# MCFRS Annual Appraisals



2023

### **Contents** PURPOSE 3 5A - PREVENTION 4 5H - HAZARDOUS MATERIALS 44

#### **PURPOSE**

This document is a compilation of the program appraisals that are required to be completed under the Center for Public Safety Excellence Fire and Emergency Services Self-Assessment Model, 10th edition. Annual appraisals are required to determine the impact and outcomes of a program. The appraisals presented herein summarize calendar year 2023.

Category 5, Community Risk Reduction Program, includes those programs that are a direct output of the Community Risk Analysis Standard of Cover document. Fire prevention, education, investigation, domestic preparedness, suppression, emergency medical services, technical rescue, hazardous materials, and other services fall under this category (Criteria 5A, 5B, 5C, 5D, 5E, 5F, 5G, 5H, and 5L, respectively). In previous years, MCFRS also considered aviation rescue, but since Montgomery County does not have an FAA-indexed airport and very few aviation-related calls, the decision was made to not assess this program area.

Category 8, Training and Competency, reflects the department's training and education efforts.

Category 9, Essential Resources, defines those mandatory services and systems required for the department's operational programs to function. Communication systems falls under this category (Criterion 9B).

Category 11, Health and Safety, examines the department's health and safety efforts to recognize, address, and analyze the workplace and apply risk management principles with the intent to reduce employee injuries. As the responsibility for health and safety falls across different MCFRS work units, three appraisals were completed for this category: Occupational Medical Services (FROMS), Mental Health, and Safety.

#### FIRE PREVENTION & CODE COMPLIANCE

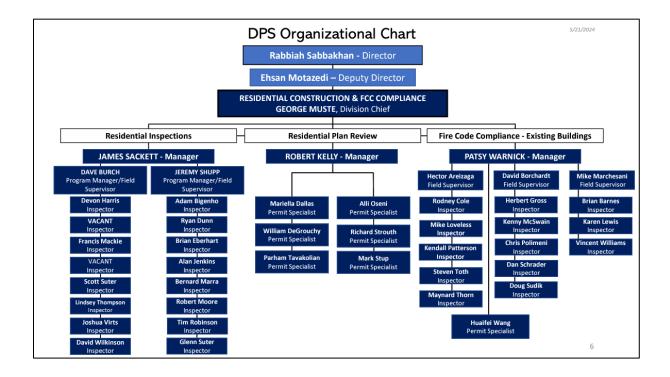
#### 1. CRITERION & PROGRAM AREA

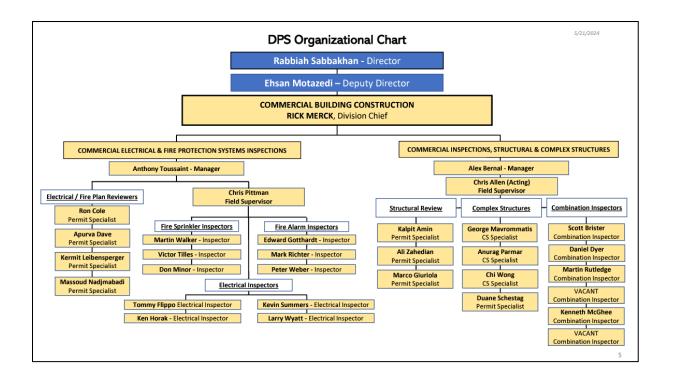
5A – Prevention Programs

#### 2. PROGRAM AREA RESOURCES & INPUTS

The responsibility for fire prevention and code compliance in Montgomery County is split between three County departments. The Department of Permitting Services (DPS) has the responsibility and authority to plan, manage, coordinate, implement, inspect, analyze, document, license and facilitate all fire and life safety aspects of new and existing construction in Montgomery County. Within DPS, the <u>Fire Prevention and Code Compliance</u> section (FPCC) is responsible for existing buildings, while the <u>Commercial Building Construction</u> section ensures public safety through the application of structural, electrical, mechanical, fire safety, accessibility and sustainability conservation codes and standards (in commercial construction).

The organization of these divisions is shown below and on the following page (source: <u>DPS Organizational Chart</u>).





Separately, the Department of Housing and Community Affairs' (DHCA) <u>Housing Code</u> <u>Enforcement section</u> manages fire prevention/life safety initiatives inside residential units (i.e., carbon monoxide alarms, smoke alarms, etc.).

MCFRS operates under an agreement with FCC where all fire code issues are reported to DPS typically by radio or phone contact with the on-call FCC Inspector. FCC then notifies other interested parties to include DHCA, the City of Rockville Code Enforcement, and the City of Gaithersburg Code Enforcement.

MCFRS does not have any code enforcement authority but that is not to say that we don't participate in the fire prevention space. It is MCFRS' practice to approach prevention through a strategy focused on community risk reduction, seeking ways to reduce vulnerability and increase resilience in the communities we serve. This activity is covered in the Education appraisal (5B).

#### 3. PROGRAM AREA OUTPUT, OUTCOMES, & IMPACT

In 2023, MCFRS was dispatched on 19,154 fire calls, of which 835 turned into full assignments. There are 75 non-sprinklered high rises throughout Montgomery County, which MCFRS has been closely monitoring.

In August 2023, a fire at a large, non-sprinklered apartment complex resulted in two critically injured victims and required an after-action report to be completed. Rather than following our traditional process, MCFRS initiated a first-of its-kind "learning team". In coordination with our partners in DPS, DHCA, Health & Human Services (HHS), the police department (MCPD), the Office of Community Partnerships (OCP), the Office of Management & Budget (OMB), and the Regional Services Center, MCFRS led a multi-agency team in studying the

issues surrounding this specific apartment complex, with the primary objective of learning enough to provide a context-rich and nuanced understanding of community risk, and mapping the key relationships between people and risk (Enclave Mind Map), with the intent of forming a highly targeted community risk reduction strategy. The final report of this effort can be found here. While problems persist at this location, the effort/process was a success in that it has worked to identify and confirm concerns related to fire and life safety, as well as other health safety issues that deeply impact the residents of this community. Furthermore, the group has identified departments within County Government that can affect change, and the process has opened dialog between agencies to increase accountability across all departments.

#### 4. INITIATIVES & OBJECTIVES

MCFRS plans to continue building on the success of the learning team and apply it to other properties/situations as they arise, expanding the membership/involvement of the participating departments.

And as the year passed by, it became obvious that MCFRS should consider streamlining the process by which notifications were made. Some changes were made on the fly (e.g., a Microsoft Teams notification channel), but the department is looking at an ESRI solution (Survey123) to create a more efficient process whereby field providers can make notifications to the respective departments. This would also allow us to quantitatively report the number of violations noticed by operational members.

We want to develop a tool that allows Field Operations battalion chiefs to identify areas within their jurisdiction that have a high incidence of false alarms or other fire code compliance issues. The objective would be to use this list as a means to target those areas with fire prevention education and preparation activities. There is evidence that some Battalion chiefs, such as Battalion 704A, who noticed that an issue exists, in this case 1131 University Blvd, then took the initiative to adapt the standard, post incident messaging by working with Community Risk Reduction staff to build and deliver programming tailored to that community.

We also need to reconsider whether conducting "After the Fire" so soon after the fire is beneficial. We learned through the learning team effort that our after the fire efforts were essentially a waste because we targeted English and Spanish in a community where Farsi and French were the predominant languages. This forced us to wonder how many times we show up to a neighborhood following a fire incident with messaging that is in the wrong language or culturally ineffective. To that end, we should consider assigning someone to develop insights, look for trends and then apply the After the Fire model in a more targeted manner.

Additionally, the need exists for MCFRS to develop a tool that allows a quick "real-time view" of documented fire prevention efforts. Getting such a readily digestible view will allow subordinate commanders access to information they need to nudge their teams in certain directions.

FRS still has limited insight as to the cause of fires occurring. What we need to develop is a system that provides the Field Operations managers ready access to the common causes of fires, without relying on community risk reduction to "generate insights"

The value proposition of fire prevention for FRS is developed to the extent that we are able to maximize education and preparation outputs. Because FRS has no control over the code enforcement that other departments do, it is invalid to measure ourselves with such metrics. However, FRS maintains full control over the extent to which we are engaged in vulnerable communities providing preparation and education activities. A prime example of this was the 4<sup>th</sup> quarter FY24 effort where at relatively low cost, FRS trained 1500 people in hands only CPR over the course of a single week. While this program is not related to fire prevention, the methodology can be translated and applied to fire prevention efforts in future iterations.

#### COMMUNITY RISK REDUCTION

#### 1. CRITERION & PROGRAM AREA

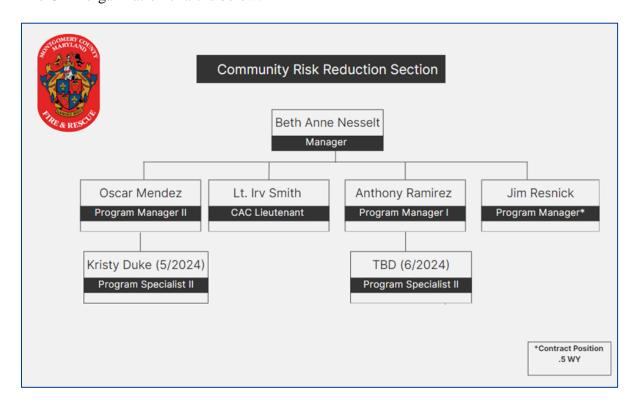
5B – Public Education

#### 2. PROGRAM AREA RESOURCES & INPUTS

The Community Risk Reduction (CRR) team plays a crucial role in enhancing community safety and improving resilience. Baseline programs for 2024-2028 include a range of programs aimed at identifying, assessing, and mitigating risks in the community, with future expansion made possible by adding new positions.

The section is managed by a Community Risk Reduction Manager, two program managers, and one part-time (contract) program manager. The approved FY24 budget included two new civilian positions (one to focus on seniors, one to focus on children/youth). The FY24 budget also created a position for a Community Action Coordinator (CAC; career lieutenant) to lead the department's hands-only CPR/AED, Stop the Bleed and Narcan education and outreach program. The CAC lieutenant was assigned to CRR in September 2023, and the two newly created civilian positions are scheduled to be filled by June 2024. The additional civilian staff positions (when on board) will add capacity to support, and ultimately lead, programs related to seniors and youth in the community once trained on the broad range of CRR programs and services provided.

The CRR organization chart is below.



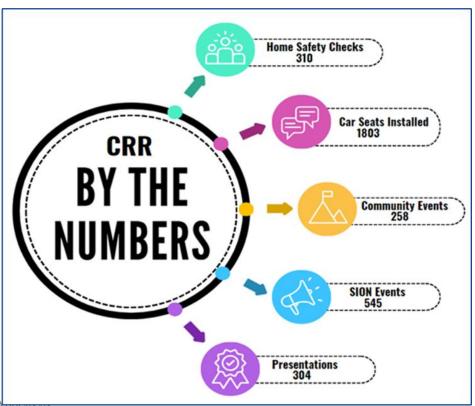
CRR brings significant value to the community and the department by promoting safety, resilience, and well-being and by fostering collaboration, empowerment and sustainability. CRR focuses on identifying and mitigating potential risks and hazards before they escalate into emergencies by implementing proactive measures such as working with high-risk senior/aging in place populations, teaching fire safety education, conducting home safety appointments, car seat checks, senior outreach programs, teaching CPR to civilian first responders, and providing programs in alternative languages.

MCFRS CRR programs take a multidisciplinary approach that integrates expertise from public health, social services, Code, housing and emergency management to ensure a comprehensive range of resource inputs and solutions. CRR has worked to build on existing partnerships to tailor programs and prioritize deployment of resources to help the most vulnerable. CRR contributes to improved health and well-being by addressing social determinants of health, promoting healthy behaviors, and reducing hazards and risks through education and progressive CRR programs. CRR fosters community engagement and empowerment by involving residents, businesses, organizations, and other stakeholders in risk reduction efforts. By empowering individuals to take responsibility and ownership of their safety, CRR builds social capital, reduces vulnerabilities, and strengthens community cohesion.

CRR initiatives can lower costs by preventing emergencies and reducing the need for costly emergency response and recovery efforts. By investing in prevention and preparedness measures, communities can mitigate potential losses and avoid the personal and economic burden associated with fires, injuries, and other emergencies. Data-informed assessments, rich community partnerships, and targeted, data-driven plans are redefining how MCFRS is working to build resilience in the community.

#### 3. PROGRAM AREA OUTPUT, OUTCOMES, & IMPACT

The CRR
Section plays a lead role in building the department's framework for strategic community risk reduction, public education, and outreach. CRR "strategists" were very busy in 2023.



MCFRS 2023 Program Appraisais

Tragically, the start of 2023 had the distinction of being among the deadliest in recent Montgomery County history. There were five fire-related deaths in Montgomery County structure fires that occurred over a three-week period (1/31/23 – 2/23/23). Common themes in these fires were occupants attempting to fight fires, delays in calling 911, and a lack of awareness that closing doors can help contain and slow the spread of fire, smoke, and heat, resulting in increased safety for occupants and first responders. In response, CRR mobilized and worked closely with Operations, the department's PIO and key community stakeholders to expand fire safety programs and education, community messaging and tailored outreach. The CRR Team introduced "walking staff meetings" in communities affected by fire to provide safety information in a strategic attempt to address complacency. Battling complacency of the public when it comes to fire safety is an uphill and ongoing battle. A specific example of this was following the deadly, high-profile fire at the Arrive Silver Spring fire. Despite significant efforts, extensive media coverage, and dedicated following the Arrive Silver Spring fatal fire, CRR had a very low turnout at each of the three events offered to the community to discuss fire prevention and fire safety.







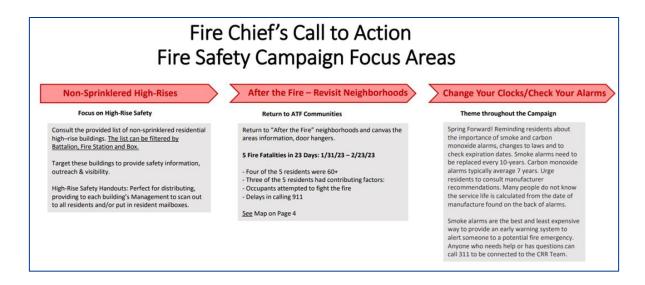


CY23 ended with 10 fire-related fatalities in Montgomery County; eight of the deaths involved persons over the age of 50. MCFRS senior outreach programs play a pivotal role in mitigating the alarming rates of fire-related fatalities among older populations. With a significant number of fire deaths occurring within this demographic, these programs serve as vital educational tools, equipping seniors with the knowledge and skills necessary to prevent fires and how to respond in the event of an emergency. By addressing the unique challenges, such as mobility issues and cognitive impairments, MCFRS CRR programs empower seniors, and those that care for them, to create safer living environments and foster a culture of proactive fire prevention across the community. By promoting awareness and providing tailored resources, CRR safety programs not only save lives, but also contribute to the overall resilience and wellbeing of the aging population in Montgomery County.

