



CITY OF MADISON
FIRE
DEPARTMENT



ANNUAL REPORT
2018



FIRE



EMS



EDUCATION
& PREVENTION

FIRE ADMINISTRATION
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A MESSAGE FROM FIRE CHIEF STEVEN A. DAVIS



Welcome to the City of Madison Fire Department 2018 Annual Report.

The City of Madison Fire Department had a very exciting year providing high quality service to the residents and visitors of the city. Every member of this diverse organization worked tirelessly to ensure that all residents and visitors remained as safe as possible throughout extreme weather and environmental challenges. The flooding events that the city endured in the month of August really showcased the dedication of our members. The various agencies of the City of Madison were able to handle any issue that was in front of them, and the Fire Department was no exception. Over the lengthy period of flooding, the department

responded to many situations that held immediate threat to life and property, and as usual, the MFD handled each incident with a high level of safety and professionalism.

On April 1st the department suffered a tremendous loss when one of our active members died suddenly. Firefighter/Paramedic Richard Garner Jr. had finished a 48-hour shift and was in Mount Pleasant, Wisconsin enjoying the Easter holiday with friends when he died of a sudden cardiac arrest. His untimely death was a Line of Duty Death (LODD) because it occurred within 24 hours of going off-duty. The department honored FF/PM Garner with a memorial service held at the Fieldhouse on the UW campus. The department will be healing from the loss of our brother for many years.

The MFD implemented a Peer Support program in May of 2018. The team is one of the accomplishments of which I am most proud since becoming your Fire Chief. The team consists of a group of current active members and some retirees. Their charter in the organization is to provide another formal outlet to support the mental health of our responders. I am happy to announce that the team has been very active to ensure that our responders stay as fit for duty as they can.

In December the department opened Fire Station 14 at 3201 Dairy Drive on the city's southeast side. The station opened with a Paramedic Engine that can provide advanced life support skills as well as fire protection to residents. This is the first station to open since Fire Station 13 in 2014.

I am reminded daily of the great service the Madison Fire Department provides to this community. I am proud of the work we do and am thankful for support we receive from our citizens and city leaders. I want to thank everyone who helped make 2018 a safe and successful year!

I hope you enjoy the pages that follow, which will give you a small glimpse of the activities and people that make up the City of Madison Fire Department.

