2023 ANNUAL REPORT

Faces of the Indianapolis-Marion County Forensic Services Agency












1st row across: Crime Scene Specialists (day shift, middle shift, tact/late shift); 2nd row across: Firearms, Forensic Evidence Technicians, Drug Chemistry; 3rd row across: Latent Prints, Biology, Trace Chemistry; 4th row: Administration.

MISSION STATEMENT

The Indianapolis-Marion County Forensic Services Agency (I-MCFSA) shall support the needs of the Criminal Justice System by providing forensic science services for subject law enforcement agencies in criminal investigations under the authority of City-County Ordinance Number 48, 1985, Proposal Number 379, 1985. The forensic services provided shall be built on a foundation of quality, integrity, accountability and ethics. All I-MCFSA personnel shall strive to meet the forensic needs of today and into the future in all their work endeavors.

Table Of Contents

Contact Us:

Main Office……40 South Alabama Street, Indianapolis, Indiana 46204
Biology/FET Office……521 W. McCarty Street, Indianapolis, Indiana 46225
Vehicle Processing……...2600 South Harding Street, Indianapolis, Indiana 46221
Office: 317-327-3670
Fax: 317-327-3607
Email: i-mcfsa@indy.gov
Website: https://www.indy.gov/agency/marion-county-forensics-services-agency

2023 Forensic Services Board

Randal Taylor
Board Chairman
Indianapolis Metropolitan Police Department Chief

Kerry J. Forestal
Marion County Sheriff

Myla Eldridge
Marion County Auditor

Ryan Mears
Marion County Prosecutor

Lee Sloan, MD
Board Secretary
Marion County Coroner

Robert Hill
Marion County
Chief Public Defender

Louis Profeta, MD
City-County Council Appointee

Steve DeBrota
Mayoral Appointee

We are grateful for the dedication and wisdom of our Forensic Services Board. In spite of their busy lives, filled with other responsibilities, they selflessly gave of their time to serve in 2023. We also acknowledge the following individuals for the same commitment:

- Chief Deputy Reginald (Reggie) Roney, Marion County Sheriff's Department *(proxy for Sheriff Forestal)*
- Anne Frangos, Deputy Prosecuting Attorney *(proxy for Prosecutor Mears);*
- Alfie Ballew, Chief Deputy Coroner *(proxy for Coroner Sloan);*
- Ray Casanova, Chief Of Trial Deputy *(proxy for Public Defender Hill)*
- Adam Wicker, Office of Corporation Counsel Attorney

Director's Message

On behalf of the dedicated forensic team at the Indianapolis-Marion County Forensic Services Agency (I-MCFSA), I humbly present the 2023 Annual Report. This report memorializes the goals, challenges, achievements, and overall interactions of the I-MCFSA within the public safety community.

I-MCFSA was created to provide forensic science services for public safety agencies conducting criminal investigations under the authority of City-County Ordinance Number 48, 1985. Forensic science is a critical component as it provides unbiased and scientifically based results from the analytical testing of physical evidence.

Since 2001, the I-MCFSA has continuously maintained its laboratory accreditation, which included an ANSI National Accreditation Board (ANAB) Surveillance Assessment in February 2023 and an annual internal audit completed by ANAB trained I-MCFSA staff Assessors/Auditors.

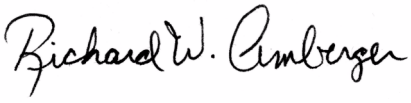
Like other public safety agencies within Indianapolis-Marion County and across the nation, I-MCFSA staffing and request for analysis demands was challenging and complex. Over the year, I-MCFSA realized a high number of vacancies which ranged from Supervisory level positions to front line staff. These vacancies required hiring and/or backfilling of positions, which stretched the laboratory's ability to train staff and meet casework demands. In 2023, the laboratory received 13,197 requests and completed 12,601 requests, which accounted for the analysis of 65,842 forensic evidence items. With request submissions slightly up, and request completions and items analyzed slightly down, this can be justified by the vacancies and training dynamics throughout the year, requests for RUSH analysis which disrupts normal casework flow and priority changes within public safety agencies which affect the types of requests received by I-MCFSA. When evaluated for complexity, Biology, Seized Drugs, and Firearms/NIBIN were the highest demand disciplines. Additionally in 2023, Biology implemented STRMix analysis software and Seized Drugs implemented THC Semi-Quantification analysis.

Throughout the year the evolution of a new laboratory showed great advancement. The forensic management team met virtually with construction stakeholders weekly and conducted monthly onsite tours to view the current construction progress and were afford an opportunity to question concerns. The current move-in date is slated for September 9, 2024.

To celebrate and continue to build upon a harmonious staff within the laboratory, the I-MCFSA was able to offer tickets to sporting events here in the City, celebrate National Forensic Science Week with games and prizes and come together for the laboratory holiday pitch-in with contest prizes thanks to the help of internal donations.

As the year closed, staffing fluctuations are still a concern in the Firearms Section with training occurring within most disciplines. Despite all the challenges, staff continued to meet the demands of the mission and maintained our core values of "quality, integrity, accountability and ethics."

The dynamics of 2024 appear to be challenging as we prepare for a facility move while still meeting casework demands, but I have no doubt the I-MCFSA staff will provide the best forensic support to the criminal justice system and community in Indianapolis and Marion County.



Richard W. Amberger
Director, Indianapolis-Marion County Forensic Services Agency

Laboratory Overview

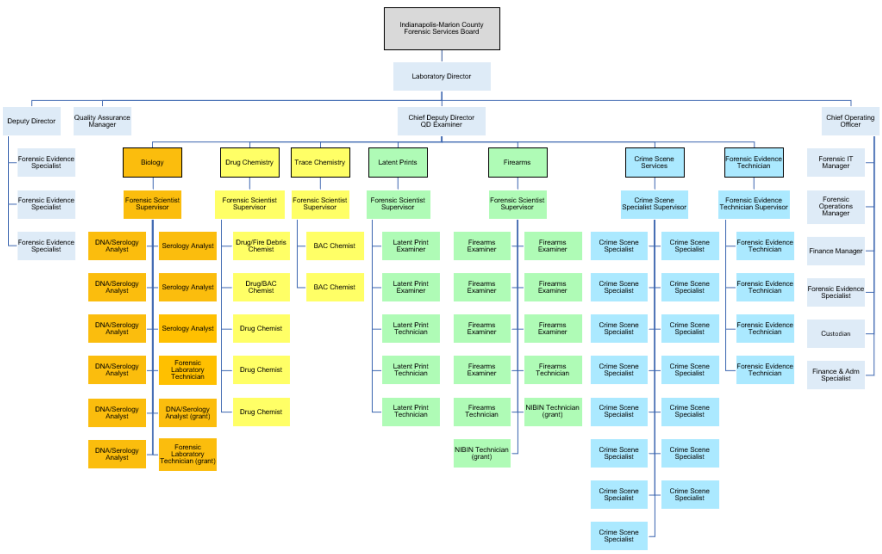
The I-MCFSA began operations in 1986, providing services to all law enforcement agencies in Marion County. The I-MCFSA provides scientific testing on items of evidence recovered in criminal cases by its own Crime Scene Specialists at various crime scenes, Forensic Evidence Technicians working in the Marion County Coroner's Office, and any other law enforcement personnel processing crime scenes that occurred within Marion County. Forensic analysis is conducted in the disciplines of Biology (DNA and Serology), Drug Chemistry, Trace Chemistry (Blood Alcohol and Fire Debris), Firearms and NIBIN, Latent Prints, Forensic Document Examinations, Photography, Videography and Digital Imaging. The I-MCFSA provides expert testimony in these areas when requested. The I-MCFSA maintains international accreditation through the ANSI National Accreditation Board (ANAB).