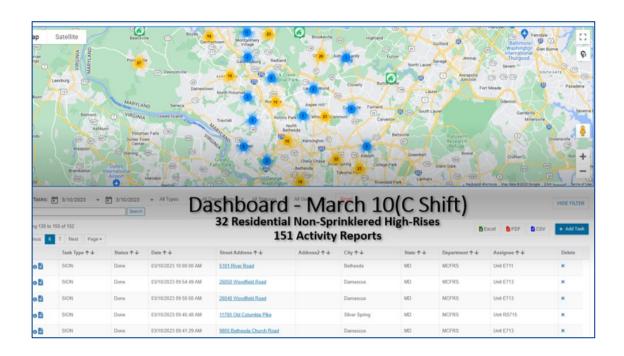
In March 2023, the Fire Chief asked CRR to plan, coordinate and lead a large-scale public awareness initiative in response to the wave of fire fatalities the County had experienced. A three-day County-wide *Fire Chief's Call to Action Fire Safety Campaign* was mobilized to align with daylight savings and the "Change Your Clock/Check Your Alarm" weekend.

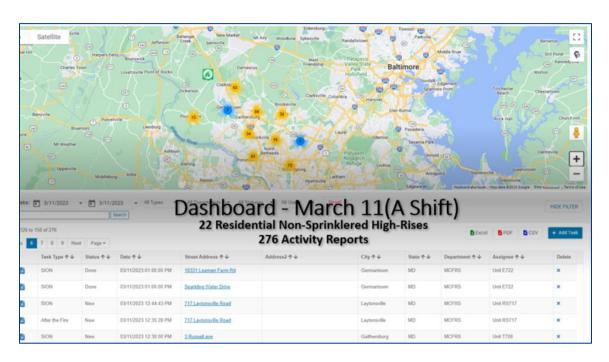
Campaign priorities included a focus on Montgomery County's 75 non-sprinklered, residential high-rise buildings; revisiting communities that had experienced recent fires, with a focus on the importance of working smoke alarms, calling 911 and closing doors on fire. The following pages contain several informational snapshots of the campaign rollout, impact and data dashboards for each shift.

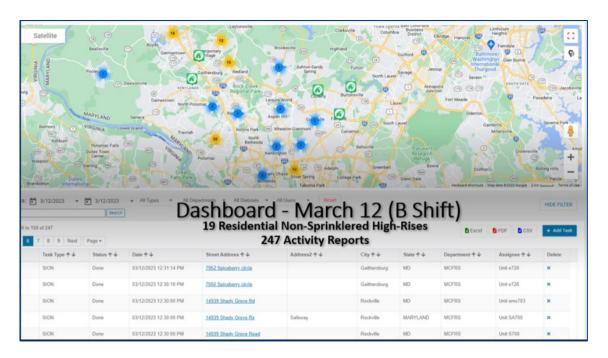




#### Screenshots from the Fire Chief's Call to Action Campaign











#### **Child Passenger Safety and Car Seat Program**

For the first time since 2019, the <u>Child Passenger Safety and Car Seat program</u> returned to a consistent, regular schedule. CRR began to host regularly scheduled car seat events, returned to providing presentations to community groups, and participated in community events.

In 2023, we continued to host car seat events at Fire Station 2 in Takoma Park, Fire Station 25 in Aspen Hill, and Fire Station 34 in Germantown. In December, we added Fire Station 6 in Bethesda into the rotation. With increased staffing coming to CRR, we plan to introduce "pop up" events focused on vulnerable communities.

Figure 1 shows the number of in-person car seat checks per quarter. In 2023, we held 137 car seat checks, an average of a little over 11 per month.

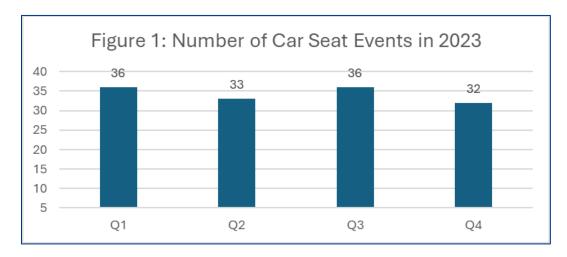


Figure 2 shows the total number of car seats installed per quarter. This includes car seats installed virtually, in-person (individual appointments separate from a car seat check), and during car seat checks events. In total, we installed 1,803 car seats in 2023. Historically, the first quarter of the year is generally when we install the most car seats, although the reasons are not known.

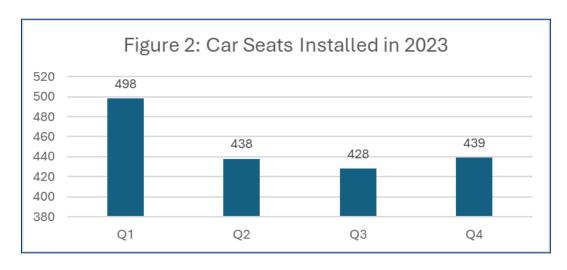


Figure 3 shows the number of car seats installed by method. Virtual appointments were those done through a video chat app. In-person installations are characterized by individual appointments for giveaways or emergencies. The last category is the number of car seat installations done at an established car seat check event.

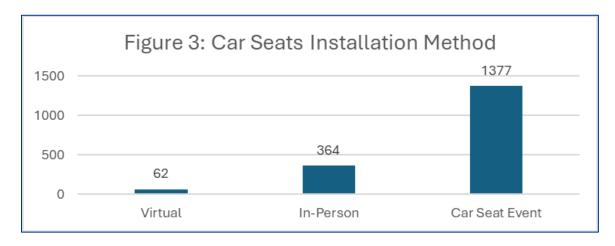
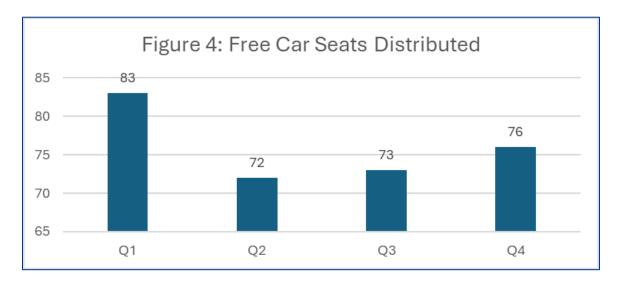
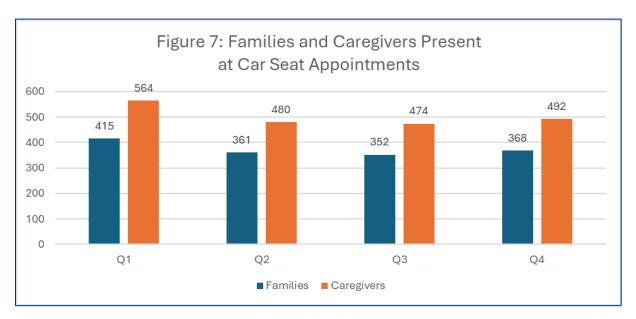


Figure 4 shows the number of free car seats that we provided to families in need in 2023 by quarter. The car seats are provided to families that were referred to us by a social service agency in Montgomery County or Maryland state government. This includes both government and non-governmental agencies. In total, we provided 304 car seats in 2023.



And the last graph shows the number of families and caregivers that were present at a car seat appointment (virtual, in-person, or a car seat check) by quarter. In total, we assisted 1,496 families with a car seat installation and 2,010 caregivers were present at the appointment.



#### New in CY23: Hands-Only CPR

MCFRS is training and equipping community members with the knowledge and skills to respond effectively – and confidently -- to cardiac emergencies, ultimately saving lives and improving outcomes for individuals experiencing sudden cardiac arrest through a newly implemented <a href="Hands-Only CPR program">Hands-Only CPR program</a>. Managed by the new Community Action

Coordinator, the program is tailored to the specific needs and demographics of the community and includes collaborations with schools, County agencies and departments, community programs and events, key stakeholders, and other innovative approaches to make Hands-Only **CPR** training accessible to everyone. The Community Action Coordinator also coordinates the delivery of Bleed, Opioid Stop the and Overdose Narcan education and training in the community.



#### **Diverse Communities**

The CRR team's outreach with diverse communities continues to have significant impact on promoting inclusivity, cultural understanding, and social cohesion. Recognizing the cultural differences and customs within the Spanish-speaking community often influences fire safety practices. Presentations, materials, and outreach programs are tailored to resonate with the cultural beliefs and preferences of our Spanish-speaking residents. Additionally, the team collaborates with local organizations, community leaders, religious institutions and non-profits to reach a broader audience and deliver fire safety education effectively. These partnerships have resulted in building trust while facilitating outreach efforts to promote a culture of safety and resilience within the community. Key aspects include:

- 1. Expansion of educational materials and online resources in other languages.
- 2. Bilingual fire safety workshops and presentations. Workshops are led by bilingual CRR educators and cover a wide range of topics such as fire safety, creating a fire escape plan, the proper use of smoke/CO alarms and topics unique to the audience (child safety, senior safety, etc.).
- 3. Bilingual Home Safety Check visits are a proactive outreach initiative aimed at empowering residents to take proactive stops to prevent fires and protect themselves and their families. Home visits foster a collaborative relationship between MCFRS and the community and have yielded very positive results.
- 4. Partnering with local community organizations, schools, businesses, and other stakeholders expands the reach of CRR initiatives. These collaborative efforts build trust and allow the department access to diverse populations to effectively communicate fire safety education to a wide audience while being culturally relevant.
- 5. Sustainable fire safety programs require ongoing support and participation from the community. By establishing strong partnerships, MCFRS is creating long-term relationships that ensure the continuity and sustainability of fire safety efforts beyond individual events or presentations.

#### Additional highlights from 2023 include:

- The County Learning Team established by Chief Bailey in response to a series of significant issues and social vulnerabilities at the Enclave Apartments should be recognized as an industry "Best Practice" for CY23. Working with multiple partner agencies, thinking outside the "organizational" box and across departments to develop a risk profile and collaborate on solutions yielded a premier learning experience. Using the five E's (education, engineering, enforcement, economic incentives and emergency response) as the framework for addressing fire and safety risks within the community when implemented together revealed a methodology to address, and potentially reduce, the overall risk of fire-related incidents and other emergencies. There is power in collaboration, and the comprehensive approach of the Learning Team under Chief Bailey's leadership was a model program in CY23. The project involved key stakeholders, fostered inclusion, leveraging data, collaboration, and intelligence to reduce vulnerabilities and improve resilience with low/minimal cost and high return on investment. The result? An impactful, model community risk reduction strategy.
- The inclusion of DHCA as a partner in CRR recruit class training.

- Meeting with staff from the Montgomery County Housing Opportunities Commission regarding Fire Safety for Homeless People.
- Focused education and awareness campaigns on Lithium-Ion Battery fire safety. CRR meeting with A/C Radcliffe and PCSS leadership to strategize on bystander CPR and pre-arrival CPR instructions to ensure consistent messaging by CRR Team and ways that CRR can help train civilians to be better 911 callers.
- Series of impactful programs and presentations with Senior Centers to include cooking demonstration focused on fire safety as part of the free lunch programs, Coffee & Safety discussions, partnering up with MCPD for Holiday Safety and cookie making with seniors program, CPR demos, and much more.
- New partnership established with the County's Office of Community Engagement Cluster.
- New program working with the County's Newcomers Initiative.

#### **Lessons learned in CY23**

- CRR needs more time for training MCFRS Recruit Classes.
- CRR needs additional staff to meet the needs, and challenges of over one million residents. Relying on on-duty, busy fire stations is not a sustainable solution. Additionally, CRR has experienced a tremendous spike in stations referring resident requests to CRR to manage.
- CRR needs uniformed ambassadors. Consider leveraging existing staff resources and assigning a rotation of field positions to CRR for a dynamic training opportunity that will build CRR capacity within MCFRS. Providing training opportunities for uniformed staff to engage in CRR leadership roles ensures continuity and sustainability of CRR efforts over time. As trained MCFRS members become advocates and champions for CRR within the organization, they can continue to promote a culture of safety across the County long after the initial assignment has ended.
- Consider a collateral CRR assignment in each battalion, fire station, or on each shift.
- One vehicle and one van shared across ALL CRR outreach programs and staff is inadequate to meet the needs of a team that is on the road, works 7 days a week and is required to transport tables, tents, ladders, tools and supplies. The current practice of using personal vehicles or the lottery system of signing out one of two department pool cars when available is not efficient or reasonable as a long-term solution.

#### 4. INITIATIVES & OBJECTIVES

The list of goals to achieve is extensive. Several are listed on the following page to highlight the potential value CRR brings to the County and MCFRS. Despite the addition of new

positions, the CRR team continues to be under-staffed, under-resourced and under-funded to meet the needs and level of requests for CRR services from the community.

- Expansion of the Car Seat Program to underserved areas of the County and "Pop Up" educational opportunities. Meeting people where they live is critical and many of these families only have one car, work 6 or 7 days a week, making it impossible for them to attend scheduled car seat events.
- The Athena App will be undergoing technical enhancements and updates to improve user interface and experience, report functionality and data collection.
- CRR will be working with Operations to provide a CRR-focused "Five Minute Drill" each month. This will extend CRR's educational reach in the department and help to ensure consistent/accurate messaging for MCFRS members that engage in CRR on both a formal and an informal basis.
- We will continue to expand the use CRAIG1300 as a key tool in the CRR toolbox. We have been in consultation with the vendor regarding enhancements to the product.
- Expect significant expansion of the CAC program areas through continued marketing and as data intelligence is received from EMS on focus areas and needs. We piloted the inclusion of Hands-only CPR education at a number of Car Seat checks with resounding success.
- Evaluations are essential and play a critical role in measuring CRR programs. We will
  expand program evaluations across other CRR programs to ensure continuous
  improvement and that programs are achieving intended goals and objectives. By
  measuring outcomes and impacts, evaluations will provide valuable insights into the
  effectiveness of our programs and generate insights on program strengths and
  weaknesses.
- We have submitted a "CRR" learning module to PSTA staff for consideration to be included in future Rookie packages. This will extend the very impactful learning that begins in the Recruit Class CRR Academy and take it to the streets.
- We have submitted a FEMA grant package focused on vulnerable populations and a unique "CRR mutual aid" and ride along program.
- CRR will continue to focus on hard-to-reach populations and those that serve them. We are working to expand our relationships with Title One Schools, designated "Community Schools," and an innovative partnership with the County's elementary schools that have School Based Health Centers (SBHC). The SBHC's provide a comprehensive range of services including health, mental health, social services, and other services. A multidisciplinary team of providers work with the students and their families, and the medical health care component serves students enrolled in the schools as well as their uninsured siblings. CRR is in discussions to pilot a program in CY24.