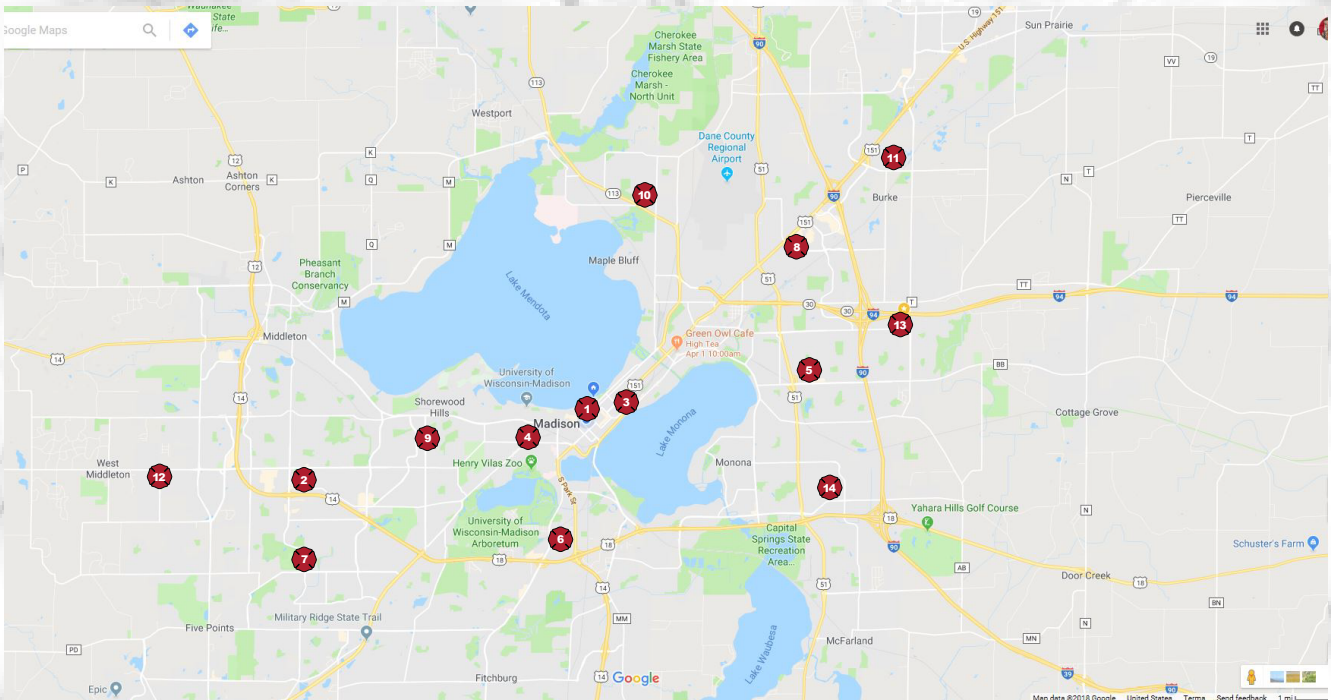
WHO WE ARE



City of
**Madison Fire
Department
2019**



FIRE STATIONS (hover mouse over station to see address).





WHO WE ARE

Commissioned Employees

Actual
Occupied
Positions*

Title

Chief	1
Assistant Chief	4
Division Chief	6
Captain	5
Lieutenant	61
Apparatus Engineer II (Chief's Aides)	3
Apparatus Engineer	64
Firefighter/Paramedic II	22
Firefighter/Paramedic	63
Firefighter	164

Non-Commissioned Employees

Actual
Occupied
Positions*

Title

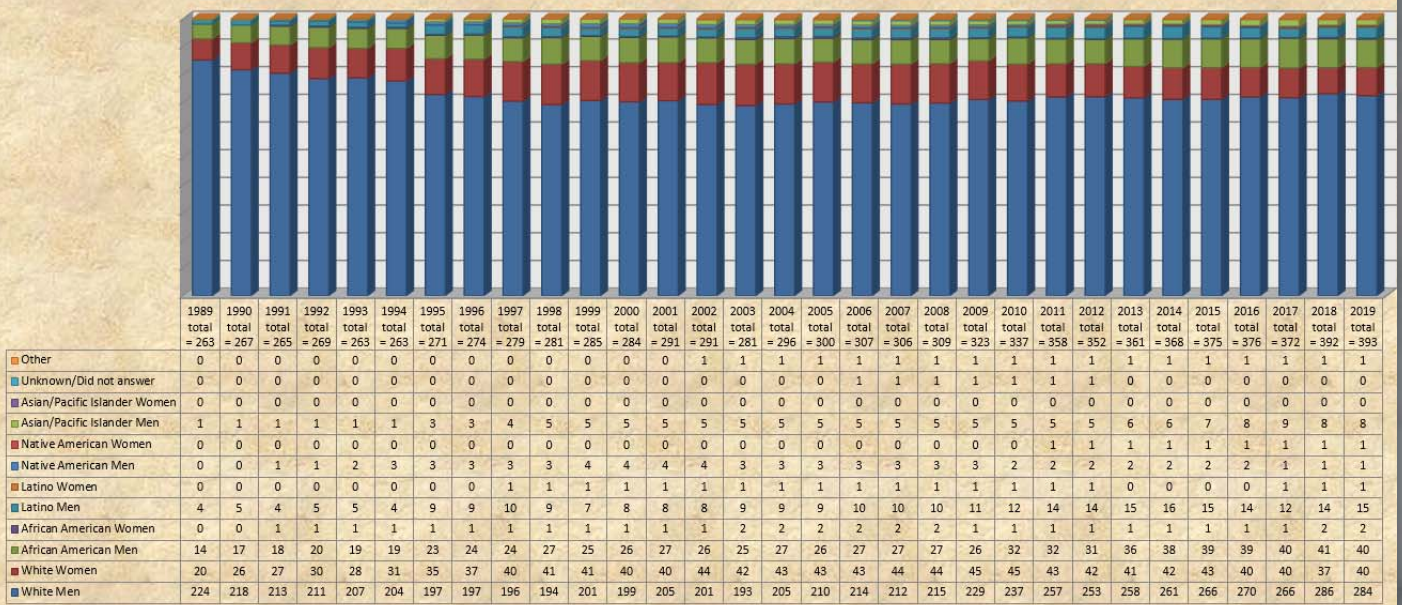
Administrative Services Manager	1
Administrative Assistant	1
Account Tech	1
Administrative Clerk	4
Clerk Typist	1
Fire Code Enforcement Officer	10
Community Paramedic	1
Elevator Code Enforcement Officer	3
Fire Education Enforcement Officer	1
Fire Marshal	1
Fire Protection Engineer	1
Management Information Specialist	1
Public Information Officer	1

