcement free of charge since January 2018. Familial DNA search (FS) is a tool that deliberately searches for biological relatives of an unknown evidence profile obtained from crime scene evidence. This search is performed with the offender DNA profiles in the Wisconsin DNA Databank. To date, 40 cases have been searched and 7 cases have been solved through the familial investigative lead. Most of the cases evaluated by the WiscIR team are historical cold cases that have been unresolved for decades. This is often the last effort to find resolution for the victim.

The WiscIR team has been assisting law enforcement with FIGG cases since 2021. Since the formation of the team, 135 total cases have been evaluated for FIGG. Over the past year, the team has evaluated 22 cases, 6 cases have been outsourced, and 2 cases have been solved through a FIGG investigative lead.

OZAUKEE COUNTY SHERIFF CHRISTY KNOWLES and Undersheriff Marshall Hermann stood next to an artist's forensic drawing of Chester Breiney and a newspaper photo of his adoptive parents at a press conference on Friday. *Photo by Sam Arendt*

WiscIR Case Status Since 2018	Cases
Total Cases Evaluated+	135
Familial Searches *	40
Outsourced FIGG*	44
Solved –FS	7 (17%)
Solved –FIGG	19 (47%)
Solved Other	12
Closed/No Action	52
+42 cases are still in an active status	
*A case may have both FS and FIGG	

WiscIR Cases since 2018



Latent Prints and Footwear

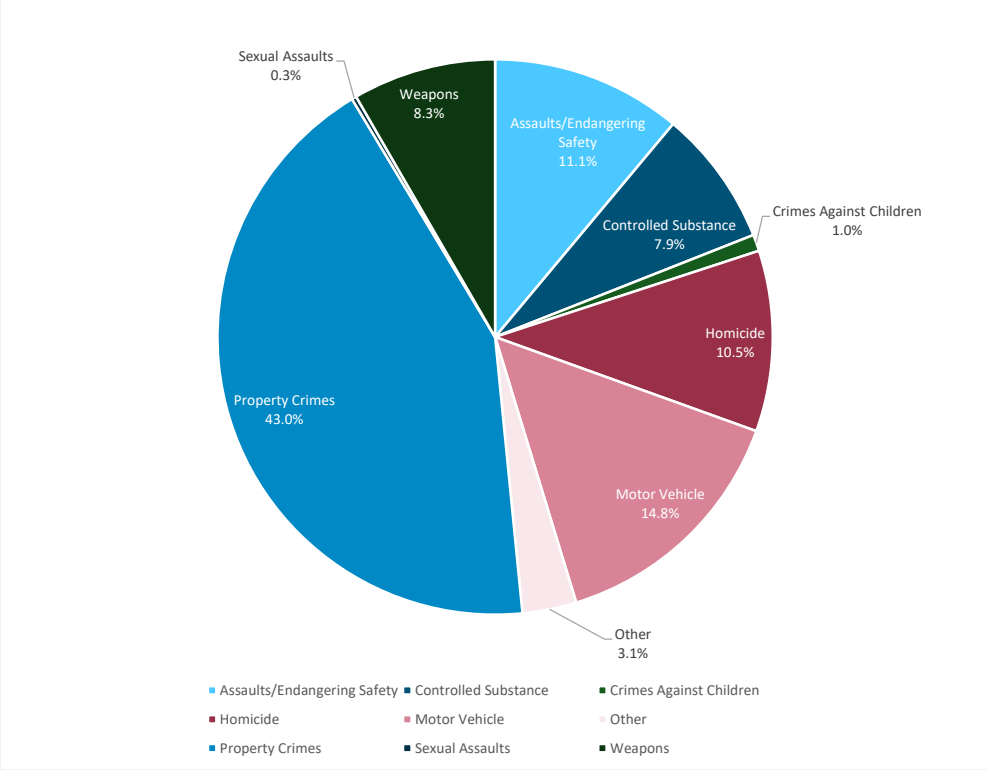
The Latent Prints and Footwear Unit examines items of evidence using a variety of physical and chemical processing methods to enhance and visualize both latent prints and footwear impressions. Latent print analysis is the examination of friction ridge impressions left behind on a surface by the friction ridge skin on a person's fingers, palms, or feet.

Latent Print	2022	2023	2024
New Assignments	856	774	696
Approved Reports	870	801	588
Items Processed	2342	2333	1657
Mean TAT	68	66	52
Median TAT	51	43	36

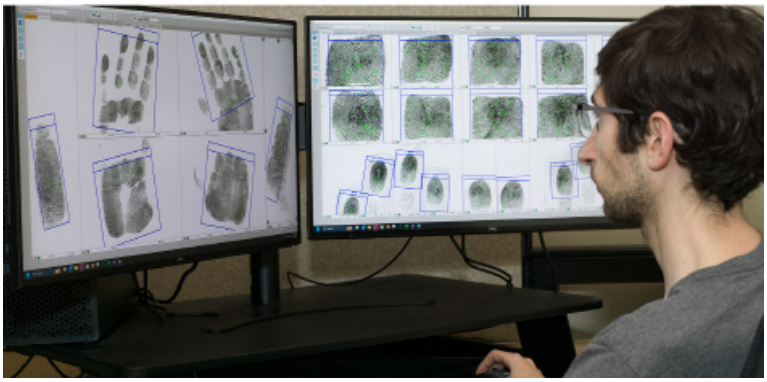
Footwear	2022	2023	2024
New Assignments	46	30	35
Approved Reports	44	28	28
Items Processed	78	40	58
Mean TAT	59	71	99
Median TAT	48	25	18

The "Footwear" data included in this year's report encompasses both Footwear (FT) and Footwear search (FWS) assignments.