- We are working on the department's "Limited English Proficiency Project" deadlines
  to translate <u>CRR materials</u>. We are conducting analysis on translating requested CRR
  portals (home safety check requests and Car Seat Appointment scheduler) into each of
  the County's seven most-spoken languages.
- Increase CRR education in the High School Cadet program.
- Allocation of funding to purchase smoke and CO alarms for the deaf and hearing impaired.
- A number of program expansions are planned. Three highlights include the Senior Outreach training with the UMD Nursing program, Meals on Wheels programs and Rebuilding Together.

CRR plays a central role in the department's communication and marketing efforts, content development, social media strategy, and brand awareness. These services communicate MCFRS mission, vision, and values and provide critical safety information to the public.

How do we measure what is prevented by MCFRS' CRR education and outreach programs? We don't have that answer. What we know is that the value of CRR programs, education and outreach strengthens community resilience by building capacity to withstand, adapt to, and recover from emergencies and disasters. The value CRR brings to MCFRS is our ability to leverage partnerships with organizations that have the trust of vulnerable communities and by contributing to the improved safety and health of the community to prevent the 911 call and in turn, the dangers and exposures to first responders. CRR just might have one of the most important jobs in the department.

#### FIRE & EXPLOSIVES INVESTIGATION

#### 1. CRITERION & PROGRAM AREA

5C – Fire Investigation, Origin and Cause

#### 2. PROGRAM AREA RESOURCES & INPUTS

The mission of the Fire & Explosive Investigations Unit/Bomb Squad is to protect lives and property by way of determining and relaying information regarding the causes of fires and explosions, arresting and prosecuting those responsible for criminal acts related to fires and explosions, and providing an immediate and effective response to mitigate incidents involving improvised chemical, biological, radiological, nuclear, incendiary and explosive devices, military ordnance and improvised explosives labs. FEI also enhances safety and reduces vulnerability by providing the community with information related to faulty products, their misuse, or a warning against unsafe behaviors that contribute to the cause of fires; and the unit provides outreach and education, such as the dangers of fireworks, the need for functional smoke detectors, and the reporting of unsafe building egress and storage issues.

In 2022, a review of legislation impacting FEI resulted in the creation of a term civilian program manager position to oversee the unit. This position was filled at the beginning of 2023 and was responsible for evaluating all aspects of the unit, including staffing levels and deployment, and revision of policies and procedures.

In addition to the civilian manager, FEI staffing consisted of four captains and six lieutenants in 2023; however, there were two vacancies in the unit throughout most of the year. Due to retirements and limited applicants at the lieutenant level, the decision was made to open the unit to master firefighters. A vacancy announcement opened in August and three applicants were selected to attend the Montgomery County Police Academy beginning January 2024.

Several policies were updated in 2023 (Scope of Authority, Use of Force, and Bomb Squad Operations) and policy review/revision will continue through 2024, as the department ensures that all written directives are in compliance with current laws and regulations related to police accountability, and consistent with the MCFRS mission and the IAFF collective bargaining agreement.

Personnel continue to enhance skills and capabilities through advanced fire origin and cause investigation classes, including those dealing with the newest edition of NFPA 921, Guide for Fire and Explosion Investigations, and NFPA 1033, Standard for Professional Qualifications for Fire Investigator. Bomb technicians' advanced training courses were in military ordnance, advanced disposal techniques, and other render safe procedures.

#### 3. PROGRAM AREA OUTPUT, OUTCOMES, & IMPACT

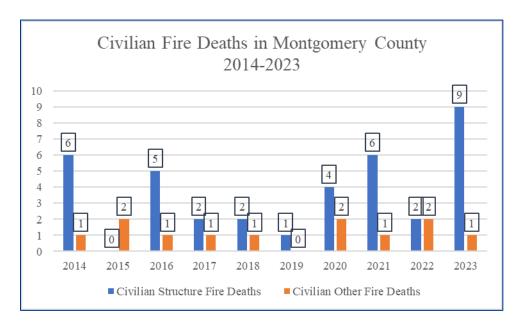
FEI investigated 370 incidents in 2023, an increase of 29 incidents from the previous year, or approximately 8% increase in call volume. In 2023, there were 257 fires and 83 explosive-related incidents. Investigations determined that 87 fires were intentionally set in 2023. Of

those 87 fires, 17 involved a residence, 11 commercial structures, 13 vehicle fires, and the remaining 46 were other types of structures and personal property fires.

In September 2023, <u>a string of fires broke out across Gaithersburg</u> in the early morning hours, damaging commercial establishments, a vehicle, and a police station. Investigative coordination between FEI and neighboring police departments resulted in the quick arrest of a subject in this arson spree.

Overall, investigators made 28 arrests over the course of the year, in connection with intentionally set fires. An estimated \$2.7 million in damages/loss was recorded in the fires that were investigated.

Fire fatalities in Montgomery County were higher in 2023 than most recent years in history. The causes of the fires that claimed lives were varied; in two cases, the victims used fire to take their own lives. However, there were several instances in which delayed 911 notification resulted in injury and/or death. It is recommended that education initiatives continue to focus on messaging that occupants should always call 911 immediately before making any effort to extinguish a fire on their own.



#### 4. INITIATIVES & OBJECTIVES

To address the position vacancies in the unit, and in an agreement between MCFRS and the IAFF, FEI will be restructuring in 2024. Once complete, FEI will consist of a manager (note: it is anticipated that the current term program manager will be leaving prior to the end of his term; rather than fill it, MCFRS will put a battalion chief in place to lead the unit), two captains, two lieutenants and one MFF on daywork; and four shifts of sworn investigators consisting of one lieutenant, one MFF, and three non-sworn FF3 positions as origin and cause specialists on a 2496-hour work schedule. The reorganization will be partially complete by January 2025 due to potential personnel movement from promotions and attrition.

Body worn camera implementation will also occur in 2024; BWC will be used by all sworn investigators in compliance with Maryland Public Safety Article §3–511 which states, "On or before July 1, 2025, a law enforcement agency of a county, other than a law enforcement agency described in paragraph (1) of this subsection, shall require the use of body—worn cameras, subject to the policy on the use of body—worn cameras developed by the law enforcement agency, by each law enforcement officer employed by the law enforcement agency who regularly interacts with members of the public as part of the law enforcement officer's official duties." FEI hopes to have this fully implemented by October of 2024.

Subject to budget allocations and vendor agreements, FEI will work on development of a vehicle replacement plan this year, and the unit is always seeking sites for a permanent base of operations where office and living/sleeping quarters are co-located.

#### SPECIAL OPERATIONS

#### 1. CRITERION & PROGRAM AREA

5D – Domestic Preparedness

#### 2. PROGRAM AREA RESOURCES & INPUTS

MCFRS strives to maintain operational readiness and response capability for any all-hazards mission, seeking and sustaining tactical and strategic partnerships with other local, regional, state, and federal agencies and private sector organizations to enhance our capabilities to prevent, respond to, and mitigate emergency incidents. The responsibility for this work is distributed across the organization, but a lot of the tasks fall on personnel within the Special Operations Section.

MCFRS is part of the County's Emergency Management Group, coordinated by the Montgomery County Office of Emergency Management & Homeland Security (OEMHS). OEMHS maintains the County's Emergency Operations Plan, which establishes the procedures for mobilizing resources and communicating with personnel to mitigate the effects of incidents that endanger an organization, a community, or government, as a whole.

Regionally, MCFRS is a participating agency/jurisdictional member of the <u>Metropolitan Washington Council of Governments</u>, which brings multi-disciplinary leaders from all the National Capital Region's jurisdictions together to increase our ability to detect, prepare and train for, and respond to man-made and natural threats.

MCFRS routinely works with internal and external partners on planning, intelligence and response capabilities; through various liaisons and committees/groups, MCFRS has established many important relationships and partnerships, thereby reducing organizational vulnerability during an emerging incident.

#### 3. PROGRAM AREA OUTPUT, OUTCOMES, & IMPACT

Major Incidents

- Multi-Alarm Fatal High-Rise Fire
- Hazardous Materials Incident involving Radiation, Explosives and Chemicals
- Severe Storm Event (July 29, 2023)
- Religious Building Fire with MAYDAY and Collapse

#### VIP/Security Events

- Presidential visit in-county
- Supreme Court visits in-county
- County Executive Inauguration
- MCPS Board of Education Protests

#### **County Initiatives**

- Provided input on EOP update related to the appropriate ESF's MCFRS is involved in; Montgomery County's <u>updated EOP</u> was approved in early March 2024.
- Updated severe weather response plans

- Addition of Baron ThreatNet for severe weather planning and response
- Addition of 12 MCFRS EOC rostered personnel
- Reduction of 1 Operations Support personnel due to promotion

#### State Initiatives

• Development of Hazmat and Swift Water Mission Ready Packages in MDEM system to assist with MEMAC requests

#### Federal Initiatives

Continued coordination with MCAC for security threats and coordination of VIP visits and special events

#### 4. INITIATIVES & OBJECTIVES

- Continue to work with OEMHS on the development of methods to improve crisis information flow, thus reducing vulnerability and enhancing coordination.
- Increase Operations support personnel roster to enhance capacity to respond to major incidents with planning support and for special event planning.
- Initiate and continue planning efforts with MCPD Special Operations on combining with MCFRS for sUAS deployment and response. A coordinated effort between public safety response agencies will enhance our capability responding to incidents/events with competent and skilled personnel respective to their roles.
- Modify the COOP process internally so that areas are handled by the appropriate sections. This will improve resilience by allowing appropriate stakeholders to input and maintain information in the process.
- Work with MCPD to establish a planning group to address active assailant response. The workgroup will develop policy, establish goals and coordinate for a combined response effort from both MCFRS and MCPD.

#### **OPERATIONS (FIRE)**

#### 1. CRITERION & PROGRAM AREA

5E – Fire Suppression

#### 2. PROGRAM AREA RESOURCES & INPUTS

MCFRS' existing structural firefighting force is qualified in the all-hazards mission of the department. In accordance with <u>Montgomery County Executive Regulation 16-05</u>, there are 1,245 active career members on the Integrated Emergency Command Structure (IECS) <u>list</u><sup>1</sup>.

Firefighting personnel respond from 37 fire/rescue stations within Montgomery County. There are also five federal fire departments that provide automatic aid in the County, and several neighboring counties offer mutual aid.

Frontline apparatus staffing is guided by Policy 25-08AMII, and includes the following:

- 35 paramedic engines
- 15 aerial ladder trucks (plus an additional tower at NIH, AT751, counted as part of our daily complement)
- 6 rescue squads (heavy extrication capable)
- 13 brush trucks
- 4 brush engines
- 8 tankers

Apparatus replacement continues on schedule; in 2023, MCFRS replaced RS717, E703, AT708, AT724, and AT735. The older engine and towers were moved to the reserve fleet.

In 2023, a residential high-rise fire resulted in the addition of <u>floor-below nozzles</u> as a tactical option for high-rise firefighting operations. This tool is available on six trucks (T706, T715, T716, AT719, AT723, AT724) close to many of the unsprinklered high-rises in Montgomery County. Further, we purchased and developed a training program for smoke curtains. These curtains have not been deployed yet. When they are deployed, it will give the fire department an advantage in preventing smoke spread in large buildings.

#### 3. PROGRAM AREA OUTPUT, OUTCOMES, & IMPACT

MCFRS firefighting personnel were dispatched to 19,154 fire calls (Group 1); 835 were full assignments. There were 535 structure fires in 2023, a 1.9% increase over 2022.

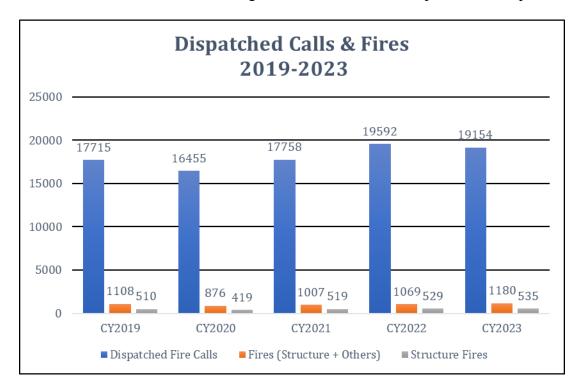
MCFRS published 19 AARs in 2023 for these fires, including two significant non-sprinklered high-rise fires (Arrive and the Enclave) and a large (church) structure fire involving a collapse and near-miss situation.

The Training Academy covered the <u>Western Avenue church fire</u> in a "From the Command Post" episode, and the <u>Whetstone Drive house fire with entrapment</u> in a "Boss Talk Episode".

\_

<sup>&</sup>lt;sup>1</sup> IECS as of 4/18/2024.

And in a two-part (<u>Part I</u>, <u>Part II</u>) "Challenges in the Street" series, high-rise building construction was presented, introducing members to the components and features of buildings relevant to the fire service and discussing the considerations and implications on operations.



MCFRS recorded 62 saves from fires in 2023, which was driven by a high number of saves at a fire that occurred in a multi-family high rise building in February in which one young woman lost her life. Overall, there were 10 fire-related fatalities in Montgomery County in 2023, seven of which occurred in the first five months of the year. Seven of the 10 deaths involved persons over the age of 65. There were also 22 civilian injuries recorded from structure fires.

As a result of the number of high-rise fires early in the year, as well as a nearly fatal fire that occurred in one of the non-sprinklered high rises in August, MCFRS reviewed its responses to automatic fire alarms (AFA) between 2020 and 2023 to ensure the existing General Order (FCGO 21-01 Fire Routine Incident Responses) was still appropriate. AFA calls primarily occur in the County's most densely populated areas, particularly in those areas inhabited by the most vulnerable people.