Laboratory Staffing

I-MCFSA was authorized 73 full time equivalent employee positions.

Open positions at end of 2023:
> 1 Forensic Scientist—Firearms
> 1 Forensic Scientist– Trace Chemistry

Positions filled in 2023:
> 1 Deputy Director
> 2 Financial Managers
> 1 Forensic Evidence Specialist
> 1 Forensic Evidence Technician
> 1 Latent Print Technician
> 1 Forensic Evidence Technician Supervisor
> 1 Crime Scene Specialist Supervisor
> 6 Crime Scene Specialists
> 3 Forensic Scientists—Biology
> 1 Forensic Scientist—Latent Prints
> 3 Forensic Scientists—Firearms
> 1 Forensic Scientist—Drug Chemistry
> 1 Forensic Laboratory Technician—Biology
> 1 Forensic Scientist Assistant Supervisor—Biology
> 1 Forensic Scientist Supervisor—Latent Prints
> 1 Forensic Scientist Supervisor—Firearms
> 1 Forensic Scientist Assistant Supervisor—Firearms
> 1 Crime Scene Specialist Assistant Supervisor

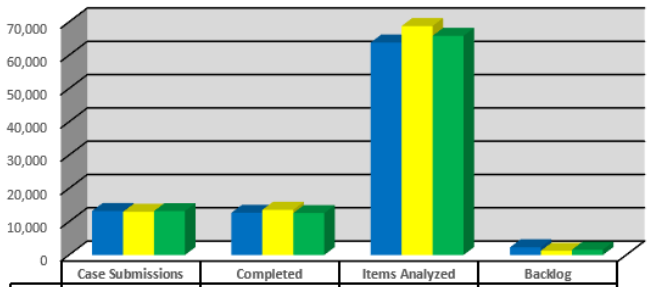


Laboratory Caseload

In 2023, the I-MCFSA analyzed 12,601 requests, which comprised of 65,842 items analyzed. Areas of the laboratory experiencing an increase in items analyzed included; DNA (7,570), Autopsy (5,147), Video duplication (484), NIBIN (11,095), Firearms (3,373), Latent Print Examinations (124), and Latent Print Processing (5,910).

I-MCFSA continually strives to achieve the goal of an average 6-week case turnaround time in each laboratory section; however, multiple factors contributed to negative turnaround times in 2023. Case turnaround time represents the time from start to finish for a given case, and does not represent the case on the backlog waiting to be started. Drug Chemistry, Trace Chemistry, Autopsy, Video, NIBIN, and Forensic Document Examinations were the only sections meeting this 12-month average goal at years' end. Other analyses took slightly longer with a 12-month average in DNA at 23.6 weeks (165 days), Serology at 14.4 weeks (101 days), Crime Scene at 7.6 weeks (53 days), Firearms at 26 weeks (182 days), Latent Print Examinations at 43.6 weeks (305 days) and Latent Print Processing at 7 weeks (49 days). The average age of a case was 110.6 days in 2022 and 117.2 in 2023.

2021 thru 2023 Statistical Comparisons



	Case Submissions	Completed	Items Analyzed	Backlog
2021	13,228	12,692	63,841	2,318
2022	12,982	13,576	68,799	1,295
2023	13,197	12,601	65,842	1,586

Administrative Unit - Forensic Administration

Overview

Forensic Administration consists of the following fourteen positions: Director, Chief Deputy Director, Deputy Director, Quality Assurance Manager, Chief Operating Officer, Forensic IT Manager, Forensic Operations Manager, Finance Manager, four Forensic Evidence Specialists, Custodian and Finance and Admin Specialist. Areas of responsibility include laboratory supervision, quality assurance program, budget management, purchasing, operations, information technology, security, vehicles, human resources, grant management, evidence handling, requests for analysis triage, case file management and other administrative functions.

Forensic Evidence Specialist receiving evidence.

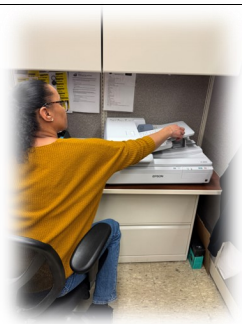
Human Resources

2023 marked the greatest year of hiring here at the I-MCFSA within the last decade. I-MCFSA faced the challenge of replacing long-term employees departing from the agency along with an increase in FTE count for 2 years in a row.

Twelve (12) individuals were promoted within the laboratory, filling the positions of Crime Scene Specialists Supervisor, Forensic Evidence Technician Supervisor, Forensic Scientist Supervisor - Latent Prints, Latent Print Technician, multiple Assistant Supervisors and Forensic Scientists throughout the laboratory. Supervisor, Harassment, and Ethics Training, along with EEOC Reporting were completed.

Sixteen (16) new employees were onboarded within, but not limited to, these laboratory areas: Deputy Director, Financial Manager, Forensic Evidence Specialist, Forensic Evidence Technician, Forensic Scientists, Forensic Laboratory Technician and Crime Scene Specialists.

Eleven (11) retirement/resignations were received within the following areas of the laboratory: Financial Manager, Crime Scene Specialists and Supervisor, Forensic Scientists, Latent Print Supervisor, Firearms Examiner, Forensic Evidence Specialist, and Forensic Evidence Technician Supervisor.



Forensic Evidence Specialist scanning case files.

Evidence Management

Evidence submission/release and forensic analysis triage are critical functions of the laboratory, which is the responsibility of three (3) Forensic Evidence Specialists, within the Forensic Administration Section. In 2023, there were approximately 30,376 items of evidence submitted or released by this section, an increase of 40% from 2022, in addition to triaging 3,591 requests for analysis.

Legal Document Management

Subpoena Duces Tecum/Request for Production of Documents occurred nearly on a daily basis. This year, the Forensic Administration Section completed approximately 172 court orders and prosecutor requests combined for forensic case files.