Types of Criminal Cases Involving Latent Prints and Footwear Analysis in 2024



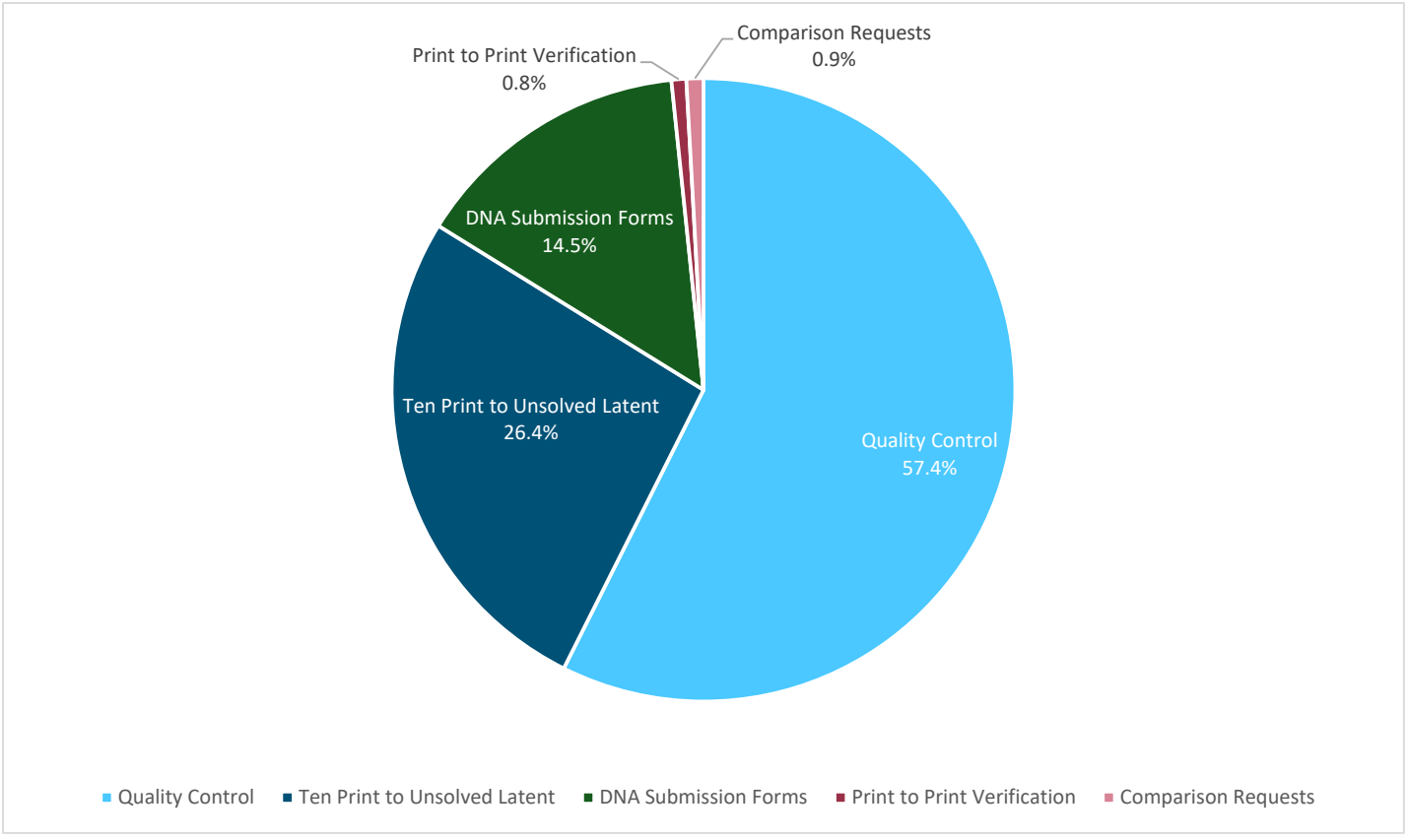
Friction Ridge Database (FRDB)



The Friction Ridge Database (FRDB) Unit, formerly Automated Biometric Identification System (ABIS), performs two major tasks: quality control of incoming fingerprints to build an accurate database and non-evidentiary print comparisons against the database.