Year	# of AFAs	# of Upgrades	# of Structure Fires (111)
2020	9,048	31 (.23%)	9 (.10%)
2021	9,720	39 (.33%)	11 (.11%)
2022	11,119	48 (.40%)	15 (.13%)
2023	10,511	54 (.45%)	13 (.12%)
Total	40,398	172 (.43%)	48 (.12%)

Although AFAs have increased over this time period, analysis indicates the policy to run routine to such calls is still acceptable: on average, only 0.12% of the fire alarm calls result in an actual structure fire. The Planning Section has developed some new resources that will allow AFAs to be monitored more consistently over time.

The high-rise fires in 2023 did result in some positive outcomes.

The high-rise fire at the Arrive Silver Spring resulted in legislation at the state level that establishes certain requirements related to the installation of fire safety equipment in residential high-rise buildings and communications from the building management. House Bill 823, the Melanie Nicholle Diaz Fire Safety Act, was signed into law by the governor on May 16, 2024, and goes into effect June 1, 2024<sup>2</sup>.

The Enclave high-rise fire resulted in the establishment of an MCFRS-led learning team, a multi-agency, cross-disciplinary team studying the issues surrounding this specific apartment complex, with the primary objective of providing a context-rich and nuanced understanding of community risk, and mapping the key relationships between people and risk, with the intent of forming a highly targeted community risk reduction strategy. The effort successfully identified and confirmed concerns related to fire and life safety, as well as other health safety issues that impact the residents of this particular community, but moreover, it opened dialog between agencies across County government that can affect change and increased accountability across all departments. This process also proved effective, and MCFRS can build on the success of this learning team and apply it to other properties or situations as they arise.

#### 4. INITIATIVES & OBJECTIVES

With the completion of the <u>2024-2030 Master Plan</u> in 2023 (Council approval in February 2024), the department will begin assessing the existing model of deployment (systemwide) and making recommendations for improvement based on demonstrated need and the vulnerability of communities throughout the County. The Planning Section will also initiate an update to <u>Risk in Montgomery County</u> and the <u>Community Risk Assessment - Standards of Cover document using census tracts as the new risk management zones, rather than box areas.</u>

<sup>&</sup>lt;sup>2</sup> The requirements of this legislation are scheduled to be phased in; for example, the requirement to install smoke detectors in the public corridors of high-rise buildings does not go into effect until July 31, 2025.

At the beginning of 2024, MCFRS initiated a "box alarm process evaluation," with the intent of building a sustainable process for the quasi-objective evaluation of our actual performance on reported structure fires. When that process is complete, MCFRS will re-evaluate its current performance measures and benchmarks.

Due to the number of ongoing issues at some of the non-sprinklered high-rises, MCFRS will increase battalion-sponsored community outreach in these and other vulnerable communities, in coordination with the Community Risk Reduction section, to convey fire/life safety information and improve the resilience of these residents.

Additionally, MCFRS personnel will be trained on the tactical application of the new smoke curtains this year.

## EMERGENCY MEDICAL & INTEGRATED HEALTHCARE SERVICES

#### 1. CRITERION & PROGRAM AREA

5F – Emergency Medical Services

#### 2. PROGRAM AREA RESOURCES & INPUTS

#### Personnel

The EMIHS Section (the Section) is overseen by:

- uniformed Assistant Chief (AC)
- Battalion chiefs (BCs) ((1) Operations battalion chief and (1) Quality Management battalion chief)
- full-time civilian Mobile Integrated Health (MIH) Program Manager
- full time contracted civilian Medical Director.

#### Subordinate administrative staff includes

- (2) captains (Quality Assurance [QA] and Quality Improvement [QI] officers)
- (2) full-time MIH FF/PM
- full-time Office Services Coordinator
- (7) part-time (collateral duty/overtime) process owners for the following processes:
  - o ACS/STEMI
  - Medical cardiac arrest
  - o Stroke
  - o ALS to BLS Downgrade
  - o Intubation
  - o Point of care ultrasound
  - o Patient care documentation and recordation
- (2) Montgomery County Department of Health and Human Services employees are embedded within MCFRS as part of the MIH team.

During CY23, the EMS Section added two (2) fulltime EMIHS Fire Fighter/Paramedics.

In addition, seven (7) captains and three (3) lieutenants serve as EMS Duty Officers across MCFRS' three operational shifts – two (2) captains and one (1) lieutenant per shift and one (1) captain in "relief." These officers liaise with our local hospitals and field personnel to facilitate effective EMS delivery. In addition, they provide critical, on-scene, infrastructural support relative to our QI/QA initiatives, especially on high acuity and multiple patient incidents. Two (2) captains Serve as an EMS Disposition Officer M-F 0700-1700 hours providing real time quality assurance and destination guidance/management.

#### **SOPs**

- Added a response plan for agitated patients
- Terminated the Viral Syndrome Pandemic Triage Protocol
- Updated EMS Personal Protective Equipment requirements
- Updated EMS inventory and hospital restocking process
- Added Calcium Gluconate
- Added IV pumps
- Added PSTrax software for controlled substance accountability

#### **Published Clinical Practice Guidelines**

- 2023-01 Temporary Change to Ketamine Indications
- 2023-02 Point of Care Ultrasound POCUS
- 2023-03 IV Infusion Pump
- 2023-04 Intravenous Nitroglycerin
- 2023-05 Suspending Use of Pediatric Sized King LTS-D

#### Maryland Medical Protocol Changes

- Modification to the treatment of atrial fibrillation
- Addition of buprenorphine for patients recently resuscitated with naloxone
- Improved hospital communications by differentiating between a physical consultation and a simple notification
- Addition of IV nitroglycerin for the treatment of SCAPE
- Addition of ketamine for treatment of pain during pacing and cardioversion
- Improved the resuscitation for pediatric cardiac arrest, requiring on scene resuscitation for 30 minutes
- Addition of tranexamic acid for postpartum hemorrhage
- Updated the trauma decision tree
- Updated the use of ultrasound to inform termination of resuscitation decisions

#### **Training and Certifications**

- Rebuilt the EMIHS website
- Published 25 "5 Minute drills" for station personnel
- Published 11 "Hot Topics in EMS" podcasts
- Published nine "Sticking Points" for ALS clinicians; this is a new product
- Provided initial training to 13 prospective EMS Duty Officers in November
- Attended and presented at the NAEMSP Conference in January
- Attended the Gathering of Eagles Conference in June
- Attended and presented at the National Sobering Collaborative Conference in October
- All uniformed staff and the Medical Director are members of the National Association of EMS Physicians

#### 3. PROGRAM AREA OUTPUT, OUTCOMES, & IMPACT

All aspects of emergency medicine are surveilled and measured utilizing many dynamic data sources and reports as its primary method for determining the effectiveness of the EMIHS Section and identifying variances. The data is aggregated and presented within Power BI. This is a view of the published <u>EMIHS Dashboard (2024)</u>, which is reviewed monthly by the EMIHS Section and MCFRS leadership.

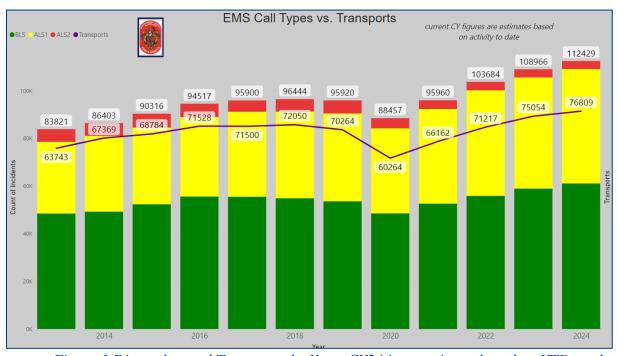


Figure 1 Dispatches and Transports by Year. CY24 is an estimate based on YTD totals.

Both the total EMS dispatches for CY2023 and the total number of patients transported have increased since returning to normal (post-COVID) levels. Contributing factors for the increase in transports may include:

- Decrease in patient's reluctance to utilize Emergency Departments
- An agnostic attitude towards long waits in Emergency Departments

During CY2023, wait times and turnover times at hospitals improved, alleviating some strain on EMS resources, but does continue to be monitored. MCFRS continues to utilize a clinical disposition officer to monitor hospital status, designate receiving hospital destinations, and provide clinical and operational oversight of the EMS system.

The monthly QA/QI (patient-centric) dashboards for the EMIHS Section can be found here. This is a monthly snapshot of the live dashboards found within MCFRS Power BI sites and provides a mechanism for section evaluation and trend identification that may be affecting service delivery.

The annual operational centric data relating to the analyzation of unit call volume, unit response, 1<sup>st</sup> arriving paramedic total response time, etc. can be found <u>here.</u> This is data measured and/or calculated within the last current calendar year.

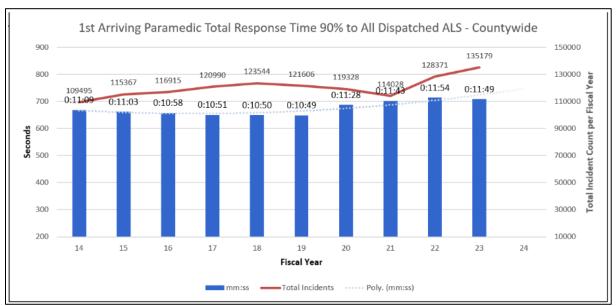


Figure 2 1st Arriving Paramedic Total Response Time - Countywide

The EMIHS Section continues to monitor, assess, and provide interventions, when necessary, to **many** *Operational* and *Quality Management* processes and performance measures to sustain the highest level of performance possible while being pioneers to the latest research of clinical intervention, technology, and pre-hospital advancement. Our operational data focuses on many traditional and non-traditional fire department performance indicators, while our quality management data encompasses more healthcare/patient centric performance indicators which are utilized between both internal and external stakeholders.

#### Observed Trends:

- CY2023 EMS call volume has surpassed previous years and is projected to continue to increase in CY2024.
- CY2023 data shows that the outcomes associated with our return of spontaneous circulation (ROSC) rates and the number of CPC 1 and 2 patients have remained stable and within normal ranges since the pandemic.
- Within CY2022, MCFRS noted sustained and prolonged wait times to offload patients within the local emergency departments. Since the implementation of EMS 700 on October 9th, 2022, MCFRS continues to observe a marked downward trend in the median drop time for our patients and a reduction in EMS incident cycle time.
- MCFRS has noted an increase in performance with our first pass success of video laryngoscopy after implementing a Quality Improvement Intervention (as described below).
- In CY2020, MCFRS instituted "cold" responses (no lights or sirens) for some low acuity dispatches. As we continue to monitor outcomes and refine call type protocols,

we increased the number of cold responses from 10,764 in CY2022 to 15,656 in CY2023

• Customer Service: In CY2020, EMIHS began texting a customer satisfaction survey to patients transported to get feedback on service delivery. Response rate was down from 19% in CY2023, but performance ratings remained consistent throughout CY2023 (see figure 3).

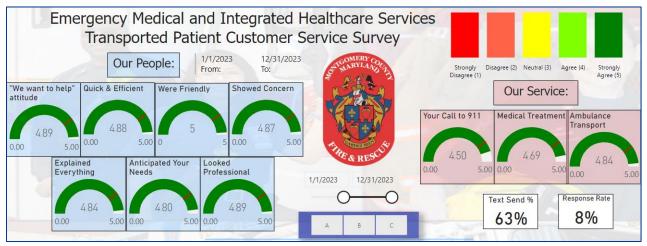


Figure 3 EMIHS Transported Patient Customer Service Survey

- With the addition of an additional EMS Duty Officer (EMS702) on October 9th, 2022, MCFRS continues to monitor EMS Supervisor response times. A fourth EMS Duty Officer is scheduled to be implemented in CY2025 as significant gaps remain in the ALS and BLS supervision of operational personnel:
  - o There are currently three on-duty EMS supervisors to oversee 110,000 annual patient encounters (~300 per day).
  - o Each responsible for over 150 square miles

These gaps will continue to lessen when a fourth EMSDO is implemented in the CY2025 operating budget. Optimal geographic and response coverage is estimated at close to 5 EMSDOs county-wide.

- In CY23, MCFRS continued a program to transport patients to alternative destinations (i.e., urgent care centers). We did see a decrease in the number of patients who participated; it remained a low percentage of total patient contacts.
  - o CY2023 Alternative destination patients: 27

#### Outcomes

The establishment of a Clinical Disposition Officer (EMS 700) from 0700 to 2300 every day ensures clinical oversight for *all* EMS calls, extending beyond instances where an EMSDO is physically present. This improves not just the decision making for the hospital destination but also for the care that is provided onscene and while in transport. Examples include directing trauma upgrades, referrals to Children's, stroke care, downgrade oversight, and encouraging

the utilization of alternative destinations. Staffing this position with a credentialed EMS Duty Officer continues to be effective as it provides supervisory oversight of every incident and continues to improve overall quality of care.

The EMIHS Section continued to measure, assess, and modify our approach to Advanced Airway Management with the goal of increasing the first pass attempt rates. A process owner continues to conduct 100% case reviews of all intubations performed with the AirTraq, a non-displacement, channeled intubation device that records video. This review process involves annotating procedural videos and sharing that performance feedback with the ALS clinician. This process produced a measurable improvement that was monitored by a <a href="PowerBI">PowerBI</a> dashboard.

As part of its ongoing evaluation of the EMIHS section, MCFRS implemented a quality improvement initiative targeting the *ALS to BLS Downgrade Process* due to identified suboptimal systemic compliance. In CY2022, it was observed that the process was not followed in at least 60% of cases involving patient downgrades. Subsequently, a plan of action was developed by analyzing aggregate data and employing the *Plan, Do, Study, Act* quality improvement model. This intervention resulted in significant enhancements within the EMIHS Section, notably improving compliance with the ALS to BLS Downgrade Process, as outlined in Fire Chief's General Order 20-07, available <a href="here">here</a>. By CY2023, the overall percentage of downgrades exhibiting evidence of process completion had increased to 79.8%.

The EMIHS Quality Management battalion chief oversees the daily operations of system surveillance and feedback. MCFRS self-monitors and assesses systemic quality performance as it pertains to the nexus of medicine using the EMS Quality Management Plan as its guide. These efforts include real time surveillance using Firstwatch triggers, chart review of 100% of critical processes using process owners and the Firstwatch Firstpass system, customer satisfaction surveys, and myriad other inputs. In CY2023, the Quality Assurance Office handled 684 total inquiries, of which twelve (12) were considered complex as defined in the QM plan.