Forensic Evidence Specialist retrieving evidence.

Grant Management

A component of the continued success for I-MCFSA is the receipt of grant monies. The I-MCFSA continually pursues grant opportunities and has been fortunate in receiving federal funds from federal, state, and local grantors. The I-MCFSA was successful in receiving grant awards totaling $913,956.48 for the purchase of equipment for several sections of the laboratory, training for employees, purchase of supplies, overtime for personnel to assist in decreasing overall laboratory backlogs, to provide grant funded personnel positions and to assist in the analysis of DNA cases. The grant award totals represent an increase of 11% from 2022. Additionally in 2023, as a subrecipient of IMPD's Sexual Assault Kit Initiative, I-MCFSA was able to complete SAKI 19 and begin use of funds available in SAKI 22. As part of the SAKI 22 grant, the lab was able to hire a Forensic Scientist and Technician to assist with processing the backlog of sexual assault kits.

Awarded in 2023
$26,014.48 24 JAG State
$87,500.00 23 JAG Local
$713,102.00 –23 DNA CEBR
$87,340.00 – 23 PSN

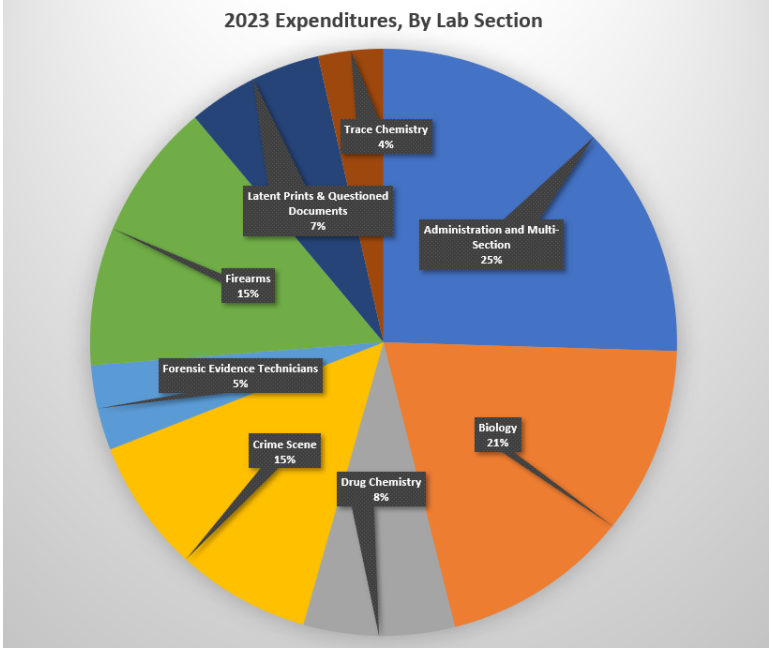
Training and Tours

Again in 2023, the laboratory conducted training, tours and events on multiple occasions to a wide variety participants, such as law enforcement officers/deputies, MCPO, MCPDA, City-County enterprise agencies, Community Conversations, Community Days and job fairs with public safety agencies and educational institutions.

Administrative Unit - Operations (Finance & Information Technology)

Budget and Expenditures

The agency's budget is funded by county funds and federal grants. The agency's county-funded budget increased by $450,538 from 2022, for a 2023 budget of $7.9 million from county funds. Revenue from federal grants supported an additional $1.1 million in expenditures during 2023. Multi-Section expenditures are included in the Administration portion of the pie chart below.



Purchasing and Accounts Payable

The unit ensured that all needed supplies, equipment, and services were procured. Some examples of large equipment purchases in 2023 included a new Full Spectrum Imaging System (FSIS II) that is paired with a 5K Apple iMac for use in Latent Prints, two Qiacube Connect instruments for use in Biology, a gas chromatograph-mass spectrometer for use in Drug Chemistry, five evidence drying cabinets for use by Forensic Evidence Technicians, and a new van for use in Crime Scene.

Information Technology

The agency is currently utilizing JusticeTrax LIMS-Plus as its evidence management software and Ideagen Quality Management as its secured document and workflow process software. The Forensic IT Manager made updates at the request of agency staff each week to one, or both, of these software systems. In addition to resolving other IT-related issues and implementing new IT solutions, some 2023 IT projects included a new design of request for analysis cards, installation of a new T1 line for the FBI's CODIS connection to Biology, and implementation of an electronic subpoena duces tecum fulfillment system through Microsoft OneDrive.

Operations and Maintenance

The Forensic Operations Manager assisted with the management of the agency's facilities, vehicles, and equipment. In addition to resolving maintenance issues each day, and coordinating large deliveries and on-site vendor services for the agency, this position assisted in the decommissioning of several items of equipment and laboratory chemicals, and played a critical role for the agency by coordinating with stakeholders to prepare for the agency to move to one consolidated laboratory facility in late 2024.

Administrative Unit - Quality Assurance

The I-MCFSA has been accredited for over twenty years, having achieved initial accreditation on September 17th, 2001. The laboratory later achieved international accreditation to ISO 17025 standards in 2007. The I-MCFSA has maintained this accreditation since that date and in April of 2023, the laboratory's accreditation was continued by ANSI National Accreditation Board (ANAB) to the following standards: ISO/IEC 17025:2017, ANAB Accreditation Requirements for Forensic Testing and Calibration (2023) AR 3125, and FBI Quality Assurance Standards for Forensic DNA testing and Combined DNA Index System (CODIS).

The accreditation process involves an independent evaluation of conformity and compliance to all applicable standards, as well as our own policies and procedures. All aspects of laboratory management, staff training and proficiency, calibration and maintenance of equipment, suitability of test methods, method validations control of data, and reporting of laboratory examinations, were assessed. Maintaining accreditation is a statement to the I-MCFSA's commitment to providing quality, impartial forensic services for Indianapolis/ Marion County.

The Quality Assurance Unit conducts internal audits of laboratory activities to ensure ongoing quality and accreditation compliance. A laboratory wide internal audit was conducted in August of 2023 by an internal audit team comprised of eleven laboratory auditors. All members of the team have been trained as either an Internal Auditor or Technical Assessor by ANAB. Additionally, all evidence storage locations and lockers were audited in both April and November of 2023. The internal auditing system provides management and all laboratory employees assurance in the I-MCFSA's ability to provide quality forensic testing services.

The Quality Assurance Unit also conducts an annual proficiency testing program. This program monitors each individual involved in laboratory testing to ensure their ability to properly conduct casework. Proficiency tests are provided by qualified forensic proficiency test providers, as available, or by approved observational testing. In 2023 a total of 90 proficiency tests were administered to staff.