Total Commissioned: 393

Total Non-Commissioned: 27

**as of February 28, 2019*

City of Madison Fire Department
Total Number of Firefighters Employed as of January 1st of Each Year

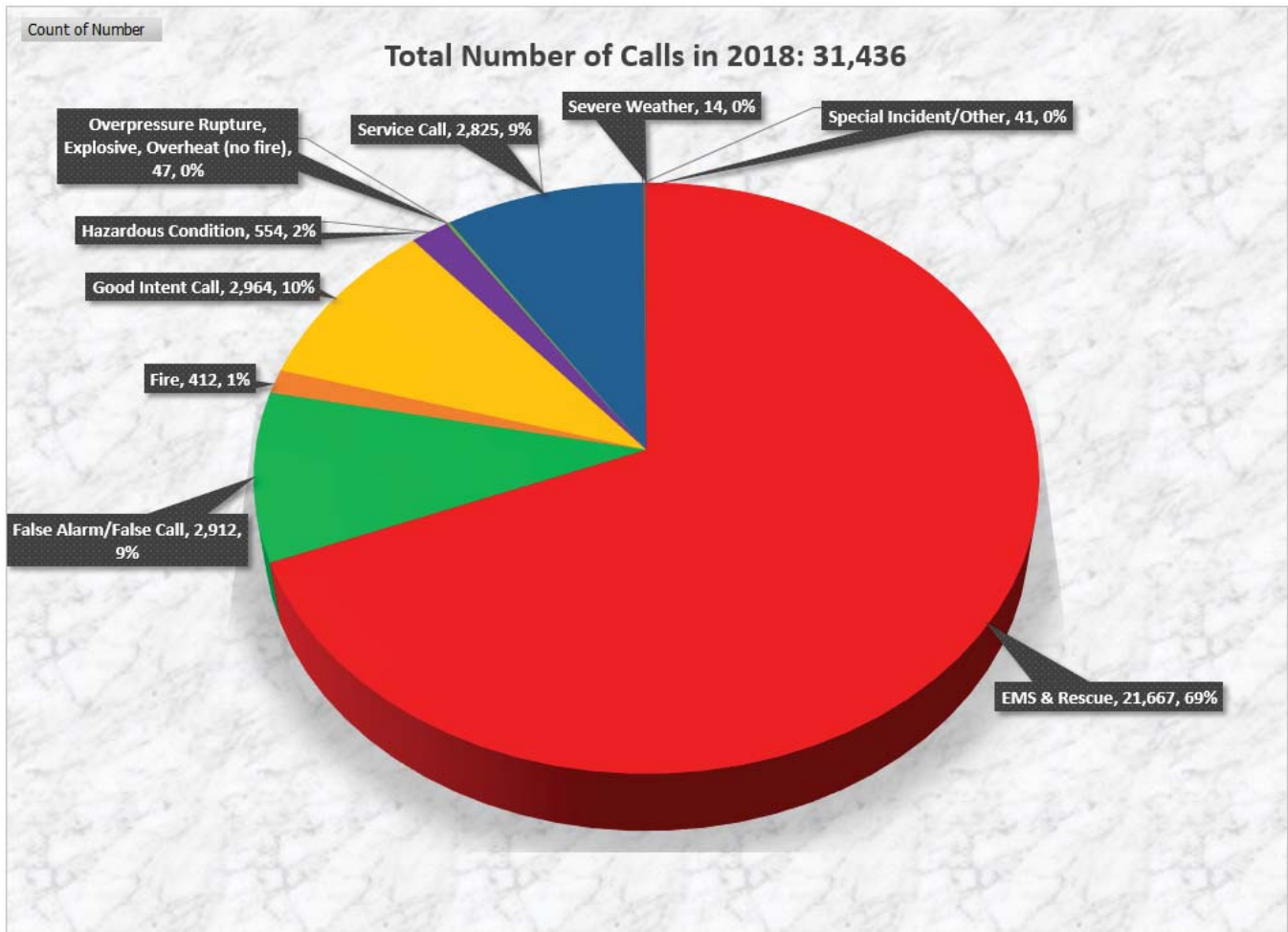




SERVICES PROVIDED

The Madison Fire Department (MFD) operates out of 14 Fire Stations throughout the City of Madison with a staffing level of 86 on duty each day. There are 12 Engine companies, 5 Ladder companies, 8 Paramedic units, and 1 Command vehicle in service every day to serve the citizens and visitors to the City of Madison.

In 2018, MFD responded to 31,436 calls for service. The largest single type of call, by far, was for Emergency Medical Services (EMS) & Rescue, accounting for 69% of call volume with 21,667 calls.





OPERATIONS

Emergency Responses

The Madison Fire Department continues its push to reduce response times to emergencies. The MFD, with the additions of priority dispatching in recent years for fire, emergency medical services, and other emergencies, continues in its plan to reduce overall response times. The addition of a new station in the Southeast portion of the city will help us to continue in this critically important endeavor. This will allow the MFD to improve the ability to save lives and property in the City of Madison.

Fire Station 14

Station #14 opened its doors and began responding to emergencies in December 2018. The new station, located on the corner of Femrite Drive and Dairy Drive, will serve the Southeast corner of the City of Madison and parts of Blooming Grove as its “first in” territory, an area which is currently served by a combination of stations. The two primary stations that used to serve the territory were Station #5 on Cottage Grove Road and Station #6 located on Badger Road near Park Street. Both of these stations had difficult responses to this area, due to the distance from the area and the extremely heavy traffic going to this area of the city.



The station is currently staffed with an Engine company consisting of four personnel, which includes a paramedic at all times, making it the city’s only full-time paramedic engine. The Engine Company is primarily financed by a SAFER grant (Staffing for Adequate Fire and Emergency Response), which the MFD applied for and received in 2017. The grant will