The Mobile Integrated Health unit continues to process a high number of requests for service and refer patients to partner agencies. Due to the success of this unit, MIH added two full-time paramedic positions in CY23, extending program coverage to five days a week. The intent was to increase home visits, increase program capacity, and introduce new pilot programs, such as the Buprenorphine protocol. CY23 saw the introduction of the MIH module in eMeds. We migrated old records and began adding new ones, switching over from a clunky Excel spreadsheet that housed all 600 patients. The MIH module not only allowed for improved documentation capabilities, but also engaged our clinicians while they are in the field by connecting patients to their MIH enrollments. The referral process in eMeds was streamlined to make it easier for our clinicians to reach the team with relevant information, right from their eMeds report.

MIH also worked to improve our outreach efforts to the field and provide additional educational opportunities, including facetime with the incoming recruit classes. All these

combined efforts led to a drastic 28% increase in unique patients referred to MIH from CY22 to CY23.

MIH and EMIHS worked diligently together to sign an MOU with HHS in CY23 that led to the expansion of our ADP program, adding the Crisis Center Stabilization Room as a destination for EMS units in the county.

#### **Impact**

MCFRS provides emergency medical services within the borders of Montgomery County. The EMIHS Section continues to expand its Operational and Quality Management reach to measure and assess the outcomes and results of performance and processes to ensure that it is meeting the expectations of internal and external stakeholders.

Twice a year, MCFRS hosts an EMIHS Provider Recognition Ceremony to acknowledge outstanding achievements in patient care and outcomes. It is an opportunity for clinicians to meet and interact with patients who have had significant events, including cardiac arrest patients who achieved a neurologically intact discharge from the hospital. These emotional ceremonies are exceptionally gratifying for these patients, our providers and the staff who work behind the scenes to create an environment where these outcomes are possible.

EMIHS staff published one full manuscript in *Prehospital Emergency Care* concerning the work done during the pandemic of testing cardiac arrest victims who met criteria for Termination of Resuscitation (TOR) efforts in the field. The article, entitled "COVID-19 Testing Among Out-of-Hospital Cardiac Arrest Patients: Implications for Public Health" appeared in the August 2023 edition online ahead of print.<sup>1</sup>

Our Medical Director and uniformed EMIHS leadership also published and presented an abstract at the 2023 National Association of EMS Physicians conference in Tampa, Florida titled, "Variability in ALS to BLS Downgrade Frequency in a Tiered EMS System." This represented an analysis of further work done to understand different factors involved in ALS to BLS downgrades and to enhance the quality review and resulting education surrounding downgrade decisions.<sup>2</sup> At this same conference, our QM Chief presented the results of his research and experience with command decisions based upon a deliberate consideration of all benefits versus risks. This session, entitled "Approaching Risk Assessment as a Process: Not just for Structure Fires Anymore" was a summary of the County's Incident Response Program and accompanying appendices and operational doctrines.

Additionally, our EMIHS battalion chief partnered with staff at *First Watch* and other experts around the country to present a webinar entitled "**Partnering with Hospitals: Solving Offload Problems Together.**" This discussion was a problem-solving session featuring our improvement efforts, amongst others, regarding the worldwide problem of ED overcrowding and its effect on ambulance offload delays.<sup>3</sup>

Members of the EMS Section continue to participate at MIEMSS committee meetings and lead the discussion on state protocol changes. MCFRS has a continued national presence by sharing data, presenting research, and innovation. The Medical Director remains a frequent attendee on weekly conference calls with the national consortium of EMS Medical Directors. Many other jurisdictions look to MCFRS for initiative and strategy.

- 1 Stone, RM, Kaufman BT, Burns TA, Delbridge TR. COVID-19 Testing Among Out-of-Hospital Cardiac Arrest Patients: Implications for Public Health. *Prehosp Emerg Care*. 2024;28(3):448-452. doi: 10.1080/10903127.2023.2241893. Epub 2023 Aug 23. PMID: 3749466
- <sup>2</sup> Burns, TA; Stone, RM; Kaufman, BT, Cooke, JW; "Variability in ALS to BLS Downgrade Frequency in a Tiered EMS System" National Association of EMS Physicians, Tampa, FL, January 2023; *Prehosp Emerg Care* Vol 27 (1) Suppl S1, p. 2, Jan 2023
- 3 https://www.youtube.com/watch?v=ijOvzVwf5dQ



# 4. INITIATIVES & OBJECTIVES

- MCFRS EMIHS Section is in the process of development and implementation of a Whole Blood Program. Each of the four (4) on Duty EMSD Officers will carry a supply of Whole Blood, for administration to critically ill patients, increasing their survivability.
- In 2024 (July 14, 2024) MCFRS EMIHS will add a 4<sup>th</sup> EMSDO (EMS701). At which time, EMS704 and EMS702 will undergo re-alignment allowing for better response/coverage of critical service areas.

# TECHNICAL RESCUE

#### 1. CRITERION & PROGRAM AREA

5G – Technical Rescue

#### 2. PROGRAM AREA RESOURCES & INPUTS

#### Personnel

The number of Technical Rescue Team (TRT) personnel for 2023 saw a slight increase overall, but the number of fully trained and TRT personnel decreased significantly. This is attributed to retirement and/or promotion within the department. Operationally, this gap places TRT behind its position at the same time in the previous year.

The Swift Water Rescue Team (SWRT) personnel had a slight decrease in SWBC; in contrast, the SWBO numbers improved dramatically. This increase with SWBO is a direct reflection of the SWRT leadership emphasizing the need for additional SWBO qualified personnel.

The tech rescue team members and paramedics, swiftwater boat crew, operations level boat operators and crew, and utility task vehicle drivers for CY2023 are shown below.

Technical Rescue Team Officers (TRTo) - 17 – decrease from CY22 (20)

Technical Rescue Team Members (TRTm) – 91 – decrease from CY22 (101)

Technical Rescue Team Paramedic (TRTp) - 7 – decrease from CY22 (8)

Technical Rescue Team Trainee (TRT-tr) - 35 – increase from CY22 (21)

Swift Water Task Force Leaders - 1 – same as CY22

Swift Water Officers - 10 – same as CY22

Swift Water Boat Operators (SWBO) - 33 – increase from CY22 (28)

Swift Water Boat Crew Members (SWBC) - 70 – decrease from CY22 (72)

Swift Water Trainee (SWTR-tr) - 26 – increase from CY22 (25)

Operations Level Boat Operators – 143 – increase from CY22 (142)

Operations Level Boat Crew Members – 208 -- decrease from CY22 (213)

Utility Task Vehicle Driver/Operators – 212 – increase from CY22 (185)

## Equipment & other resources

The SWRT completed an overhaul of the inventories for both boats and boat supports. A significant amount of new equipment was placed in-service to bring units up to standard. This new inventory was converted to an electronic format to allow for real time deficiencies to be reported.

The following new equipment was added by SWRT in 2023:

- Three (3) Yamaha motors were purchased by CJPVFD for their Chesapeake boats; the SWRT completed the break in and training for them.
- Ice rescue sonar added to inventory with associated training.

Additionally, SWRT has reviewed and updated the SWBC & SWBO recertification tasks.

SWRT continued to focus training initiatives to increase the number of available and trained swift water boat crew and operators as well as a public outreach initiative to promote water safety and reduce incidents occurring on the river.

The SWRT training group established a <u>YouTube training page</u> and created approximately 30 training videos made with support from the PSTA A/V club.

TRT also implemented new equipment in 2023. These include:

- Updating lead climbing kit to replace equipment that is at end of life (EOL)
- Evaluating new equipment/asset tracking system
- Preparing for large scale rope replacement due to EOL
- Developing and storing TRT-specific ALS gear
- Expanding rope system capabilities
- Purchase of additional AZ Vortex for TR725

TRT offered several training courses, some in conjunction with the Public Safety Training Academy, including:

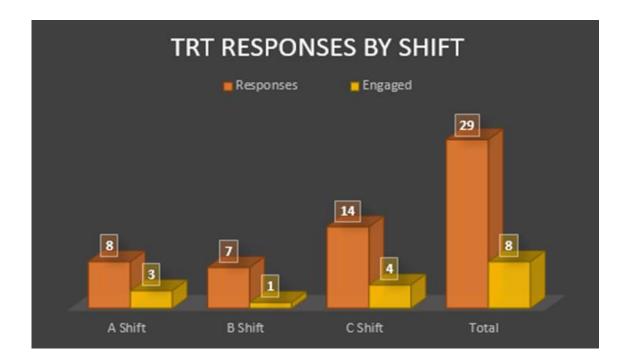
- Structural Collapse Specialist (90 hours)
- Trench Rescue Technician (30 hours)
- Technical Search Specialist (28 hours each) two class offerings (grant funded)
- Tower Rescue Technician (16 hours each) two class offerings

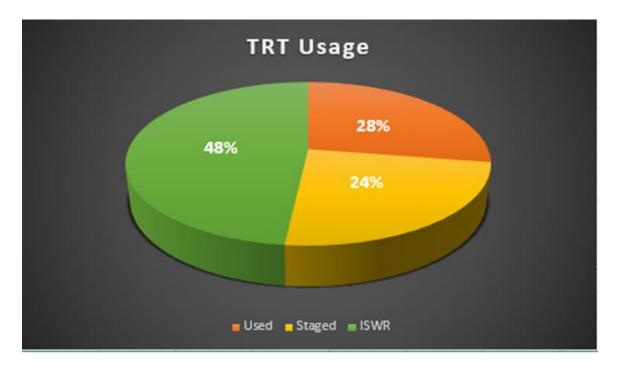
And TRT implemented the following policies/procedures in 2023:

- Revised Policy 20-05 to account for new TR731
- Implemented previous draft of TRT-O Task Book

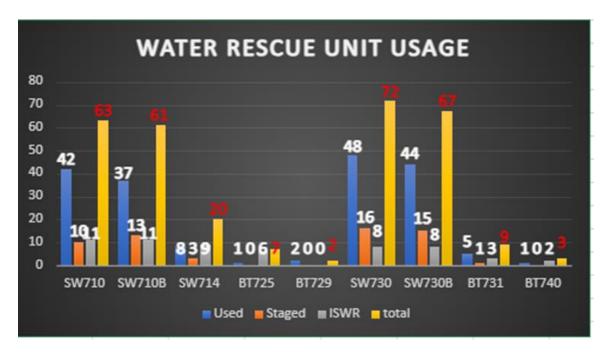
# 3. PROGRAM AREA OUTPUT, OUTCOMES, & IMPACT

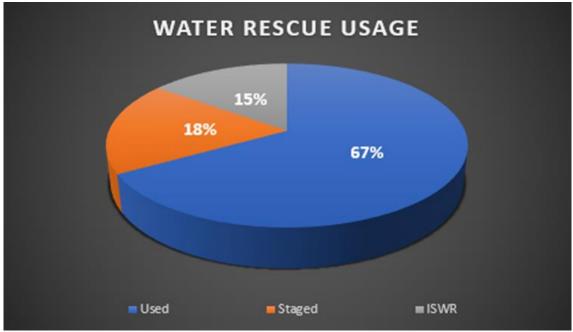
The number of incidents in which TRT was dispatched and operated on increased slightly in 2023 (29 incidents, 26% more than 2022).



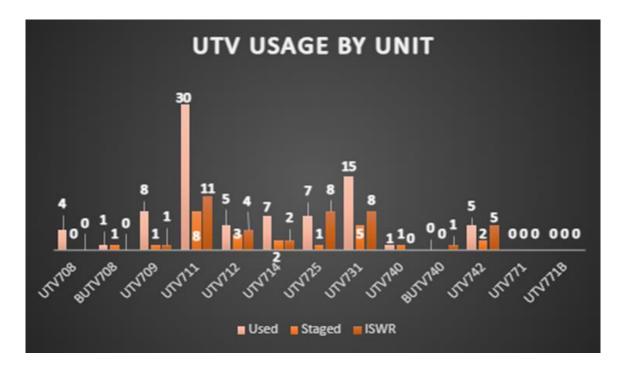


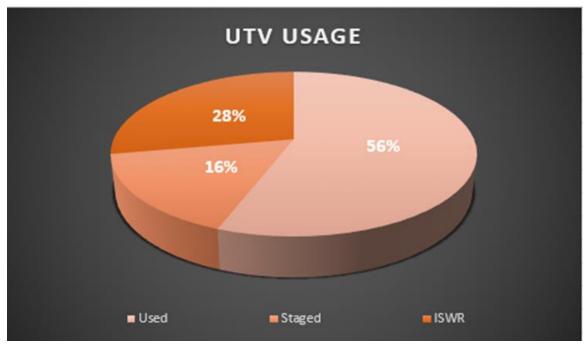
SWRT responses also remained consistent with previous years, with a slight increase in engagement on incidents.





The Special Operations section also operates a fleet of utility vehicles (UTVs) with a variety of equipment complements to aid on EMS incidents, brush fires, and hauling equipment. This fleet saw a slight increase in incidents and usage in 2023.





## 4. INITIATIVES & OBJECTIVES

The Special Operations Section will focus on the following initiatives in 2024:

# Swiftwater Rescue Team

- Wash down pump installed on all the Chesapeake Boat platforms.
- Send 6 SWBOs to Vehicles in Water classes.
- Implement dry suit replacement plan. This plan would rotate these suites to training use prior to the 10-year mark.
- Continue with updating all SWBC, SWBO, and recert training lessons to online format.

# Technical Rescue Team

- Planning regional mobilization exercise with PGFD.
- Develop succession planning process for team leadership.
- Participate in the revision of technical rescue course curriculum to include updated technologies and mandates.
- Complete driver training initiative on TR731.
- Push for staffing requirement at FS25 for TR725.
- In coordination with the PSTA, begin training opportunities at AST facilities.

.

# HAZARDOUS MATERIALS INCIDENT RESPONSE TEAM

## 1. CRITERION & PROGRAM AREA

5H – Hazardous Materials

#### 2. PROGRAM AREA RESOURCES & INPUTS

#### Personnel

The MCFRS hazardous materials program continues with two-tiers of certification and response. All firefighter/rescuers are trained at the Operations-level (OSHA and NFPA) through the Public Safety Training Academy (PSTA) recruit training program and volunteer hazardous materials operations courses meeting NFPA 470. Hazardous Materials Team members are trained to the Technician level (OSHA and NFPA) through the PSTA or outside training academy utilizing the current NFPA 470 Hazardous Materials Technician Course. Hazardous Materials Officers (HMo) are trained through an AHJ-training program utilizing modules containing NFPA knowledge, skills and abilities, state and local laws/regulations, and department specific policies and guidelines. All members complete annual hazardous materials refresher training as required by OSHA, and this is managed through the PSTA; no major changes occurred in 2023.