2023 Proficiency Testing Program

Discipline	Test Name	Number of Tests
Forensic Documents	Handwriting	1
Forensic Documents	Other Questioned Document	1
Trace Chemistry	Blood Alcohol	3
Trace Chemistry	Ignitable Liquids	2
Drug Chemistry	Controlled Substances	5
Latent Prints	Examination	2
Latent Prints	MBIS Entry - Observational	1
Latent Prints	Processing	5
Firearms	Examination	5
Firearms	Examination Supplemental - Observational	5
Firearms	Technician/NIBIN - Observational	4
Firearms	NIBIN - Observational	2
Firearms	Serial Number Restoration	5
Biology (DNA)	DNA Profiling #1	4
Biology (DNA)	DNA Profiling #2	5
Biology (DNA)	CODIS Review - Observational	5
Biology (Serology)	Serology	7
Crime Scene Services	Crime Scene Processing - Observational	10
Crime Scene Services	Latent Print Processing	11
Forensic Evidence Technician	Autopsy - Observational	5
Forensic Evidence Technician	Latent Print Processing	2

ANAB
ANSI National Accreditation Board

CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

Indianapolis-Marion County
Forensic Services Agency
40 South Alabama Street, Indianapolis, Indiana 46204 USA

Fulfills the requirements of

ISO/IEC 17025:2017
ANAB Forensic Testing & Calibration AR 3125:2019
FBI Quality Assurance Standards for Forensic DNA Testing Laboratories:2020

In the field of

Forensic Testing

This certificate is valid only when accompanied by a current scope of accreditation document.
The current scope of accreditation can be verified at www.anab.org.

Pamela L. Sale, Vice President, Forensics

Expiry Date: 30 June 2025
Certificate Number: FT-0110

ANAB

ANAB International Accreditation Document

Biology Unit - DNA and Serology Sections

The Biology Unit is comprised of the Serology and DNA Sections. The Serology Section screens evidence for the presence of biological material including blood, semen, and saliva and collects samples for DNA testing. The DNA Section performs DNA testing utilizing short tandem repeat (STR) analysis and compares DNA profiles developed from unknown evidence items to DNA profiles from known individuals. The unit is staffed by four scientists cross-trained as DNA Analysts and Serologists, three full-time Serologists, the Biology Unit Supervisor/DNA Technical Leader and two Forensic Laboratory Technicians (one grant funded). Three additional scientists (one grant funded) are currently in training to become DNA Analysts.

Forensic Scientist loading DNA samples on a genetic analyzer.

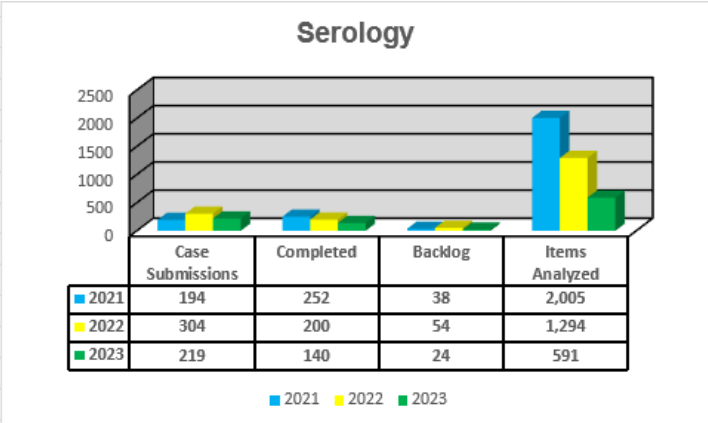
Forensic Scientist examining hairs for the presence of root material.

Eligible DNA profiles generated from casework samples may also be entered and searched in the Combined DNA Index System (CODIS). CODIS allows unknown DNA profiles to be searched against DNA profiles recovered from items of evidence in other cases, in addition to convicted offenders and arrestees. In 2023, the Biology Unit uploaded 170 DNA profiles. Eighty-two uploads resulted in a hit to a convicted offender or arrestee in the database. These hits provide law enforcement agencies potential investigative leads to help solve cases.

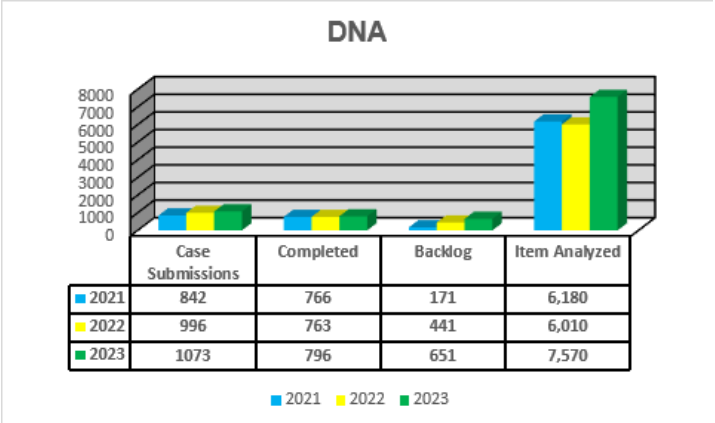
Casework demand continues to increase within the unit. The DNA submissions increased approximately 8% from 996 in 2022 to 1073 in 2023. Serology submissions decreased by nearly 28% from 304 in 2022 to 219 in 2023. DNA case completions increased by 4% from 763 cases completed in 2022 to 796 in 2023. Serology case completions decreased from 200 in 2022 to 140 in 2023. The DNA backlog significantly increased by 48% from 2022 to 2023, with 651 submissions awaiting DNA analysis while 24 submissions were awaiting serological testing as of the end of 2023. Training of three additional DNA Analysts will increase staffing to help alleviate the DNA backlog and address the increasing number of DNA requests.

The unit continues to receive DNA submissions of sexual assault kits (SAK) as part of the SAKI grant awarded to IMPD. In 2023, the DNA Section received 94 SAKI submissions and completed testing of 59 kits. The Biology Unit has one grant funded Laboratory Technician to assist in screening and initial processing of SAKI kits. One grant funded DNA Analyst has been hired and is in training to assist in testing of SAKI kits. SAKI grant funding has also been obtained by IMPD for the outsourcing of SAKI kit testing to a private vendor starting in 2024.

In 2023 the DNA Section brought STRmix™ interpretation software online for casework. STRmix™ combines biological modeling and mathematical/statistical theory to allow for the interpretation of complex DNA profiles. This software enables DNA Analysts to interpret data that previously would have been deemed too complex or inconclusive based on previous interpretation methods.