Friction Ridge Database	2022	2023	2024
Quality Control	78464	96763	99771
Ten Print to Unsolved Latent	37212	48205	45939
Total Comparisons	54857	59063	62200
DNA Submission Forms	22154	22081	25250
Print to Print Verification	2706	1667	1331
Comparison Requests	630	937	1530

Friction Ridge Database Records Evaluated in 2024



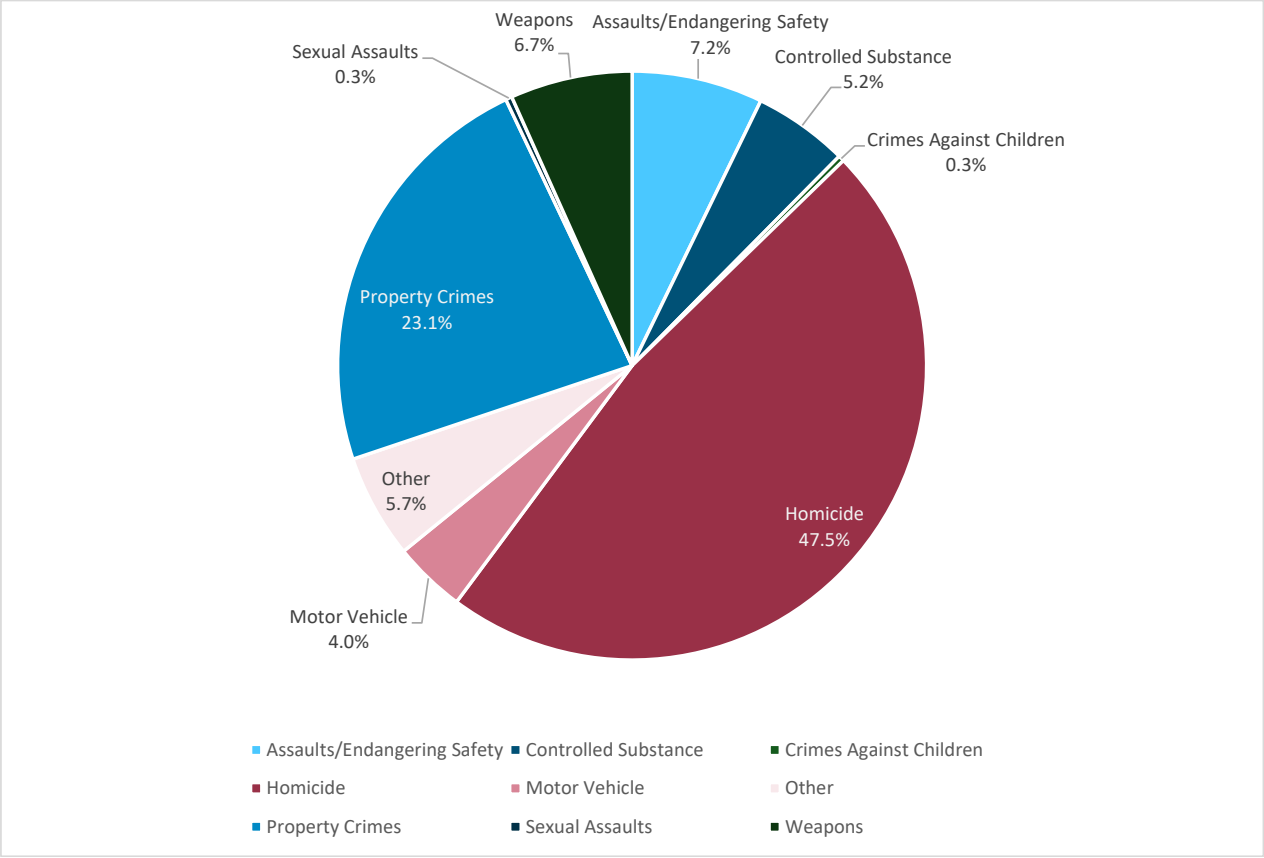
Forensic Imaging

The Forensic Imaging Unit examines and documents physical evidence utilizing specialized imaging systems and lighting methods. Submitted analogue and digital evidence is examined to provide video and image clarification services for both active and cold cases.

Imaging	2022	2023	2024
New Assignments	85	74	78
Approved Reports	81	77	65
Items Processed	179	89	106
Mean TAT	83	79	88
Median TAT	42	63	52

Work orders	2022	2023	2024
New Assignments	398	324	324
Approved Reports	396	320	279
Items Processed	657	555	511
Mean TAT	30	23	29
Median TAT	22	16	22