The hazardous materials' complement is below:

Hazardous Materials Team Members (HMm) - 118 (5 new HMm's)

Hazardous Materials Officers – 20 (1 new HMo; total includes 4 Chief Officers)

Hazardous Materials Unit Drivers – 47 (2 new HMu's)

Hazardous Materials ALS Providers – 39

Hazardous Materials Trainees – 12

## Apparatus and Staffing

MCFRS Hazardous Materials Team deployment remained the same with minimum staffing of 13 HMm's on-duty, including two HMo's. The team has two primary Hazardous Materials Units (HMu's) located at FS7 and FS28, which are staffed with four HMm's including one HMo and one HMu driver. These stations are supported by two Hazardous Material Support Companies: one at FS20 with a minimum of three HMm's and the other at FS25 with a minimum of two HMm's. Non-consolidated personnel are rostered and available for response as needed based on incident needs.

# Administrative and Budgetary Items

The Hazardous Materials Team continues to support the program utilizing Montgomery County Government department budget process funding and Metropolitan Washington Council of Governments (MWCOG) Hazardous Materials Subcommittee grant funding for equipment and training. Other grant opportunities are utilized when approved to support training and equipment initiatives. There was a focus in 2023 by the Operations Section to move towards a smaller response unit platform that could handle the 80-90% of incidents MCFRS responds to while maintaining a large primary Hazardous Materials Unit supporting Type 1 response capability.

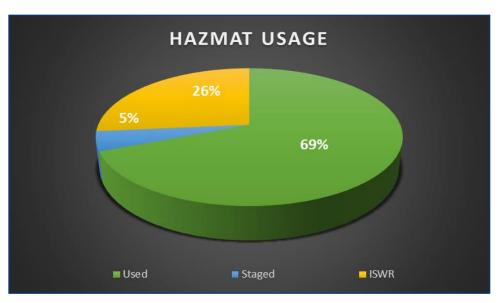
# 3. PROGRAM AREA OUTPUT, OUTCOMES, & IMPACT

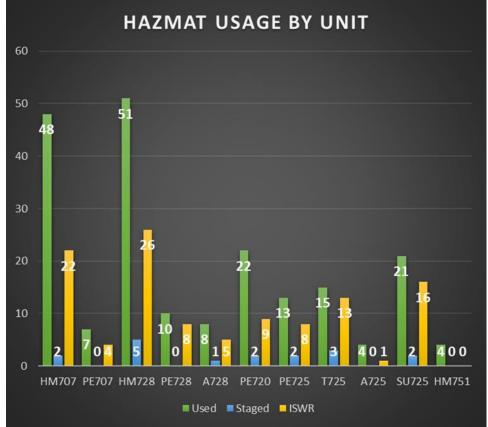
**CY23 Statistics** 

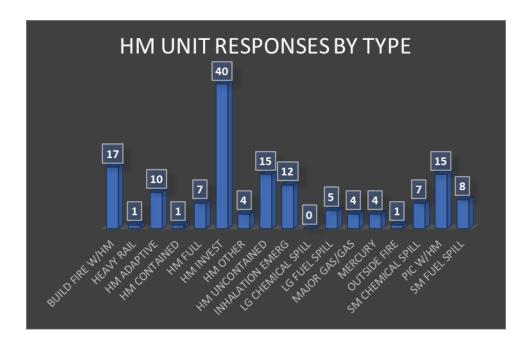
Hazmat Team Responses – 151 (decrease from 172 incidents in CY2022); hazmat usage–69% (increase from 51% in CY2022)

Note — CY2023 does not include Hazmat Team Consult data. Hazardous material incidents handled without the Hazmat Team are not included (i.e. Outside Gas Leaks, Inside Gas Leaks, Small Fuel Spills, etc.)

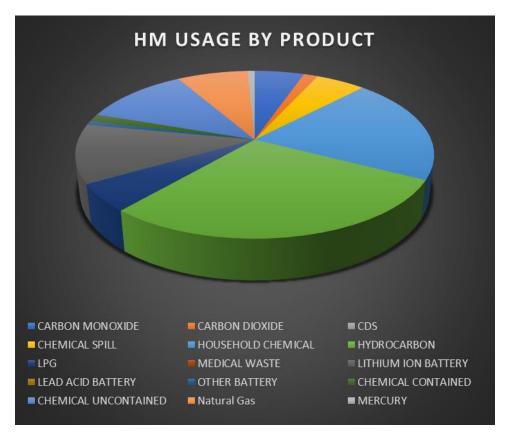
While hazardous material team responses declined overall in CY2023, the usage of response personnel and assets at incidents increased significantly.







In CY2023, we expanded our ability to track products involved in incidents. This included separating Natural Gas and LPG from Hydrocarbon responses. We were also able to pull some specific battery response data and separate that into lithium-ion battery, lead acid battery and other battery categories. However, tracking for battery incidents was subpar, at best, in 2023.



## CY23 Outcomes

- Added five new Hazmat Team members (HMm) and one new Hazmat Officer (HMo)
- Ability to send personnel to required and/or additional training opportunities continues to be limited due to County travel restrictions.
- Evaluation and purchase of smaller Hazmat Support Unit to replace HM707 in CY24
- Evaluated new equipment for purchase and inclusion in operations for CY24
  - o In-suit communications
  - Meters
  - o PPE
- Training Initiatives
  - o Full-scale Hazardous Materials response scenario with Astra Zeneca testing and evaluating response.
  - o Joint training coordinated with National Institute of Standards and Technologies for radiation response utilizing real-time sources.
  - o Compressed Natural Gas vehicle response training for evolving CNG fleets located in county.
  - Increased Lithium-Ion Battery response knowledge through internally developed programs and outside entities.
  - o Joint training with FBI, ATF and FEI on homemade explosive response.
  - o MWCOG STC-PRND regional table-top for radiation response coordination.
  - Continued attendance at IAFC Hazmat Conference
  - o Continued joint training evolutions with MCPD ESU
  - o Increased joint training with NIST and NIH
- Continued Hazmat Team SOG evaluation and updates.
- Increased involvement in local, regional, state, and nationwide Lithium-Ion Battery response initiatives.
- Observed decrease in ability for Hazmat stations to properly maintain items due to call load of cross-staffed engine.
- Moved Hazmat meter maintenance to the Special Ops warehouse from the County meter shop and worked through coordination for meter maintenance and repairs.

#### 4. INITIATIVES & OBJECTIVES

• Continue to evaluate need for dedicated staffing of a primary hazardous materials unit that will reduce vulnerabilities to community when cross-staffed response units are on EMS/Suppression incidents and improve resiliency for being able to respond to hazardous materials incidents with appropriately trained personnel. Increased value will be obtained through the provision of pre-incident planning assistance and site visits at moderate to high-risk hazardous materials facilities, increased ability to provide and document on-duty training to technician and operations level personnel, increased ability to maintain specialty equipment and improved coordination with other agencies. Cross-staffing reduces value to the organization and the community by requiring Hazmat Team personnel to multi-task numerous response initiatives, thereby reducing their knowledge, skills and abilities for hazardous material technician items.

- Finish procurement process of new primary Hazardous Materials Unit, increasing value with increased capability and equipment inventory. This project will improve resilience with decreased maintenance and out-of-service time, while also providing a dedicated reserve unit which can store additional response equipment.
- Continue build-out of Hazardous Material Support Companies. Increased value and enhanced resiliency in handling low-risk incidents by utilizing specially trained personnel and reducing systemwide impacts to EMS and Suppression coverage. Incidents in which these units can handle or evaluate are:
  - o Initial evaluation and research for low-risk incidents
  - o Hydrocarbon leaks and spills to include small spills and tractor trailer saddle tanks
  - o Battery incident response
  - Natural Gas
  - Liquified Propane Gas (LPG)
  - o Initial reconnaissance of hazardous materials investigations
  - o Initial reconnaissance and identification of radiation incidents
- Enhance coordination with assisting response agencies through joint training initiatives at the local, state and federal levels. This will increase resiliency of team capability and enhance communication and response efforts when incidents escalate.
- Enhance team logistics capability through MWCOG and Safeware equipment inventory tracking program. This will reduce vulnerabilities by reducing out-of-service time for equipment and quick replacement of consumables. Organizational value will increase through better tracking, organization and operations of assigned equipment and processes.
- Enhance capability with daywork Special Operations/Hazardous Materials Teams Logistics position. Request to trial this concept with long-term detail for 2<sup>nd</sup> half of CY24 and 1<sup>st</sup> half of CY25 where position will be evaluated for continuation and submittal for FTE if appropriate.
- Evaluate vendor provided Hazmat Officer program for inclusion into MCFRS AHJ Hazardous Materials Officer program. This will reduce vulnerability to the hazmat team, department and community while enhancing response capability by providing HMo's with additional knowledge and processes to apply at incidents.
- Work with the PSTA and MD Fire and Rescue Institute to provide Hazardous Materials Incident Commander course, which was in redevelopment prior to CY2024. This will also enhance response capability of HMo's and potentially CCO's and unit officers through additional knowledge and processes. This course also provides the ability to meet or maintain OSHA/NFPA Hazardous Materials Incident Commander and Officer requirements.
- Purchase and/or place response equipment in-service that was evaluated and/or procured in CY2023. This equipment includes replacement in-suit communications and meters. Aging technologies were increasing the vulnerability of the team and this new equipment

will improve resilience with state-of-the-art equipment to meet hazardous material mission needs.

- Continue joint training efforts with other Special Operations teams such as TRT, Water and Rail. This increases value to the organization and community by ensuring team members can coordinate and operate together at large-scale incidents where multiple specialties are needed to complete incident objectives.
- Continue work with MCFRS IT to improve and/or enhance incident data entry to better incorporate hazardous materials and battery incidents. This will allow for improved data-driven decision making while also meeting appropriate documentation goals, thus improving organizational value of both data and enhanced team evaluation.

# **URBAN SEARCH & RESCUE (MD-TF1)**

#### 1. CRITERION & PROGRAM AREA

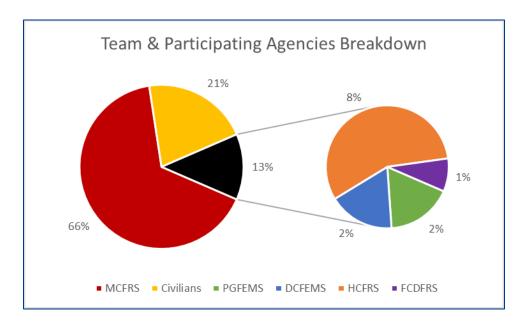
5L – Other Programs

#### 2. PROGRAM AREA RESOURCES & INPUTS

MD-TF1 is a part of the National USAR Response System, established by FEMA to organize federal, state, and local emergency response teams as federal disaster response task forces. MD-TF1 is one of twenty-eight USAR task forces available for deployment by FEMA to aid in structural collapse rescue or it can be pre-positioned for impending disasters. Furthermore, MD-TF1 is one of seven national teams equipped with Hazardous Materials Equipment Push Package (HEPP) capabilities, allowing for replacement and resupply of HazMat equipment on US&R deployments for national disasters. The HEPP is a self-contained mobile entity comprised of four MD-TF1 members, two Logistics members and two HazMat members, providing additional equipment during emergency operations at local, state, and national levels.

## Team members breakdown:

Montgomery County Fire & Rescue Services (MCFRS)	117
Civilians (Physicians, Engineers, Police, & Other Professionals)	37
District of Columbia Fire and Emergency Medical Service (DCFEMS)	4
Howard County Fire and Rescue Service (HCFRS)	13
Prince George's Fire/Emergency Medical Service Department (PGFEMS)	4
Frederick County Division of Fire & Rescue Services (FCDFRS)	2
Anne Arundel Fire Department (AAFD)	0



There has been a slight decline in the number of team members, but in 2023, Memorandum of Agreements were established with Anne Arundel County and Frederick County. Vacant positions were advertised to the newly engaged organizations and applications were submitted

in 2023. Two were added from Frederick County Division of Fire & Rescue Services. The ability to increase the number of members from participating agencies decreases the direct impact of manning on the Sponsoring Agency for local incidents when the team is activated or deployed federally.

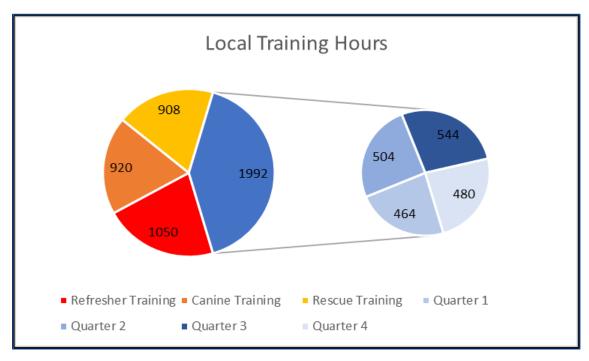
Applications for FY2022 Supplemental Funding and the FY2023 Cooperative Agreement (CA) were submitted and awarded by FEMA USAR. The FY2018 and FY2019 CAs were closed out. Due to extensions necessitated from travel restrictions and decreased training opportunities as a result of the COVID 19 Pandemic and the CA's three-year Period of Performance, funding remaining at the close of 2023 included the following CAs: FFY2020, FY2021, FY2022, and FY2023. Once the Notice of Funding Opportunity is released for FY2024, MD-TF1 will apply for the FY2023 Supplemental Award and the FY2024 CA.

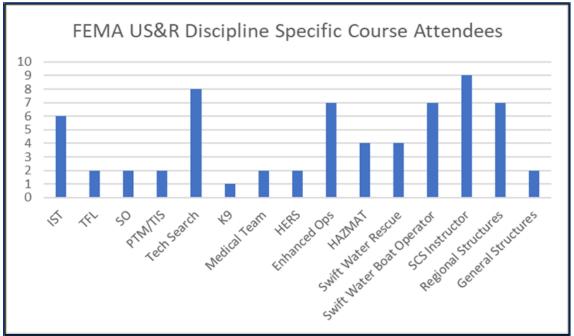
Using cooperative agreement funding, we were able to send our members to training opportunities and provide additional security for the team's rescue cache. Our members were able to attend crucial national training events to support our response capabilities to incidents both within our community and across the nation. On a local scale, Special Operations provided comprehensive training for sixteen Search Specialists and six Structural Collapse Specialists.

Additionally, MD-TF1 utilized funding to enhance security measures and reorganize the Dover Road warehouse layout, facilitating a more efficient and effective mobilization process for the team. The installation of security fencing and a gate has not only heightened security for personal motor vehicles during deployments but has also provided a secure storage area for our fleet trailers.