	Case Submissions	Completed	Backlog	Items Analyzed
2021	194	252	38	2,005
2022	304	200	54	1,294
2023	219	140	24	591



	Case Submissions	Completed	Backlog	Item Analyzed
2021	842	766	171	6,180
2022	996	763	441	6,010
2023	1073	796	651	7,570

Chemistry Unit - Drug Chemistry Section

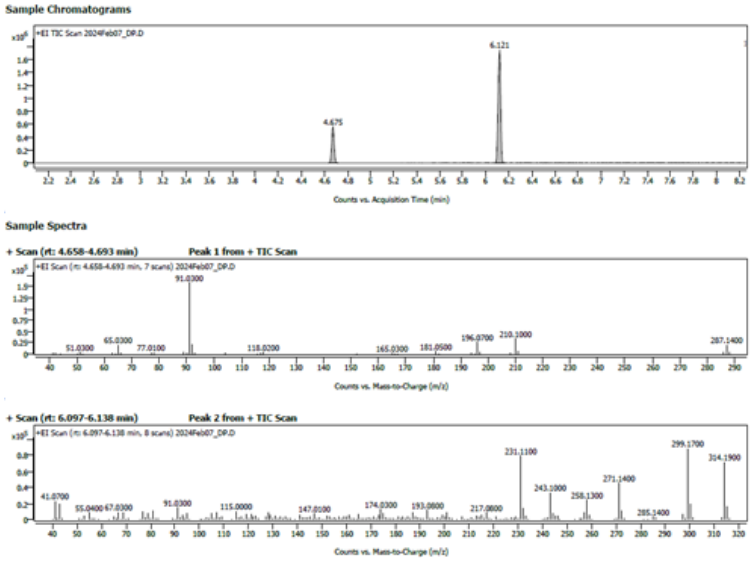
At the close of 2023, the Drug Chemistry Section was staffed by five (5) trained Chemists, including a Supervisor and one trainee nearing the end of training. Compared to the 2022 data, the 2023 revealed a 2.8% increase in case submissions and a 5.8% decrease in items analyzed. However, the number of items analyzed was 15.9% higher than in 2021. The section is now working cases on a "request only" basis and has seen good adherence to the policy of filling out a request card before a case will be analyzed.

Pills marked as Oxycodone that contain Fentanyl.

One new Shimadzu GC/MS was purchased, installed, and verification will be completed in early 2024. This addition will help reduce the section backlog and ability to do more casework by increasing the number of instruments available for use.

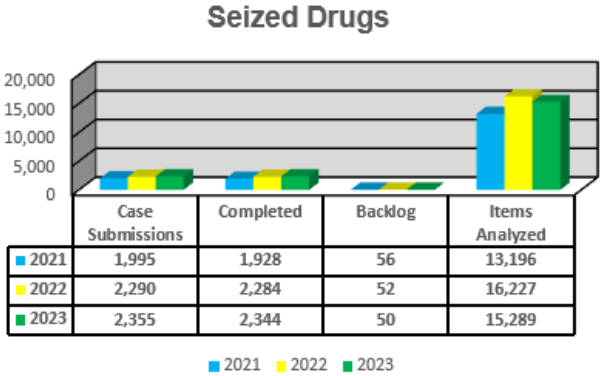
In January of 2023, the section began analyzing potential Marijuana samples by utilizing the Semi-Quantitation program. In 2022, the section analyzed 773 Marijuana items and in 2023 that number jumped to 1,116, a 44.4% increase. This can partially be attributed to the initial backlog of Marijuana items waiting to be tested after testing was halted in July of 2022. However, Marijuana continues to be one of the most analyzed drugs in the section.

The Drug Chemistry Section continues to see a large amount of Fentanyl in case samples. In 2023, there were 683 Fentanyl confirmations in sample submissions. The section continues to see many fake pills that contain a drug other than what the markings indicate, primarily Oxycodone pills that actually contain Fentanyl, or Alprazolam pills that actually contain other, similar designer drugs.



GC/MS data of internal standard and Delta-9-Tetrahydrocannabinol (THC) for Semi-Quantitation

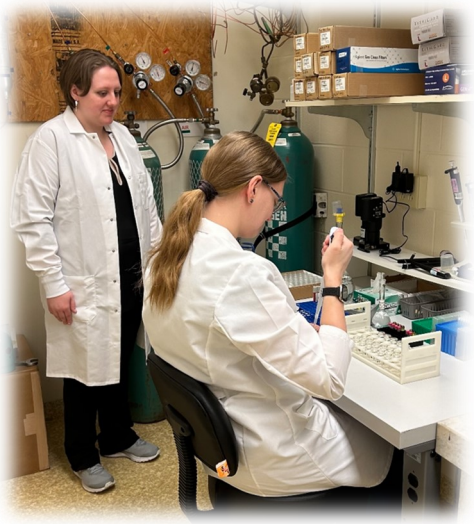
Marijuana (top 2 bags) and spice (bottom bag)



	Case Submissions	Completed	Backlog	Items Analyzed
2021	1,995	1,928	56	13,196
2022	2,290	2,284	52	16,227
2023	2,355	2,344	50	15,289

Chemistry Unit - Trace Chemistry Section

The Trace Chemistry Section is comprised of Blood Alcohol and Fire Debris Analysis disciplines. The section is staffed with two full time Trace Chemists, a Supervisor, and one cross-trained Drug Chemist who analyzes fire debris evidentiary items.



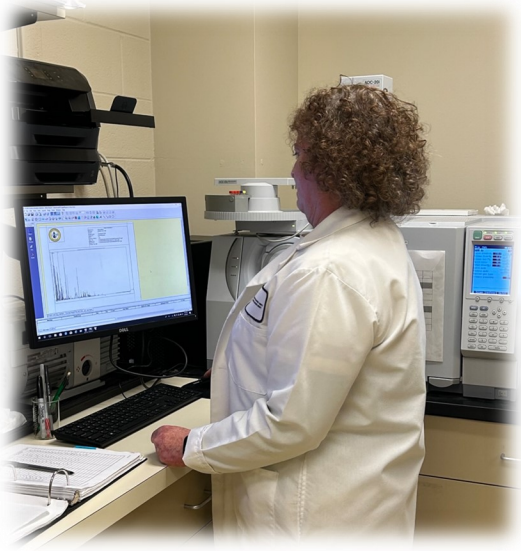
Forensic Scientist pipetting BAC samples.

Blood Alcohol Concentration (BAC) analysis is performed on blood samples to determine the concentration of ethanol in blood from individuals suspected of operating a vehicle while intoxicated. Fire Debris (FD) analysis is performed on samples collected from suspected arson fires to determine if ignitable liquids are present and can assist Fire Investigators in determining the cause of fires.