pay for the bulk of the salaries for the staffing of this Engine for the first 3 years. The facility also includes a large Community/Training room, which will be available to both the City and private organizations for meetings and departmental training sessions. The site will continue to be developed for ongoing incumbent training and for the training of new recruits for the MFD.

Cancer Prevention

The MFD established a committee to research and present recommendations for the MFD to assist in cancer prevention in the Fire Department, which continues to meet and compile recommendations. The committee has been and will continue to be in constant communication with the department’s administration. This communication has helped establish specific protocols to assist in the cancer prevention initiative, to set priorities for equipment to assist in this and for equipment to

continued...



OPERATIONS

...continued

achieve the committee's goals of reduction in the incidence of cancer as well as increased early detection of cancer in its members. The committee also provides the Fire Department with budgetary recommendations and priorities to assist in budget requests in the City as they relate to cancer preventative personal protection and equipment.



One cancer prevention initiative is this infrared sauna, complete with stationary bike, designed to help firefighters sweat out dangerous carcinogens after a call.

Telestaff (Personnel Scheduling)

MFD continued the implementation of the new scheduling platform that consolidates and improves the accuracy and efficiency of staffing in the Fire Department. The program includes daily staffing, vacation selections, overtime staffing, and emergency callback among other functions. The system continues to grow and increase efficiencies for the MFD.

Target Solutions

Madison Fire Departments has implemented a new web-based training platform. The site is the new source for much of the daily EMS and Fire studies and provides access to many other essential bulletins, guidelines and policies that are important to the department. Equipment check-offs are another one of the duties that the system has made more accurate, efficient and easy to track. That and many other functions are made much easier for the department to accomplish its missions.