Five of our task force leaders underwent valuable FEMA-approved media training, equipping us to communicate our mission and capabilities to the public and stakeholders while meeting federal expectations and learning how to effectively direct interviews to ensure positive media coverage and garner public trust and support. Furthermore, MD-TF1 hosted an open house and exhibition at our warehouse for state and local government leaders, including the Maryland Department of Emergency Management, local politicians, state senators and representatives, and our participating agencies, showcasing our capabilities, strengthening communication channels, and aiming to improve response times during future alerts and activations. Positive feedback was received from attendees, indicating increased support for deployments and recruiting efforts, which is expected to persist in the following years. Notable attendees included leadership from participating agencies, the sponsoring agency, Maryland Department of Emergency Management, and other State and Federal representatives.

The task force provided 4,870 hours of training to its members, with sixty-three members receiving an additional 1,580 hours of discipline-specific courses. These training sessions enhance team members' knowledge of US&R operations and standards, serving as valuable professional development for first responders and other task force professionals. These training opportunities are funded through Cooperative Agreements, benefiting MCFRS, task force members, and the communities they serve.





Other notable actions in 2023 include the implementation of Standard Operating Procedure 23-01: CDL Drug and Alcohol Policy, ensuring adherence to U.S. Department of Transportation (DOT) regulations for pre-employment screenings, random testing, reasonable suspicion instances, and post-accident checks. This policy is applicable to all individuals involved in operating task force vehicles, providing driver training, or performing driving tasks related to vehicle maintenance and operations. Task Force Drivers are required to enroll in the DOT Clearinghouse and consent to random screenings, with a Drug Testing Rate of 50% and an

Alcohol Testing Rate of 10%. By the year's end, 36 drivers had registered and were in compliance with the policy.

# 3. PROGRAM AREA OUTPUT, OUTCOMES, & IMPACT

The MD-TF1 team remains fully deployable, as confirmed by its latest Self Evaluation. Despite causing personnel shortages during training, activations, and deployments, this program continues to serve as a crucial resource at the county, state, and federal levels. The team's search and rescue expertise and capabilities play a vital role in incident mitigation and outcomes, making it an essential asset for emergency response efforts.

The team was deployed five times to three incidents in 2023:

- Hawaii Wildfires, August 2023 IST, 2 x K9 and handler, & Type I: 73 members
- Tropical Cyclone Idalia (Orlando, FL), August/September 2023 Physician: 1 member
- Tropical Cyclone Lee (Portsmouth, NH), September 2023 IST: 1 member

In response to the challenging environmental conditions encountered in Hawaii, booties for all canines have been acquired to enhance personal protective equipment (PPE) measures and to effectively prevent paw pad injuries resulting from rugged terrain and extreme temperatures. These booties not only safeguard against hazards such as glass, sharp objects, and debris but also afford added grip in slippery conditions, ensuring the dogs' safety during deployments and training exercises. By prioritizing this investment in PPE, we aim to significantly reduce preventable injuries, mitigate emergency veterinary expenses, and uphold the effectiveness of our search and rescue operations.

# 4. INITIATIVES & OBJECTIVES

The Task Force is strategically planning to allocate resources for participation in national training opportunities and leadership meetings scheduled for 2024. These engagements are pivotal for advancing the team's expertise and proficiency in USAR operations. In addition, the team is slated to attend a Mobilization Exercise (MOBEX) in April 2024, facilitated by Virginia Task Force One; Pennsylvania Task Force One will also participate in this exercise. Furthermore, VA-TF1 and MD-TF1 are set to co-host a National Water Training in August 2024. These collaborative training sessions offer a unique opportunity for the task forces to collaborate and address real-life scenarios, fostering the application of best practices and the sharing of knowledge amongst members of the Response System.

The Task Force is currently preparing for its Annual Readiness Evaluation (ARE) conducted by FEMA. The team is committed to implementing any recommended changes from the ARE team and has already submitted the Self Evaluation. A new Self Evaluation Tool was created for 2024, although several discrepancies were identified while completing the new tool and the Administrative Team is diligently working to address and rectify these issues before the scheduled ARE in July.

Applications for the 2023 position vacancies have undergone thorough review, and all applicants have been notified regarding the interview process and the status of their candidacy. The interview process is currently in progress to secure new team members and to reallocate existing members into leadership positions due to resignations and retirements.

# PUBLIC SAFETY TRAINING ACADEMY

# 1. CRITERION & PROGRAM AREA

8B – Training and Competency

#### 2. PROGRAM AREA RESOURCES & INPUTS

#### Personnel

The Fire/Rescue Training Academy (PSTA) continues to operate on a model that includes a small complement of full-time staff that form a skeleton of operations around which the bulk of instruction is performed by personnel on either long-term details or overtime. This model is becoming increasingly problematic for several reasons, including continuity of message, impact of long-term details on operations, and an inflation of the overtime budget.

Current uniformed full-time employees of the training academy are:

- Assistant Chief (Chief Training Officer)
- Battalion chief (Deputy Training Officer, Command Competencies Coordinator)
- (4) captains (ALS Training Coordinator, BLS Training Coordinator, In-Service Training Coordinator, Recruit Training Coordinator)
- Lieutenants (Recruit Instructor, Driver Instructor Coordinator)
- Master Fire Fighters (Technical Services Coordinators)

Current non-uniformed full-time employees of the training academy are:

- Program Managers II (Training Course Coordinator)
- EMS Educator
- EMS Clinical Coordinator
- EMS Instructors
- Registrar
- Office Services Coordinator

In addition to these full-time employees, the training academy has relied on long-term details of personnel from operations, ad-hoc details from operations, and overtime hours to meet its staffing needs. In CY2023, the PSTA used 62,000 overtime hours at a total cost of 4.3 million dollars for direct instructor costs alone. This resource consumption does not account for overtime costs associated with backfilling operations to support the 17,300 hours of personnel details used by the PSTA during CY2023.

#### **Facilities**

The PSTA operates in a modern facility that opened in 2016 that we share with the Montgomery County Police. Despite the relatively new facilities, the limitations of the size of the building and facilities do pose some problems. The fire specific facilities, including classrooms and burn buildings are solely the purview of Fire/Rescue; however, certain portions of the facilities are shared, including locker rooms, gymnasium and weight room, and driving courses. The shared nature of the facility is not inherently problematic; however, Fire/Rescue is often faced with competing for shared space with other programs. This competition can lead to a need for creative scheduling and cooperation at a minimum, but also limits our maximum

capacity for recruit training. Overall, the facilities are modern, well maintained, and clean and meet the current needs of the training section. We are, however, approaching maximum capacity for student throughput based in part on available facilities.

The training section estimates that given current facilities, the absolute maximum number of recruits (new full time-employees going through a 6-month academy process) is 120. Weather plays a large role in the ability to move recruits through the academy. Current recruit training officers outline that they could have one class of 80 starting in January, that is, split into two sections of 40 recruits, one doing EMT while the other does firefighting. They could then switch and be done before the weather gets so hot that they cannot do outside activities. They would then start the second class of 40 recruits in June, doing EMT in the summer months and then firefighting in the fall when the weather cools off. The class of 80 would stretch facilities, including student lockers, physical training and classroom space, to the max. In fact, 80 recruits would exceed the number of available student lockers by 20, requiring some to be "borrowed" from the police.

Smart planning for the anticipated future training needs of the organization should begin now, given the 5-year capital improvement program schedule. If a throughput of more students or recruits will be required, given anticipated attrition or for required training of a younger workforce, either academy expansion or alternate learning sites may be necessary to meet the mission going forward.

# **Educational Accreditations**

The PSTA has maintained accreditations from both the Commission on Accreditation of Allied Health Education Programs and the Maryland Institute of Emergency Medical Services Systems since 2015.

# 3. PROGRAM AREA OUTPUT, OUTCOMES, & IMPACT

The PSTA offered 299 core courses in CY2023, with 32 being cancelled due to low-enrollment and 267 going through to completion. These accounted for 5235 student enrollments and 4460 student completions in these core classes. In addition to two full recruit classes (RC52 and RC53) and two concurrent high school cadet classes (EMS and Fire), the PSTA completed multiple sessions of the following courses:

- Aerial Apparatus Driver/Operator
- ALS Continuing Education Multiple forms and formats
- Boat Crew Member
- Boat Operator
- Class "A" Vehicle Operator
- Class "B" Vehicle Operator
- Conducting Safe Life Fire Evolutions
- Day of the Nozzleman
- EEO and More: What Officers Need to Know
- Emergency Medical Technician
- Emergency Vehicle Operators Course
- EMS Company Level OPS
- Emergency Medical Technician Initial Certification

- EMT Recertification Didactic and Skills
- Emergency Vehicle Operator Course
- Fire Fighter I
- Fire Fighter II
- Fire Officer I
- Fire Officer II
- Hazmat Materials Course (Hazmat OPS)
- Health and Safety Officer
- Incident Safety Officer
- Individual Perf. Planning & Appraisal
- Instructor I
- Instructor II
- ITLS
- MICRB: Skills Development for EMS
- PALS Provider and Recertification
- Professional Development for Certified Instructors
- Protective Envelope and Foam (PPE/SCBA)
- Pumps Operator Course
- Rescue Technician
- Strategies & Tactics
- Water Day SwiftWater Awareness

These core courses were in addition to other training responsibilities borne by the PSTA to include ad hoc training requested by station officers, remedial training and evaluation requested by EMIHS Operations and Quality Management, professional development for command officers, and training broadcasts via livestream to station officers and vehicle operators in the form of the "Challenges In the Streets" and "Wheelin' the Rig" programs.

The training academy is also responsible for initial testing and certification of apparatus driver/operators following their vehicle driver training. In CY2023, the driver's training office conducted 228 written exams in the following disciplines:

Engine	Aerial	Rescue	Brush Truck	Ambulance
68	45	10	25	80

They also administered 232 practical driver/operator examinations in the following disciplines:

Engine	Aerial	TDA	Rescue	Brush	Tanker	Amb
70	19	19	9	23	25	67

The PSTA continued the Acquired Structure Training (AST) program in CY2023 to develop and facilitate realistic training scenarios for Fire and EMS personnel, enhancing their ability to successfully mitigate various types of emergency events. This program focuses on the evolving dynamics of residential, commercial, and industrial fires, building construction, and their impact on strategies and tactics. The AST program ensures the ongoing development of personnel through high-quality, realistic training that adheres to important risk management principles and maintains the highest level of safety for personnel. MCFRS offers adaptable training options, from non-destructive exercises, such as advancing dry hose lines, search techniques, and EMS scenarios, to destructive training, such as forcible entry, fire attack methods (flowing water), and ventilation techniques (breaching/cutting). The program also extends to skill-based training for individual companies and Battalion-led training.

The PSTA was integral in supporting EMIHS operations in training all 400+ ALS clinicians in the use of new IV pumps and IV Nitroglycerin. The timeline for training and rollout was aggressive and the PSTA devoted a great deal of time and energy to make the deployment successful. Specifically, each individual ALS clinician was responsible for two pieces of PSTA developed, asynchronous content via our learning management system, then a one-hour in-person, hands-on session. This training was primarily conducted on-duty and regionally, which added to the complexity. PSTA staff also collaborated closely with EMIHS operations to produce supplemental materials including step-by step videos and cheat-sheets for clinician reference post-deployment.

## 4. INITIATIVES & OBJECTIVES

Staffing inefficiencies and instructor resilience are a major threat to the continuity of operations at the PSTA. The impact of long-term and ad hoc details from operations in the face of force-holds to maintain apparatus staffing is not sustainable. Equally unsustainable is the 4.3 million dollars in overtime costs for instructors and more than 17000 hours of details from operations.

Additionally, the way the section documents work when employees are detailed from operations is not exact. Records of work performed and section outputs exist in several different databases over multiple platforms. Some of these databases are ad-hoc spreadsheets that staff use to track their own productivity while others are more formal. Record keeping across the section must be improved so that data can be harvested into information regarding section performance.

Seeking alternative, cost-neutral or cost-saving staffing solutions is a high priority for CY2024 and into CY2025. Positions have been added to operations to increase the staffing factor in recent years, however, many of these positions have been consumed by details to the PSTA resulting in no net-reduction in field overtime hours.

The high school cadet program restarted in the fall of 2022 and continued through 2023. The long-term vision is to increase our ability to leverage our diverse community early in life to create a more diverse workforce. In its current iteration, the cadet program does provide exposure for high school juniors and seniors to the world of the fire department, and they have the ability to graduate high school with some core certifications, but we have only been able to capitalize on that exposure by shepherding cadets into full-time career employment in a handful of cases.

The long-term aspirational goal of the training academy is to transform the high school cadet program so that it provides exposure to the fire department to high school students, provides them with core certifications and skills that fulfill entry level requirements, and expedites their path through the recruitment process. Once hired, the goal would be to utilize their existing certifications and training to fulfill many of the requirements of recruit school, thereby providing return on investment to MCFRS.

These are aspirational goals that face difficult barriers and challenges. Not all pieces of these goals may be attainable due to regulations, laws, or other unforeseen impediments. The PSTA does have a goal though and we plan to iterate the cadet program closer to that goal over the next several years.

# EMERGENCY COMMUNICATIONS CENTER

# 1. CRITERION & PROGRAM AREA

9B - Communications

#### 2. PROGRAM AREA RESOURCES & INPUTS

The Montgomery County Police Department (MCPD) maintains control of the Public Safety Communications Center (PSCC). MCPD assumed all 911 call taking responsibility in February 2020 and has been diligently working towards consolidation of the center, to relieve MCFRS of dispatching responsibilities. For now, MCFRS maintains fire dispatch responsibilities, and full consolidation is not expected until 2025, due to recruitment challenges.

The MCFRS Emergency Communications Section is led by a Fire and Rescue Assistant Chief, with a direct support staff of one Fire and Rescue captain and two Fire and Rescue lieutenants, serving in professional standards and training positions. A dedicated CAD System manager is also employed by the MCFRS to maintain the Fire & Rescue portion of the CAD system. Daily minimum staffing is set at eight personnel. Each unformed FRS Dispatcher and Supervisor is trained on the P25 radio system, CAD, and VESTA phone system.

The MCPD has been training incumbent employees in Fire Dispatch since 2021. In 2023, they held six (6) Fire Dispatch classes with a total of 34 personnel; to date, nine (9) of those personnel have been credentialed as Fire Dispatchers. Between the MCPD dispatch classes, and the training of FRS personnel from the 2022 classes, much of the dispatching and operations talk groups were operated by trainees and preceptors. In December 2023, MCPD also held their first FRS Dispatch Supervisor class with four (4) personnel.