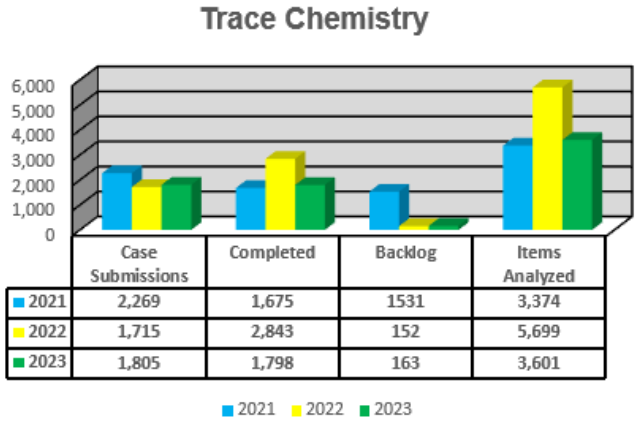
Case submissions in 2023 were up approximately 5% from 1,715 in 2022 to 1,805 in 2023. Case completions, however, were down from 2,843 in 2022 to 1,798 in 2023. This is attributed to the elimination of the backlog of cases and the hard work of the section personnel. The section utilizes two Agilent 7890B Gas Chromatographs with Heated Head Space analyzers for testing.

The average case turnaround time dropped substantially from a 12-month average of 154 days in 2022 to 31 days in 2023. This is due mainly to the elimination of the backlog for Blood Alcohol cases. The overall 6-week backlog goal increased from 3 weeks in 2022 to a little over 6 weeks in 2023. The section is up to date on BAC submissions, thus cases are being assigned and analyzed as they are submitted.

The Fire Debris caseload continues to greatly affect this number, with the oldest Fire Debris unassigned case being from September of 2021. One of the current Trace Analysts is midway through Fire Debris training. The backlog will begin to decrease once the Analyst completes training.
Anticipated changes in 2024 include an additional Examiner trained in Fire Debris analysis and the implementation of the auto dilutor's.



Forensic Scientist Supervisor evaluating Fire Debris sample.

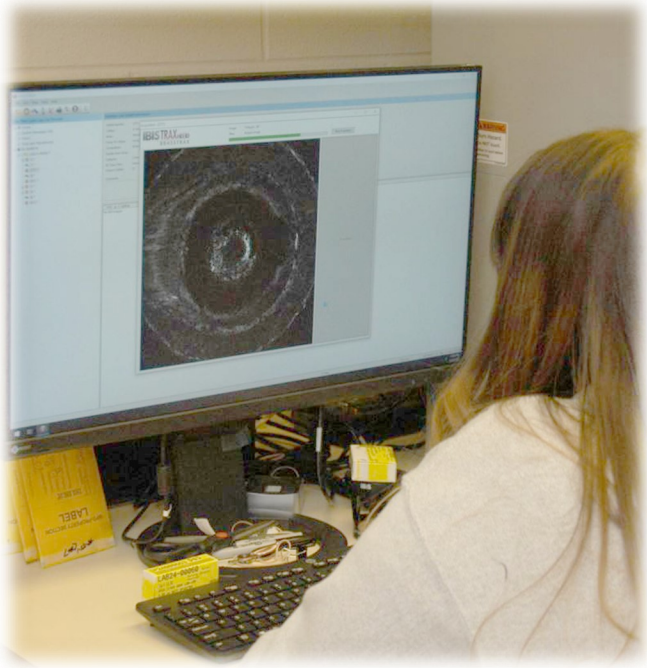


	Case Submissions	Completed	Backlog	Items Analyzed
2021	2,269	1,675	1531	3,374
2022	1,715	2,843	152	5,699
2023	1,805	1,798	163	3,601

Criminalistics Unit - Firearms and NIBIN Sections

The Firearms Section consists of three full-time Firearms Examiners, one Firearms Examiner who works 30 hours a week, the Firearms Section Supervisor, two Firearms Technicians, two NIBIN Technicians and two Firearms Examiner Trainees. The Firearms Section applies scientific procedures to the forensic examination of firearms and fired evidence. The primary objective of the Firearms Section is to determine, through microscopic comparison, if an item of evidence was fired by a particular firearm. Other activities within the Firearms Section include Serial Number Restoration and entry of evidence into the National Integrated Ballistic Information Network (NIBIN).

NIBIN acquires digital images of cartridge cases recovered from crime scenes or obtained from test fires of recovered firearms. NIBIN then uses a computerized algorithm to correlate these images and attempts to "match" or associate the evidence. NIBIN has the potential to link crime scenes through the fired cartridge cases as well as linking fired cartridge cases to a particular firearm. The Firearms Section employ's the "Expedited NIBIN" Program, which is a streamlined process providing fast entry of cartridge cases and test fires from seized firearms which provides fast, actionable intelligence.



NIBIN Technician entering cartridge casings.

Casework demand within the Firearms Section revealed some minor declines in some areas and increases in other areas in 2023. The number of NIBIN request completions for 2023 totaled 5,162 (a decrease of 45 from 2022). The cartridge cases submitted to the program totaled 20,655 (an increase of 2,152 from 2022). A total of 8,158 NIBIN entries were created (an increase of 400 entries from 2022) resulting in a total of 2,921 associations created by NIBIN (an increase of 636 from 2022). Full comparison completed cases totaled 374 in 2023 (an increase of 138 from 2022) and 505 requests for full comparisons were received in 2023 (an increase of 71 from 2022).

List of Improvements:

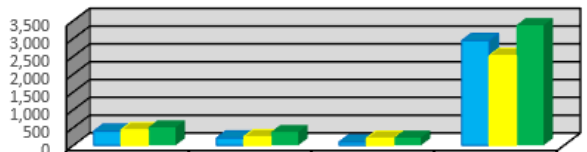
- The Firearms Section hosted interns that assisted with various projects involving the ammunition reference collection, the firearms reference collection, and information/data management. One intern was subsequently hired as a latent print technician.
- One Firearm Examiner Trainee graduated from the National Firearms Examiner Academy (NFEA) and began supervised casework.
- Two Firearms Technicians completed the Expedited NIBIN (cartridge case associations) training program and began making significant contributions to the Expedited NIBIN process.
- One individual was promoted from Firearms Technician to Firearms Examiner Trainee.
- A new spreadsheet was created to aid in documenting and reporting methods used in analysis to meet ANAB requirements.
- Achieved the rank of Silver after an onsite MROS Assessment of the Laboratory's NIBIN process.

New Equipment:

- A new BrassTrax Acquisition Station was installed, validated, and placed into service.
- A new Forensic Buddy bullet recovery system was acquired and validated for use.

It is believed that the Firearms Section will continue to see increases in requests and items analyzed in comparison cases as well as the Expedited NIBIN Program cases. The Firearms Section will continue to support the endeavors of the Indiana Crime Guns Task Force and explore ways to further the scientific procedures within the field of firearms comparison.