Flooding

The Madison Fire Department responded to a large number of calls for assistance in the summer of 2018 due to the unprecedented flooding in Madison and the surrounding areas. Plans were developed to mitigate the impact of flooding in the city and to pre-plan for potential catastrophic flooding in downtown Madison. Along with planning for responses to flooding in the City of Madison, emergency response and evacuation plans were created for potential downtown flooding that could occur due to catastrophic failure of the Tenney Dam.



SUPPORT SERVICES

2018 Accomplishments

Working with members of the apparatus committee, which has representatives from fire administration, Fire Fighters Local 311, and City Feet Services, the MFD purchased several new vehicles. Committee members always spend many hours reviewing past specifications, making changes and updates as needed to new vehicles. Members also travel to the assembly plants to inspect apparatus as they are being built.

Medic units at Fire Stations 7 and 8 were both replaced with a new model of ambulance. The Demers ambulance is highly rated for patient and paramedic safety. The new rigs have an anti-idle feature for more efficient fuel usage and adjustable liquid shocks for patient/ paramedic comfort.

Ladder 7 at Fire Station #7 on McKenna Blvd was replaced with a Pierce 2018 100' tower ladder with a 1500 GPM fire pump.



New Fire Station #14 also needed a **fire engine** and it received a Pierce 2018 Quantum. As one of the four members assigned to the engine is a paramedic, it is also equipped with advanced life support equipment and medications along with the full complement of firefighting tools.



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SUPPORT SERVICES

...continued

We also replaced **Fire engines at Stations 8 and 10**, adding safer and more efficient vehicles on the north and east side of Madison



Squad 9 at Station 9 on Midvale Blvd. was in need of replacement but in a cost-saving effort the department elected to have it remounted, which provides a new cab and chassis, but has the existing box reconditioned and remounted on the new chassis. This measure saved over \$200,000 from purchasing a fully new squad.

Current Vehicles assigned to each of the 14 fire stations:

12 Front line fire engines and 4 reserve engines

- 5 Front line ladder trucks and 3 reserve ladders
(Reserve engine and ladders have several functions, which include being put in service for large events, when service or breakdowns occur, and for providing training for current and new firefighters.)
- 8 Front line advanced life support ambulances and 6 reserve ambulances
(Reserve ambulances are needed to assist in staffing an increased number of special events in the city, tactical emergency medical services incidents, and ongoing training, leaving front line rigs available for service.)
- 2 Squads, which carry specially-designed tools and equipment for specialized rescue efforts, which include firefighting breathing air and lighting for operations after dark.
- Several trailers and supplemental vehicles, which include 2 SCUBA equipped boats, several hazardous materials vehicles, and Heavy Urban Rescue Team (HURT) equipment.

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SUPPORT SERVICES

Fire Station #10 at 1517 Troy Drive underwent several upgrades, including removal and installation of **new storefront windows**. The new windows were approved by the city Urban Design Commission and offer superior insulation value.



Station 10 also had the three existing **bathrooms remodeled** and designed into four, making showers and facilities more functional and usable for all employees. Several areas in the station were also mitigated of existing asbestos. At **Fire Station #6** on Badger Road the city **added a sidewalk** on the west side of the property, on Perry Street to enable students a safer route to the new Madison College south campus. **Fire Station #3** on Williamson Street received several **heating and electrical upgrades** along with **new concrete** along the side and rear of the station. **New fencing** was added to offer a barrier of privacy for several neighbors to the rear of the station. **Automated dispatching** was added to **Station 3** to enable faster and more consistent call information being sent to the firefighters. **Fire Station #7** on McKenna Blvd had **all carpet removed and replaced** with a more easily cleaned rubber flooring product. Employees noticed an improved environment which virtually eliminates the development of mold.

The MFD in cooperation with Fire Fighters Local 311 has an **Accident Review Committee** that meets each quarter to review any accident or incident involving city property. The group looks at the incident/accident report submitted by the involved employee and/or the law enforcement focusing on skill improvement. An employee often then works on a skill improvement plan with their supervisor to improve driving proficiency and lessen the likelihood of repeat incidents. Overall the eight ambulances are involved in more vehicular accidents compared to the fire engines and ladder trucks.