Types of Criminal Cases Involving Forensic Imaging in 2024



Firearms and Toolmarks

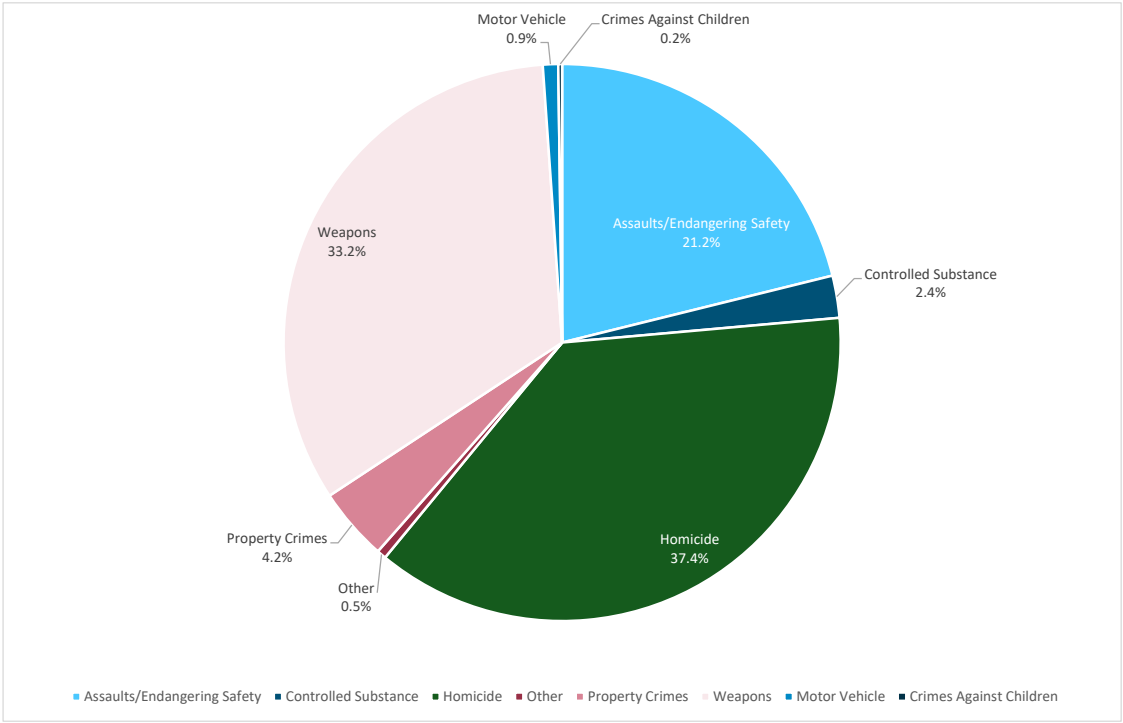
The Firearms and Toolmarks Unit analyzes firearms for operability and performs comparative analysis on fired bullets and cartridge casings. In addition, the unit conducts serial number restorations, distance determinations, and toolmark comparisons.

Firearms	2022	2023	2024
Case Intake	533	499	429
Approved Reports	382	311	343
Items of Evidence	2931	2428	2648
Mean TAT	167	177	193
Median TAT	120	110	131

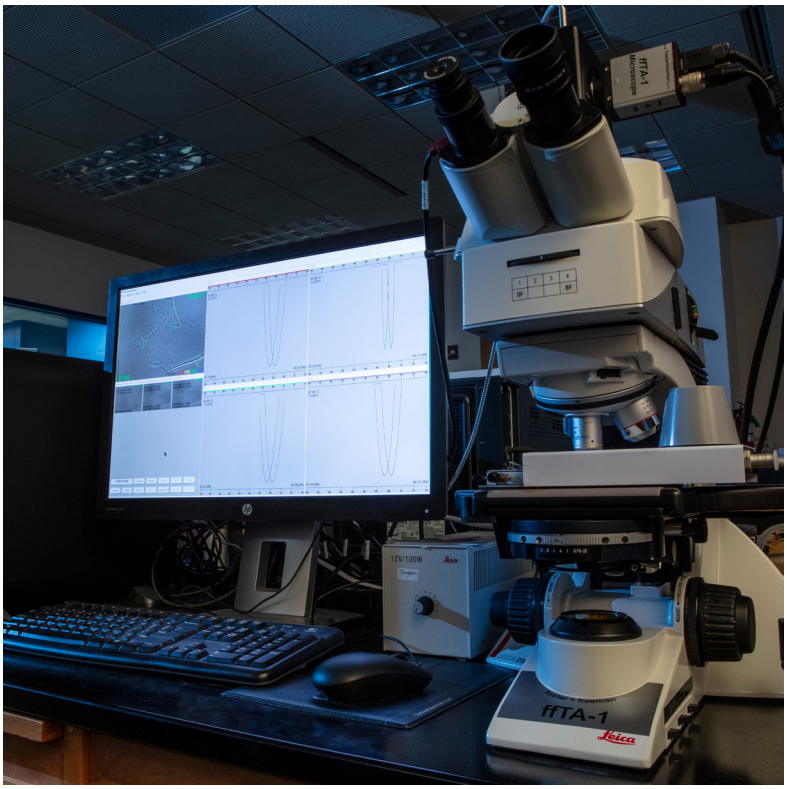
Toolmarks	2022	2023	2024
Case Intake	7	5	20
Approved Reports	12	0	0
Items of Evidence	5	0	0
Mean TAT	763	n/a	n/a
Median TAT	929	n/a	n/a

NOTE: All pending toolmarks cases involve property crimes apart from one controlled substance case. The firearms cases most often involve violence against a person. The same staff members in the Firearms and Toolmark Unit work these cases, and cases involving violent crimes are given priority in the testing queue.