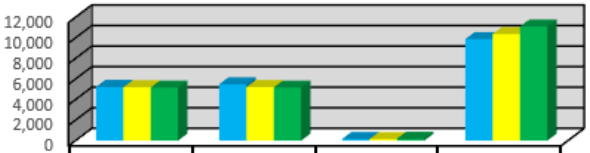
Firearms



	Case Submissions	Completed	Backlog	Items Analyzed
2021	397	204	92	2,940
2022	434	236	198	2,519
2023	505	374	216	3,373

2021 2022 2023

NIBIN



	Case Submisisons	Completed	Backlog	Items Analyzed
2021	5,218	5,477	163	9,871
2022	5,186	5,207	152	10,358
2023	5,152	5,162	178	11,095

2021 2022 2023

Criminalistics Unit - Latent Print Section

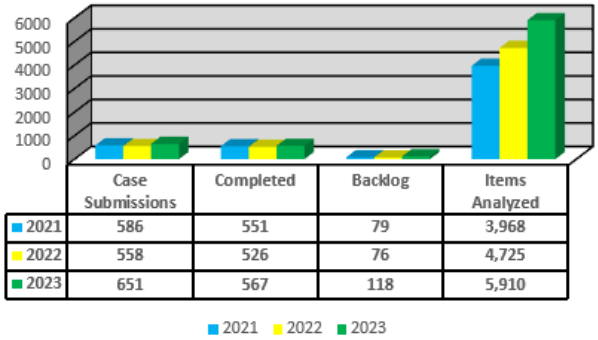
The Latent Print Section is staffed with Latent Print Technicians and Latent Print Examiners. A latent print is a finger mark or palm print that is not easily seen by the naked eye that is left behind when touching an object. Most latent prints need to be processed (or developed) with fingerprint powder or chemical to be visible. The Latent Print Technicians apply different processing techniques to develop the latent prints left behind. The processing techniques utilized depend on the type of surface the object is made of. There are different processes for different types of evidence; porous, non-porous, adhesives, blood and skin cells. As the Technicians develop prints, they then capture the developed latent prints using high resolution imaging devices, from 36-megapixel cameras to ultraviolet and infrared cameras. Merely touching an object does not ensure prints will be left behind. Many different factors will determine whether a print is left behind to include how the item is touched (lots of pressure, little pressure), the surface of the item, environmental factors (heat/humidity), substances on the fingers, or something covering the fingers.

Technician photographing RAY dye stain on evidence.

Once the items are processed for prints, any prints developed will be photographed and then forwarded to the Latent Print Examiners who will then conduct comparisons. The Latent Print Examiners determine whether the latent prints recovered from items of evidence can be identified to, or excluded from a known source (inked/rolled prints). The Latent Print Examiners use a process commonly referred to as ACE-V, Analysis, Comparison, Evaluation and Verification. During the Analysis process the Examiners look for three levels of detail. Level one detail is the fingerprint pattern which consists of 3 different types (loops, whorls, and arches). Level two consists of following the fingerprint ridge paths and level three is looking at the individual fingerprint ridge shapes, their pore shape and location. During the Comparison phase, Examiners compare the unknown latent fingerprint to a known (inked/rolled) fingerprint and compare those 3 levels of detail. During the Evaluation phase, the Examiner will reach a conclusion of identification (2 prints come from the same source), exclusion (2 prints do not come from the same source) or better inked prints (inconclusive) are needed. The last phase is the Verification phase, in which all conclusions are verified by a second Latent Print Examiner. If the Examiner does not have any known prints to compare to the latent prints, the unknown prints can be entered into AFIS (Automated Fingerprint Identification System). The AFIS system is a database that is used to search for potential candidates. Should the unknown prints hit to any candidates within AFIS, the Examiner will then conduct the appropriate comparisons.

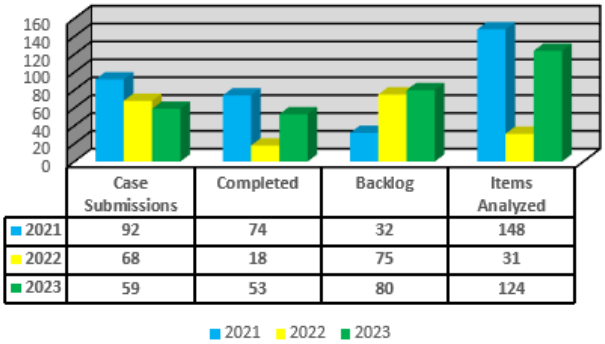
Tape processed with Gentian Violet.

Latent Print Processing



	Case Submissions	Completed	Backlog	Items Analyzed
2021	586	551	79	3,968
2022	558	526	76	4,725
2023	651	567	118	5,910

Latent Print Examinations



	Case Submissions	Completed	Backlog	Items Analyzed
2021	92	74	32	148
2022	68	18	75	31
2023	59	53	80	124

Criminalistics Unit - Forensic Document Examinations Section

The Forensic Document Section continues to be supported by one Examiner. This section conducts a wide range of examinations on questioned items to determine the authenticity, background and origin of the questioned item. Those examinations may consist of, but are not limited to: comparing questioned handwriting/hand printing to known writings; typewriter examinations; developing and deciphering indented writing impressions; physical match of torn or cut paper items; ink comparisons to reveal alterations or obliterations on documents; counterfeit currency and identification cards; and, determining printing technology used on documents. During 2023, the Forensic Document Section received a case involving a typewriter ribbon and original checks, items of evidence that are rarely seen in case submissions. The Examiner was able to identify the questioned typed text on a check to the text on the ribbon utilizing paper fiber transfer. This method allows individual paper fibers from the check paper to be matched to the paper fiber impressions left behind on the mylar film of the ribbon. Cases completed by the Forensic Document Section are technically reviewed and verified by qualified Examiners within the Indiana State Police Laboratory Documents Section.