2019 Goals

- In 2019 the MFD will continue to replace older apparatus and maintain the condition of the 14 fire stations and Fire Administration.
- As part of the firefighter cancer prevention program the MFD is committed to installing additional fire gear washers and dryers and several detoxification saunas in 2019.
- Of the 14 stations, 7 currently have automated dispatch and in 2019, 2-3 more stations will be retrofitted with this system.



FIELD OPERATIONS

Hazardous Materials Incident Team (HIT):

The City of Madison Hazardous Incident Team is comprised of 57 members who can respond to any hazardous material emergency that affects life safety, property, and/or environmental conservation. HIT is designated as a Level II team with the State of Wisconsin Regional Hazardous Materials Response Team, which means we are responsible for responding to nine counties at the request of local authorities. The City of Madison Hazardous Incident Team is located at Fire Station 7 on McKenna Boulevard.

These individuals train each week on all types of hazardous scenarios: material spills, chemical leaks or releases, radiological



emergencies, and unknown substances/odors.



A Sampling of HIT Responses from 2018:

Timberlake Trail: Chemical Odor. While investigating, HIT determined this was some sort of makeshift lab with a large amount of chemicals being stored throughout the apartment. HIT set up monitors throughout the apartment

building to monitor for toxic gases. HIT contacted Madison Police Department and Department of Criminal Investigation (DCI), US Army 54th Civil Support Team (CST) to assist in identifying what type of lab this was. After two days of investigating it was determined that the occupant was operating a makeshift chemical lab, which included making explosives.

Sherman Avenue: An apartment, which had been raided earlier in the day, had a release of **heroin and fentanyl**, and three officers were treated for exposure. HIT as well as the CST 54th responded and set up a decontamination station for the DCI agents who made entry and performed evidence collection.

Leland Dr: HIT responded to a police standoff. An individual dumped an **unknown chemical** onto another individual during a domestic disturbance. One patient was decontaminated by MFD ambulance crew and immediately transported. Soon after, MPD made entry and brought out the individual who had been holed up in their apartment. This individual had chemical burns from the earlier incident and was immediately decontaminated by HIT and transported to hospital. HIT made entry to apartment building, ventilated the structure, and monitored the structure for any toxic gases. Once the building was rendered safe, occupants returned to their apartments.



FIELD OPERATIONS

Lake Rescue:

Since Madison's large and plentiful lakes offer outdoor recreation year-round, we need to be trained in every water rescue contingency, from swimmers and boaters in summer to people falling through the ice in winter.

Each year the Lake Rescue Team trains on topside, underwater, ice rescues, recoveries, vehicle recovery, and assistance calls from the City of Madison Police Department, Dane County Sheriff's Office, and local fire departments.



Above: The MFD's rescue boat, the Ralph E Chamberlin II. Left: Preparing for ice dive training.

57 Rescue Divers staff the City of Madison Lake Rescue Team with a minimum of 5 Rescue Divers each day ready to respond at a moment's notice. The Lake Rescue Team is based out of Fire Station #1 located on E. Dayton Street. To become a member of the Lake Rescue Team an individual has to complete hundreds of hours of training, including 32 rescue dives.

2018 Historic Flooding: Lake Rescue's Biggest Challenge

On August 20th The City of Madison experienced torrential rain that resulted in a fatality and set records across Dane County, totalling over 12" of rain overnight. The City of Madison Fire Department rescued hundreds of people from flooded vehicles, homes, and apartments across the city. On this night the Lake Rescue team performed some of the most harrowing and technically challenging rescues since the team's inception. The team typically consists of eight members who respond to an incident; however, on this night with the large number of water rescues, the team split in half. One Lieutenant and three rescue divers responded to individuals who were in the most immediate danger who could be accessed from dry land: this team was Lake Rescue 1. The other four members, Lake Rescue 2, responded to those incidents that required access by the team's small rescue boat.



FIELD OPERATIONS

Historic Flooding, continued...

Lake Rescue 1 responded to Deming Way for a person trapped inside vehicle with rushing and quickly rising water. As LR1 arrived on scene, the water was at the bottom of the vehicle's door. LR1 established a safe area and set up a swift water rope rescue system. Within minutes, LR1 made patient contact; water had risen to the vehicle windows. The team removed the individual from vehicle and assisted them to the established safe area. During this rescue, water speed was estimated at 15 mph; within minutes of rescue, the vehicle was washed off the road into a spillway.