Types of Criminal Cases Involving Firearms Analysis in 2024



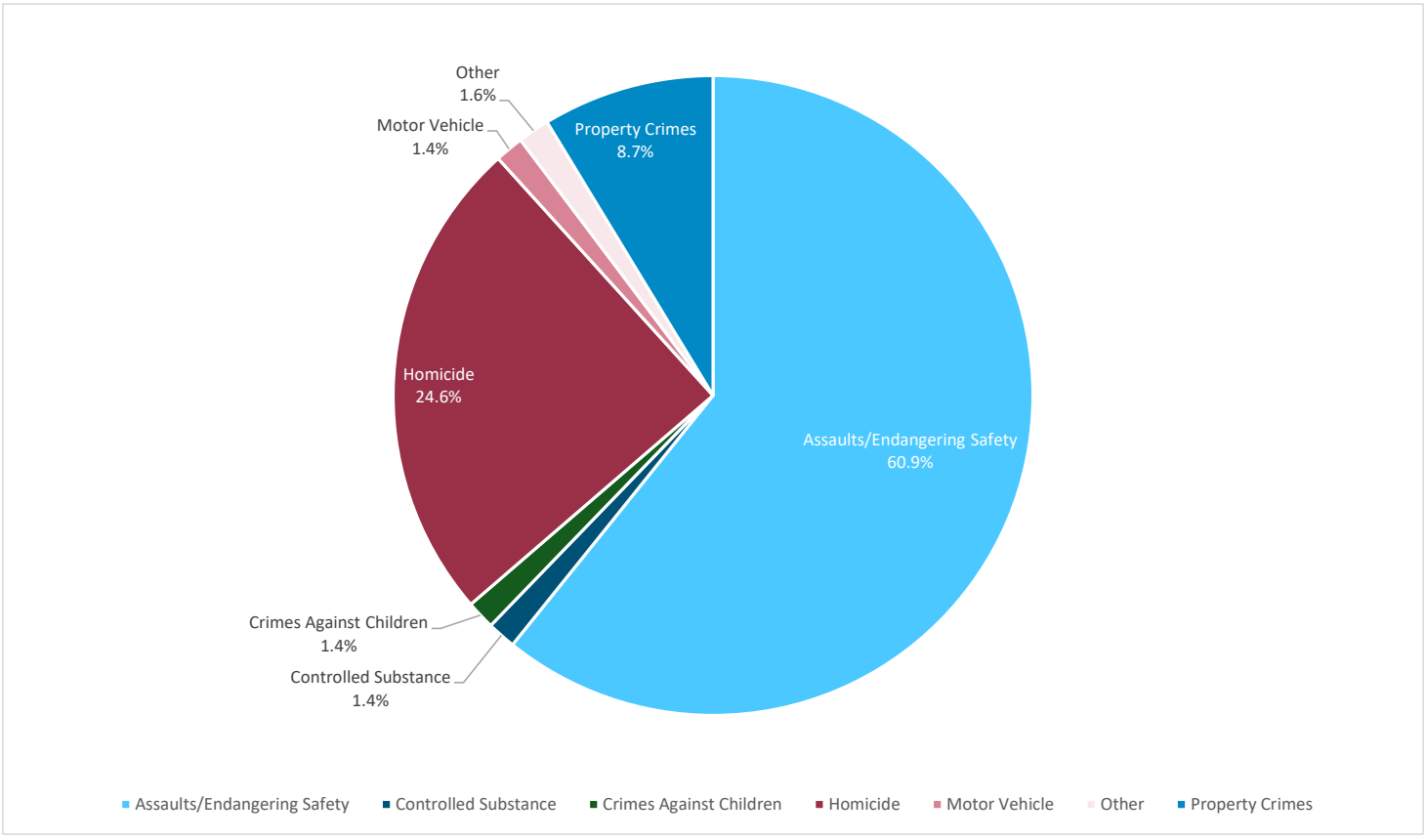
Trace Evidence



The Trace Evidence Unit analyzes a variety of physical evidence for the purpose of identification and comparison.

Trace Evidence	2022	2023	2024
New Assignments	98	88	69
Approved Reports	80	88	57
Items Processed	350	258	239
Mean TAT	79	202	146
Median TAT	29	117	64