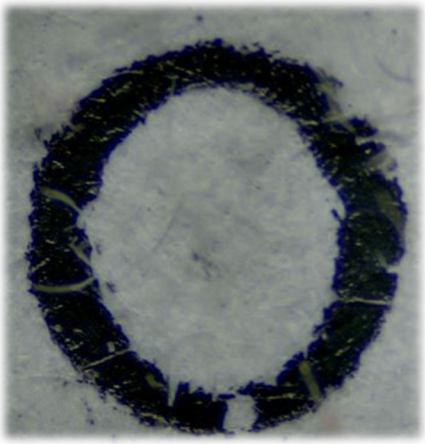
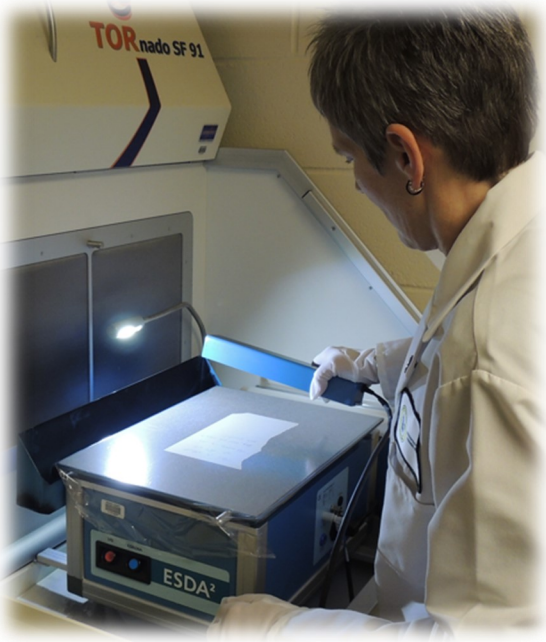
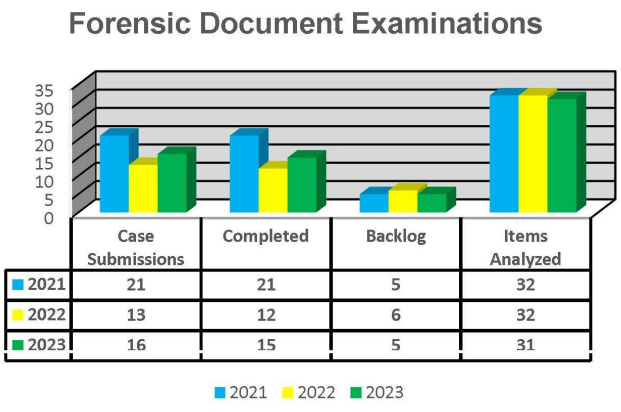


Image showing paper fibers from type-written text.



Forensic Scientist examining evidence for indented writing impressions on the ESDA2.



Crime Scene Unit - Crime Scene Section

The Crime Scene Section is the only section staffed 24-hours a day, 365-days a year. The section started the year out with a total of fourteen full-time Crime Scene Specialists, to include three Assistant Supervisors and filling the vacant Section Supervisor position in February of 2023 with the subsequent Assistant Supervisor position backfilled in March. During the first part of 2023, there were an additional six Crime Scene Specialist vacancies. In July, six new Crime Scene Specialists were hired and began the training process which allowed the Section to achieve full staffing of sixteen Crime Scene Specialists. The year ended with three Specialists released from training to begin supervised casework. The remaining three Specialists are projected for release in early 2024.

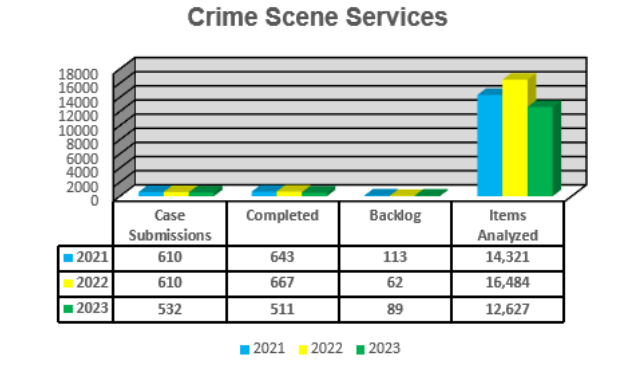
Crime Scene Specialists collecting evidence at a crime scene.

In 2023, the section responded to a total of 529 crime scenes, which is a decrease from the 607 crime scenes responded to in 2022. There was a total of 532 case submissions, with the section completing a total of 511 cases within the year. The backlog stood at 89 cases at years' end, which is an increase from 2022. The agency goal of a 42-day case completion was not met with an average turnaround time of 53 days, which is a slight increase 2022. All the unit members continue to strive to provide a work product of the highest quality, while completing videography, scene photography, searches, scene sketching, evidence collection, and evidence processing. These numbers continue to provide proof of the incredible passion, dedication, and commitment that all the unit members possess.

Crime Scene Specialists removing bullets from a doorway.

The Crime Scene Section was finally able to implement a brand new fourth crime scene van. Additionally, a fifth van was purchased and is currently being outfitted to be operational. Procedures for the new OSCR360 cameras are being written and will be implemented in 2024 for an additional way to document crime scenes.

Crime Scene Specialist photographing evidence at a scene.



	Case Submissions	Completed	Backlog	Items Analyzed
2021	610	643	113	14,321
2022	610	667	62	16,484
2023	532	511	89	12,627

Crime Scene Unit - Forensic Evidence Technician Section

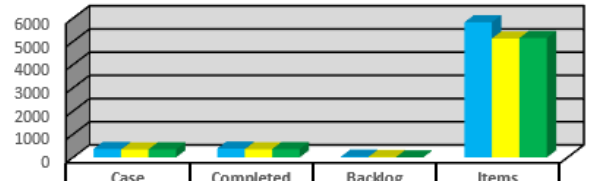
The Forensic Evidence Technician Section attends autopsies conducted by the Marion County Coroner's Office on cases involving investigations of homicides, suspicious deaths, and deaths involving traffic accidents where criminal charges will potentially be filed. The duties include photography, collecting physical evidence including clothing, blood, hair, fibers, fired bullets, touch DNA swabs and other trace evidence. Additionally, Forensic Evidence Technicians collect final case fingerprints for identification and elimination. The Forensic Evidence Technician Section consists of three Technicians, one Forensic Evidence Technician Assistant Supervisor and a Supervisor. The Forensic Evidence Technicians also have secondary responsibilities involving crime scene video mastering, uploading, and duplications of videos. The Forensic Evidence Technician Section Supervisor is also responsible for maintaining the supplies, cameras and videography equipment for the Crime Scene Unit.

In 2023, the section completed a total of 361 autopsy cases, 480 video cases and processed 5,147 items of evidence.

Forensic Evidence Technician prepares for evidence collection.

Forensic Evidence Technician photographs decedent during autopsy .

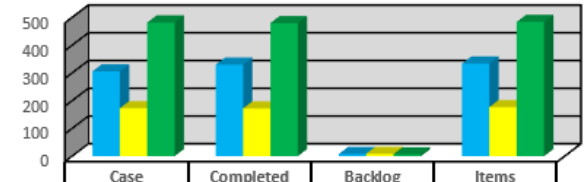
Forensic Evidence Technician - Autopsies



	Case Submissions	Completed	Backlog	Items Analyzed
2021	369	382	30	5,827
2022	339	352	18	5,123
2023	348	361	5	5,147

2021 2022 2023

Forensic Evidence Technicians - Videos



	Case Submissions	Completed	Backlog	Items Analyzed
2021	306	330	8	334
2022	173	172	9	177
2023	482	480	7	484

2021 2022 2023