Assisting Mt Horeb Fire on County Road PD, LR2 arrived on scene to find one occupant trapped in vehicle with rushing water up to the individual's neck. LR2 secured a rope to a guardrail and lowered their rescue boat approximately 50 feet to the vehicle downstream using the swift water current. LR2 and Dane County Sheriff's Officers arrived at the car with their boats. LR2 and the Sheriff's Officers pried open the molding around the car's sunroof, which allowed for the individual to squeeze out and to be subsequently assisted into the LR2 boat. Within minutes, vehicle was completely submerged.

Chapel Hill RD – Three people were in a vehicle that had washed off the road. Two occupants escaped and the third, who was washed into the spillway, was unaccounted for. LR1 and LR2 responded, established a safe area, developed an incident action plan, and began rescue efforts. A flooded area of roughly half a square mile was searched by boat and on foot. Despite continued rain and rising water, rescue efforts continued throughout the night. The next morning, MFD lake rescue personnel recovered the victim's body a half mile downstream from where they initially entered the spillway. Total efforts exceeded 10 continuous hours for this search and recovery operation and 16 hours total throughout the course of the flooding event.

HURT: The Heavy Urban Rescue Team

The Heavy Urban Rescue Team (HURT) is a specialized rescue team of 57 dedicated firefighters ready to respond 365 days a year. HURT, based at Fire Station #8 on Lien Rd., specializes in five primary rescue disciplines: trench rescue, building collapse, high/low angle rescue, confined space rescue, and grain bin rescue. Each year the team heads up to the Regional Emergency All-Climate Training Center located at Volk Field and participates in two days of training. This year the training focused on breaching concrete and cutting metal in simulated rescue situations.





FIELD OPERATIONS

2018 HURT Highlights

A **worker became trapped** inside a large boiler while performing inspections when their personal lowering system failed. The team set up rope anchors and a patient lowering system inside the boiler, which was multiple stories tall. One team member made entry into the boiler and secured the stranded worker in a rescue harness. Then the team lowered the worker to the base of the boiler and exited the confined space safely.

HURT was called by MFD Fire Investigation Division to **shore up a structure** that had sustained major fire damage. The fire investigators needed to access a portion of the building which was unstable. HURT set up T shore supports throughout the structure to stabilize the area, which allowed the investigators to safely investigate the fire.

The HURT Team assisted the Sun Prairie Fire Department after an **explosion** in July, which killed an SPFD Fire Captain, injured another firefighter, and caused widespread damage in the heart of downtown Sun Prairie. HURT helped with searching and clearing many heavily damaged structures, during which time two dogs were rescued. The team then established safe zones around the damaged buildings for future operations.

Car vs. House. An unresponsive driver slammed into the rear of a house. After the driver was rescued, treated, and transported, HURT responded and used wood shoring to stabilize the rear wall and trusses of the structure. This allowed for homeowner to safely access the home and start the rebuilding process.

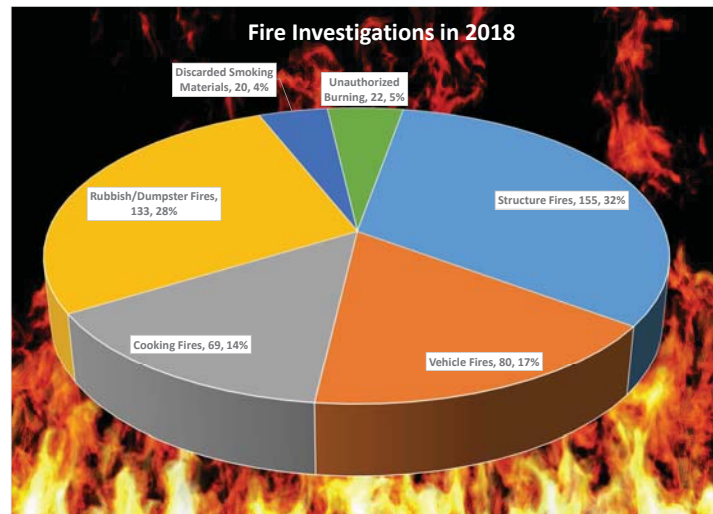
Right: HURT training at the Kohl Center. HURT members have over 300 hours of advanced training in technical rescue disciplines, including trench rescue, building collapse, high/low angle rescue, confined space rescue, and grain bin rescue.