Types of Criminal Cases Involving Trace Evidence Analysis in 2024



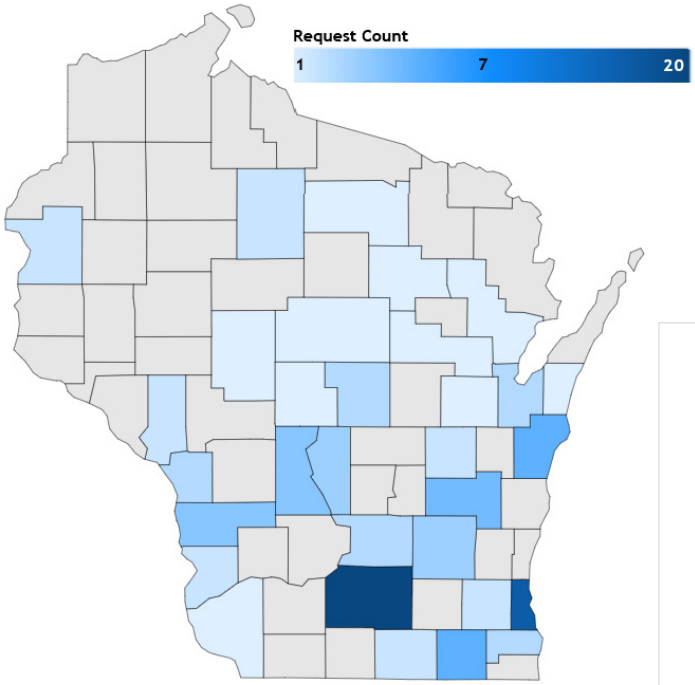
Crime Scene Response

The Office of Crime Scene Response assists law enforcement agencies with scene documentation, evidence collection, vehicle processing, and specialized processing including shooting reconstruction. The Office of Crime Scene Response also provides training to law enforcement staff who collect crime scene evidence.

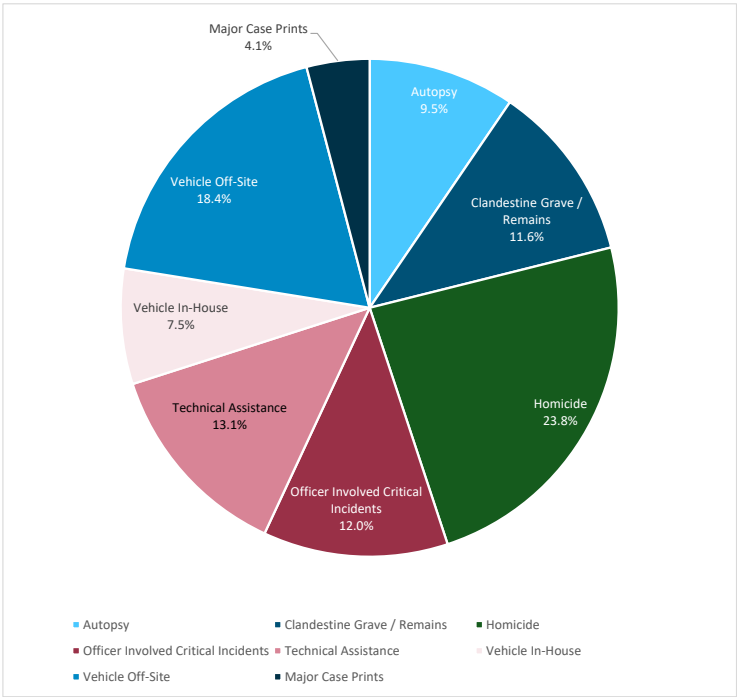
Crime Scene Response	2022	2023	2024
Total Responses	101	90	147
Average Staff Deployed per Request	3.2	3.4	4.0
Total Response Time (hours)	3058	2867	3882
Average Response Time per Staff (hours)*	30.3	31.9	26.4

*Average response time is the time the team deploys from the laboratory to the time they return to the laboratory from the scene.