MCFRS credentialed a total of five (5) uniform personnel to function as Dispatchers/Operators. These personnel were part of the CY2022 FRS ECC Training class and completed the training process in 2023.

## 3. PROGRAM AREA OUTPUT, OUTCOMES, & IMPACT

The MCPD continues to have a high number of vacancies among the Public Safety Emergency Communications Specialists (PSECS), despite hiring 11 in 2023; of the 150 authorized positions, 64 are vacant (Council Staff Report, March 13, 2024). The average answer time in 2023 was 10 seconds.

In 2023, the MCFRS personnel dispatched 136,291 incidents, a 2.7% increase from 2022.

The phone to dispatch times countywide for the most serious call types, ALS2 and FFA, are shown below.

ALS2 & FFA Phone to Dispatch Times 2018-2023						
	2018	2019	2020	2021	2022	2023
ALS2	0:03:18	0:03:26	0:03:31	3:35:00	0:03:35	0:03:36
FFA	0:04:01	0:04:06	0:03:59	0:03:46	3:26:00	0:03:49

# 4. INITIATIVES & OBJECTIVES

- MCFRS and MCPD continue with the consolidation, despite hiring challenges of civilian Communications Specialists. MCFRS personnel are currently precepting four civilian supervisors who are being trained as FRS Dispatch Supervisors.
- In 2024, FRS anticipates running another Fire Dispatch Supervisor class for MCPD and will be announcing an FRS uniform class to start in early 2025. The FRS uniform dispatcher class will be used to fill vacancies created by transfers and promotions that occur before the consolidation.

# HEALTH & WELLNESS SECTION OCCUPATIONAL MEDICAL SERVICES

## 1. CRITERION & PROGRAM AREA

11 – Health and Safety

# 2. PROGRAM AREA RESOURCES & INPUTS

The primary mission of the Fire and Rescue Occupational Medical section is to provide health and wellness screening for the active members of MCFRS. Moving into 2024, the MCFRS leadership has acknowledged the necessary expansions for the program, and in the 2024 budget year added funding for COVID-19 inoculations and advocated for additional clinical staffing for 2 extra contract positions to increase appointment availability.

FROMS is staffed with one battalion chief and one captain to oversee the clinic, manage the MIDS Program (Medically Influenced Duty Program) with approximately 130 career firefighters, and to coordinate the contracted medical staff and Workman's Compensation Provider Company MCSIP and CorVel. One firefighter is assigned to the section on an overtime basis to manage repairs of physical fitness equipment, as well as service and replacement cycles. The FROMS BC is also technically in charge of the uniformed CISM Program Career Staff through the career captain in charge of the program, coordinated with the Mental Health staff psychologists and LCSW professional civilian staff.

In 2023, the MCFRS began to raise our standard for the Elevated Stress Test Cardiac testing to the recommended 12 METs level while capturing data on the number of personnel by age and status to show how the change could affect the membership. The Athletic Trainer has established a clinic at FS32 where 1 or 2 days a week she is meeting individuals with minor complaints to develop targeted therapy plans for the members to prevent worse aggravating injuries that have seen the number of injuries fall over the calendar year by roughly half over 2022. The AT is also doing station and shift rounds, working with the cadets, and assisting career and volunteer members with developing health and fitness plans.

Moving forward, we plan to address the need for predictive cancer screening with the advent of a provision in the IAFF Bargaining Agreement allowing for blood and ultrasound cancer screenings for career members reimbursement. This program will be managed by the IAFF Local- they do not want to allow FROMS to administer. In calendar year 2023, we have used ultrasound to identify nine (9) cases of thyroid cancers, and our union was one of the organizations that had Thyroid Cancer added to the Firefighter's Presumptive Cancers list in Maryland State Law.

It is the goal of the FROMS Section to test all IAFF Members (and secure funding for non-union and volunteer members) for blood and ultrasound tests for cancer in the next three calendar years.

The section head is also revising the Bloodborne and Infectious Disease plan for the department, which should be completed and ready for administrative review by July 1 of 2024, with a yearly review cycle set going forward.

## 3. PROGRAM AREA OUTPUT, OUTCOMES, & IMPACT

FROMS provided 888 appointments for general physical appointments of MCFRS career personnel, 60 support staff, and 610 appointments for follow up of injuries and return to work clearances. The section also accomplished approximately 1200 volunteer appointments and additional clearances for the volunteer staff. The examinations done at FROMS have uncovered at least 12 significant outcomes/cases for more advanced medical care. Record keeping and analysis was done of the membership to anticipate the increase in the EST requirement, which was significantly better than expected. The MCFRS also used over \$100,000 to replace and maintain exercise equipment in all of our worksites. In 2023, we attempted to do seasonal flu vaccinations in the stations, rotating the vaccine from different station to be delivered by MCFRS paramedics, but the results were lukewarm reception by the station personnel and a high number of vaccine doses that had to be wasted due to poor handling of the medication and refrigeration issues.

We have advocated for a FCGO to update our medical standards to the NFPA 1582 2022 standards from our current 2013 standard. MCFRS has ironed out our processes for bloodborne and respiratory exposures, and in 2024 we intend to meet with our local medical facilities to develop a standardized reporting method for reporting and treating members who are suspected of being exposed.

In 2023, the FROMS section processed the return of the High School Cadet class medical examinations (40) over the months of July and August and developed a process for scheduling and implemented a new scheduling process for volunteer members to self-sign up for available appointments.

# 4. INITIATIVES & OBJECTIVES

CY2024 will be a big year to develop a process for the beginning of blood and ultrasound testing programs through the IAFF local in which we will begin testing approximately 200 people by the end of 2024 and anticipate 400 per year in 2025 and 2026. We anticipate the volunteer members advocating for this test in the next budget cycle, so we will need to develop a flexible plan that can be expanded to cover a workforce that is primarily available on nights and weekends when the clinic is normally not open.

A request for additional funding for additional medical staff in the FY25 budget will be used to hire two full time medical assistants to increase the appointment capacity for FROMS to allow for more examination to cut the delay/backlogs in recruit and incumbent physicals, and to assist in delivery of Flu and COVID vaccination clinics was cut from the proposed budget at the council level, which we will again repeat in the next year budget request. Funding has also been approved for 2024 and 2025 COVID vaccinations, which will be delivered by FROMS, and outreach clinics set up in coordination with MCFRS Operations and Logistics to ensure wide availability for vaccinations against viral threats to the workplace.

In the next budget process, we anticipate asking for additional staff to manage the approximately 130 Medically Influenced Duty Staff, to keep up on personnel both off the floor due to injuries and on light duty, as well as review and align our internal policies for leave and

follow up with the Workman's Compensation Insurance provider CorVel to ensure that personnel are in the proper status.

We are developing a plan for additional AT Clinics at different major commuter friendly sites (East County and North County) to increase the availability and convenience of appointments for the minor injury clinics and individual fitness assessments.

The implementation of the newer 2022 NFPA physical fitness standard will need to be reviewed, as well as the possible NIOSH changes dealing with mental health screening and beefing up our ability to provide mental health wellness through the various resources within MCFRS, County government, and the community.

# HEALTH & WELLNESS SECTION MENTAL HEALTH

#### 1. CRITERION & PROGRAM AREA

11 – Health and Safety

# 2. PROGRAM AREA RESOURCES & INPUTS

The Mental Wellness Program (MWP) consists of three fulltime employees (Staff Psychologist, Staff Therapist, Administrative Aide) and one part-time employee (Staff Therapist). FRS added the administrative aide and part-time staff therapist in 2023, following recommendations from OLO Report 2022-4.

The team also moved into the new mental wellness suite to consolidate office space for therapeutic services and created new ways for people to request different types of services – including requesting assistance from outside providers. The addition of new staff and other improvements has greatly impacted the availability and accessibility of mental wellness services to members of the department and their families.

In addition, the department added eight new PS-CISM team members in 2023 to the existing team of 38, began holding hybrid quarterly PS-CISM meetings, and created a bi-monthly newsletter that discusses different mental wellness topics or other mental health issues related to first responders.

# 3. PROGRAM AREA OUTPUT, OUTCOMES, & IMPACT

In 2023, the MWP had 116 new service requests for individual, couples, or family counseling. The additional staff added in mid-2023 helped the team increase the number of contacts. The team also facilitated training for the recruit classes and COLA class and will continue to facilitate training in 2024.

The PS-CISM team provided contact for over 146 different incidents 2023. This number is an underestimate of the services offered by the PS-CISM team, as there may be some instances that were missed in documentation or from less formal interventions. The proactive approach appears to be making a positive impact on the reception of PS-CISM overall in the department.

## 4. INITIATIVES & OBJECTIVES

In early 2024, the MWP added the full-time position of Psychologist Supervisor, which created an opening for the Staff Psychologist position. The MWP anticipates the Staff Psychologist position to be filled in FY25, which will bring the MWP complement to four full-time employees and one part-time employee. The MWP will also be considering a request for an additional full-time psychologist to assist with continuously new service requests and to facilitate trainings for the department on various mental wellness issues.

The MWP also intends to begin hosting group support sessions at the mental wellness suite in 2024. The MWP is also looking to make changes in the outreach made by our PS-CISM team

by creating sub-teams that will allow for targeted outreach to recruits, rookies, members facing retirement, and those who are injured/light duty/off duty, as well as department-wide education on available county services. The MWP will also be considering a request for an additional full-time psychologist to assist with continuously new service requests and to facilitate trainings for the department on various mental wellness issues.

Additionally, the MWP is working to request permission to use a third-party software to manage electronic medical records, which is a common practice in the mental health community. Another objective for 2024 is to switch software and improve the functioning of the PS-CISM hotline to reduce the risk of outages or missed calls.

# **SAFETY & SUPPLY SECTION**

# 1. CRITERION & PROGRAM AREA

11 – Health and Safety

## 2. PROGRAM AREA RESOURCES & INPUTS

Operational safety for MCFRS is overseen by the Safety Office, operating under the Safety and Supply section. While the unit does not have a formalized mission statement per se, its focus is solely on operational risk management, with the objective of reducing risk to the lowest achievable level.

Of interest, the technical rescue and hazmat teams maintain domain specific incident safety officers specifically for their operations. The County Safety Officer typically operates as the incident scene safety officer.

The position of Safety700 is staffed 24 hours a day and is considered part of our minimum daily staffing. The Safety Office is staffed by three shift work captains, who work a 24/48 shift schedule. There are multiple "backup" safety officers at the rank of captain, battalion chief, and assistant chief, who can contribute to filling staffing vacancies. There is also one captain who spends 24 hours/week filling overtime spots in field operations and 24 hours each Friday as the relief Safety Officer.

The safety office functions out of MCFRS fire station 32 (Travilah). They have office space in the fire station and their response vehicle has a dedicated bay. The Section Chief has office space co-located with the apparatus and logistics warehouse.

Safety officers operating as the primary County Safety Officer from their normal vehicle have access to multiple types of specialized equipment, including a WSAD (a device used to warn of energized tracks in the Metrorail System), a specialized gas meter that has photo-ionization detector capability (this technology is otherwise limited to battalion chiefs and Hazardous Materials team members), and a thermal imaging camera. The Safety Officers are also the first line of effort for investigating reports of mold in the workplace and for treating transport units exposed to bedbugs.

The purpose of the Safety Office is primarily to ensure compliance with extant rules. Safety officers are expected to be intimate with the full range of operational and administrative policies, so they are able to point out and correct deviations from normal behavior. On the administrative side, the Safety and Logistics Section Chief is responsible for two key areas: (1) The collision review board, where the Section Chief works with representatives from the County Risk Management and Labor officials to adjudicate post-collision outcomes and (2) the Joint Health and Safety Committee, another group composed of members from management and labor. This group is charged with developing a joint approach to safety and authorizing the use of new types of equipment.

# **Guiding Documents**

- Novel Hazard Briefing
- Infection Control and Hazard Mitigation
- Air Monitoring Devices
- Emergency Vehicle Driving
- Critical Illness and Injury
- CAGS: EMS Duty Officer & Safety Officer
- Vehicle Accident Review
- Injury Investigation Procedures
- Respiratory Protection Policy

# 3. PROGRAM AREA OUTPUT, OUTCOMES, & IMPACT

In 2023, MCFRS completed its first appraisal for category 11, Health & Safety. However, one of the recommendations that came from the 2023 onsite assessment was to ensure we were addressing safety in the appraisal. MCFRS' organizational structure is such that we decided to have the Safety Office prepare a safety appraisal separate from the health appraisals (FROMS, Mental Health). Thus, this is the first time the Safety Office has prepared an assessment of this nature, and the process has highlighted some deficiencies in data collection/recording and analysis that we must address in order to fully realize continuous improvement in this area.

The following accomplishments from 2023 are indicative of the department's commitment to employee health and safety:

- The Joint Health and Safety Committee reviewed four new pieces of equipment:
  - o Floor below nozzles for highrise fires
  - Smoke curtains for highrise fires
  - o Knock out curtains to address the issue of wind impacted fires
  - o Suppression blankets for battery electric vehicle fires
- Conducted wear trials for PFAS-free alternatives to standard turn-out gear.
- The creation of a quarterly Safety Report (sample), distributed to the entire workforce.
- Trained multiple Safety Officers to identify and classify mold growth.

#### 4. INITIATIVES & OBJECTIVES

Recently, the Section Chief, division chief, and other team members met to discuss codifying the FY25 work plan. In addition to the quarterly dashboard that highlights injuries, collisions, and losses, the Safety Office is working to develop section-level objectives on a fiscal year schedule and improve performance measures.

## FY25 Objectives for the Safety Office

- Establish automated tracking for each performance measure, reducing reliance on hand tabulation.
- Deliver at least one educational program, per safety officer each quarter (this could be as varied as an email, or a lecture for continuing education, or a kitchen table talk.)
- Work in conjunction with FROMS to monitor progress on PFAS alternatives.
- Fully explore and characterize the data around apparatus collisions.

The agreed upon performance measures are as follows:

- Number of risk management reports completed
- Total collision dollar loss
- Number of safety infractions noted

These measures are new for FY25 and are the first time that the Safety Office will be operating with established performance measures. It is important to note that the performance measures were designed to align with the FRS Master Plan strategy of "can notice." By tracking trends in these areas, we can more readily identify trends and better assess our safety programs.

In the ongoing quest to reduce vulnerabilities and improve wellbeing, the Safety Office will continue to work with FROMS' new risk manager to prevent occupational injuries through training, and the PSTA to provide driver's training, education, and awareness to reduce collisions across the organization.