2024 Crime Scene Responses by County



Types of Criminal Cases Involving Crime Scene Response Casework in 2024



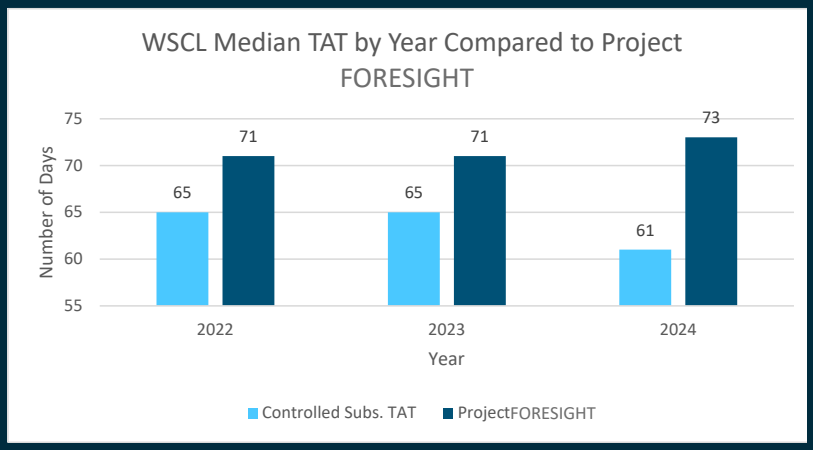
Appendix 1

Project FORESIGHT

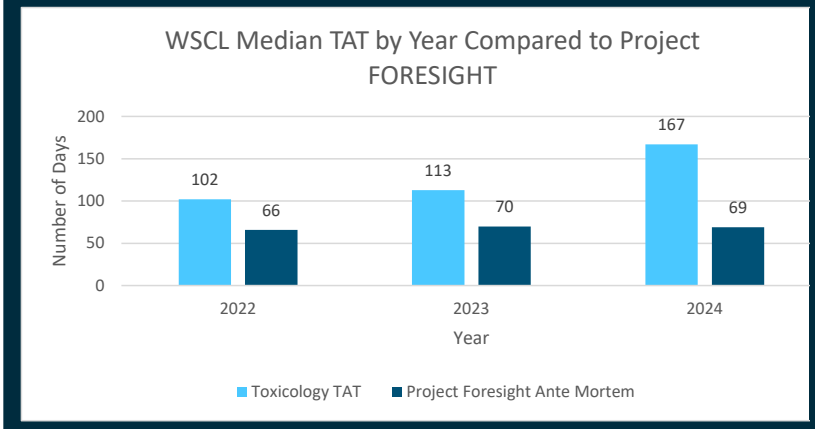
Project FORESIGHT collects data from approximately 200 laboratories and laboratory systems and provides national averages across various business-guided metrics. Included below are comparisons between WSCL median TATs and those reported by Project FORESIGHT. DFS does not participate in Project FORESIGHT.

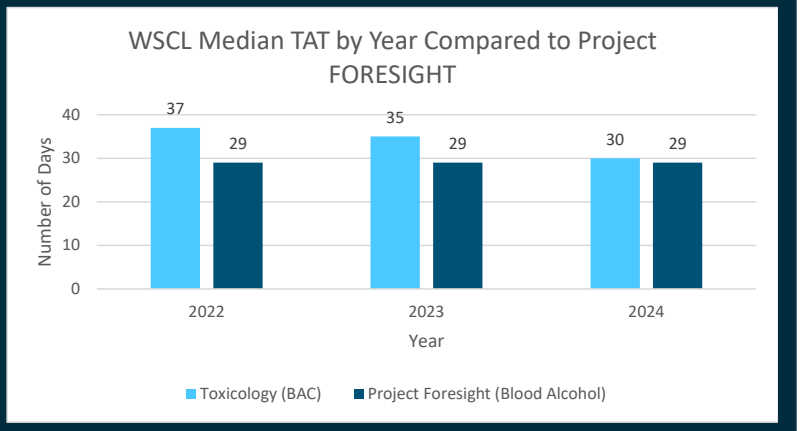
Of note, the DFS data is data for calendar years, whereas the data reflected in Project FORESIGHT is generally data for fiscal years. In addition, DFS measures TAT differently from how it is defined by Project FORESIGHT.

Controlled Substances

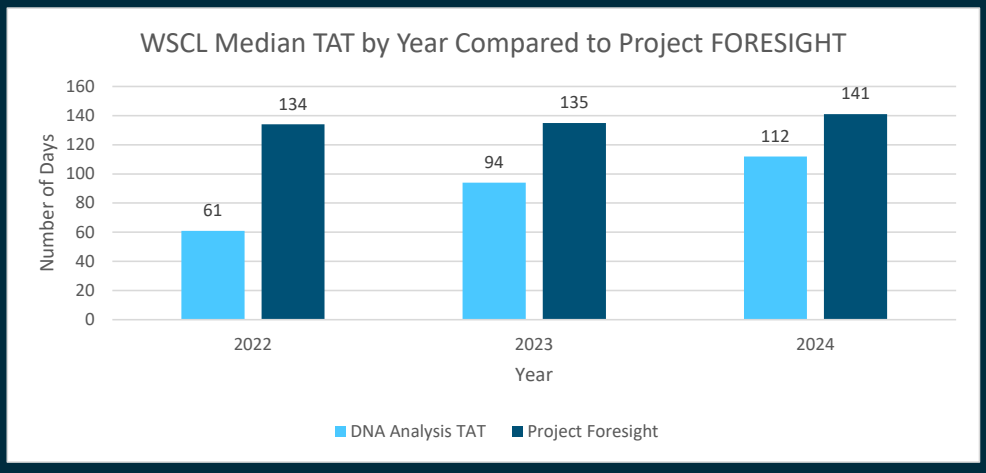


Toxicology



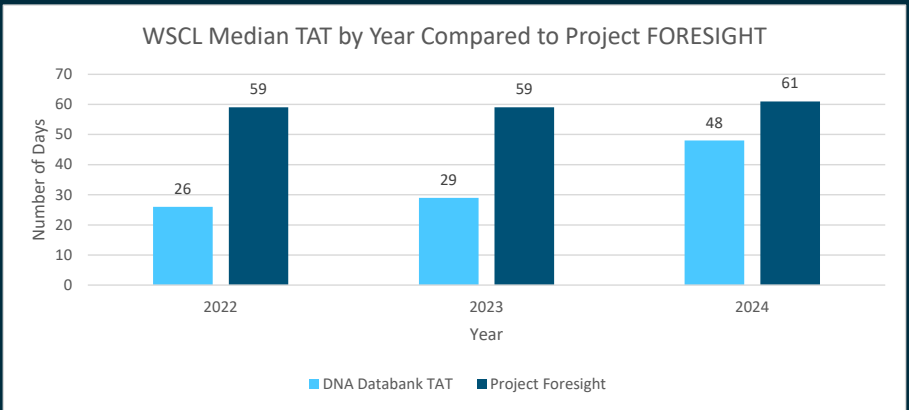


DNA Casework

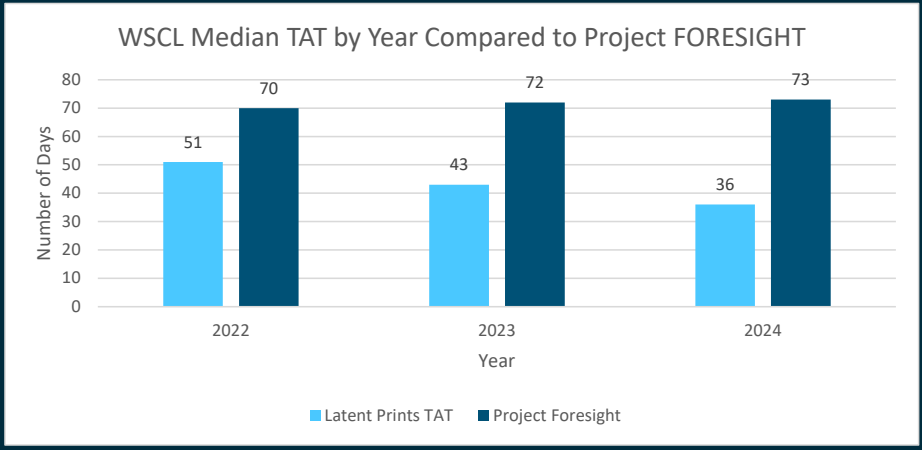


Project FORESIGHT

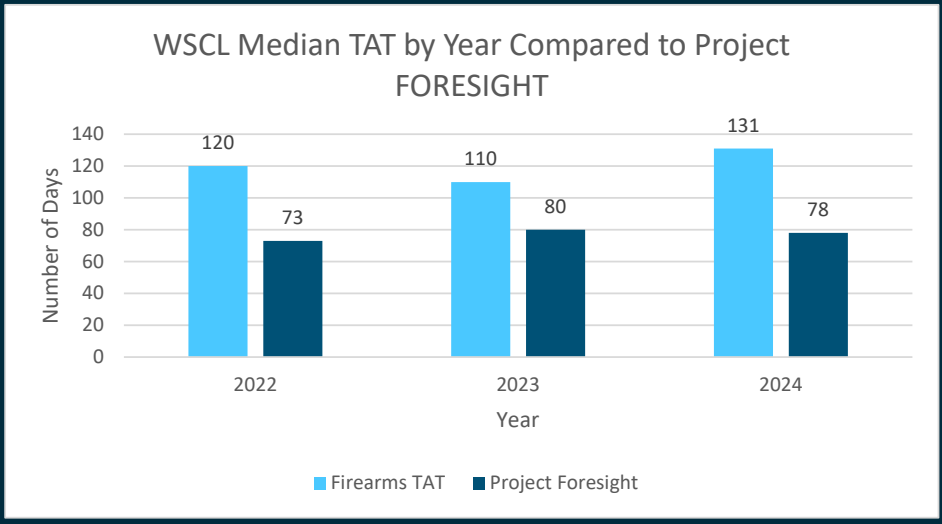
DNA Databank



Latent Prints and Footwear

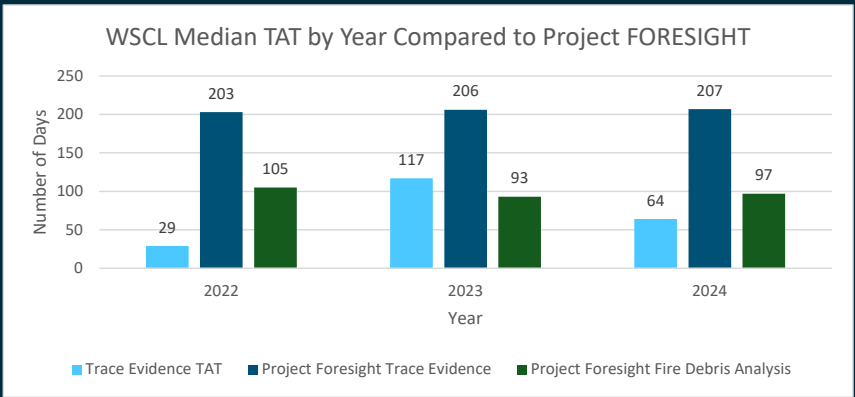


Firearms



Project FORESIGHT

Trace Evidence



The investigative areas of Trace Evidence and Fire Debris Analysis are reported separately by Project FORESIGHT. DFS captures both investigative areas in one median TAT.