FIRE INVESTIGATION

The Fire Investigation Division (FID) is responsible for investigating and determining the origin, cause and circumstances of structure fires, vehicle fires, suspicious fires, outside vegetation fires, rubbish fires, and fires with no identifiable origin and cause. In 2018, FID was involved in the investigation of 155 structure fires, 80 vehicle fires, 69 cooking fires, 133 rubbish/dumpster fires, 20 discarded smoking material fires and 22 unauthorized burning incidents. Smoking and unattended cooking-related fires were responsible for multiple incidents in 2018 resulting in millions of dollars in fire loss. FID along with the MFD Public Information Office (PIO) shared information on how to reduce or eliminate these fires. Chief Davis also released a public safety announcement on the importance of closing doors and not leaving cooking food unattended. Other FID responsibilities include conducting follow-up investigations, pre-employment background investigations, delivering training to the field, as well as remaining current with certifications related to fire investigations.



Follow-Up Investigations/Actions

During 2018, FID investigators conducted hundreds of follow-up investigations regarding minor fire calls or other calls for service. The goal of follow-ups is to review the report completed by the lieutenant in the field, make contact with the community member(s) involved, and offer assistance when needed. Using a problem solving model, efforts are undertaken to educate the involved parties about future preventative efforts they can take to minimize the chances that such an event will occur again. Although prevention and risk reduction are the focus of these follow-up visits, this public outreach is also meant to send a message to the community that the Department, through the efforts of FID investigators, is a partner in their recovery as well as their overall safety.

Reviewing old case files is also the responsibility of FID. In 2018 investigators concluded a "cold" case investigation from 2003, where a fire resulted in a death. This investigation was performed in conjunction with MPD and included countless hours of case review and the re-interviewing of multiple witnesses. Additional information was discovered during this review but the adjudication of the case was not changed and the case was closed.

continued...



FIRE INVESTIGATION

Significant Criminal Cases

Arson criminal investigations continue to be a significant focus of FID. The close working relationship FID investigators have with the Madison Police Department (MPD), Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF), Department of Criminal Investigations (DCI), Wisconsin State Crime Laboratory, UW Police Department, Dane County Medical Examiner's Office and the District Attorney's Office is critical in bringing arsonists to justice.

During 2018, FID investigators were involved in multiple criminal arson investigations which led to arrests and convictions in several cases.

One case from 2017 came to a close in 2018 when an individual was convicted of first degree intentional homicide and sent to prison for the remainder of his life for murdering his wife and attempting to cover up the murder by blowing their house up. This complex investigation extended for six days and included many agencies that operated under the unified command structure. It was only through the investigative diligence, teamwork, expertise and professionalism of MFD/MPD Fire Arson Investigation Task Force, and the ever-present support, tireless efforts and knowledge of personnel assigned to other agencies that this individual was brought to justice.

Also in early 2018, an individual intentionally dispensed a flammable liquid and ignited it, causing a vehicle fire, which extended to another vehicle. Observant MFD/MPD investigators not only completed a scene exam and a number of interviews, but were able to locate video surveillance footage showing this individual igniting the liquid and vehicle. This individual was identified through Madison Area Crime Stoppers and charged with two counts of arson among numerous other charges. This suspect later pled guilty to arson and multiple other charges.

In a similar case, a homeowner stated that somebody purposely set his truck on fire, which caused an adjacent vehicle to also become involved. Fire crews extinguished the fire, preserved the scene and contacted investigators due to the suspicious nature of this fire. Through methodical work with MPD investigators, the individual responsible for the fire was located, charged, and convicted of one count of arson.

Another case involved an individual intentionally damaging property and setting fire to a duplex in an attempt to seek revenge. This fire was contained and further damage was stopped. MPD located the individual responsible for the arson and he was taken into custody while MFD investigators processed the scene and collected evidence.

In another instance, an unknown person/persons deliberately dispensed a flammable liquid encompassing a residence and ignited it, causing damage to a deck and fence in the rear of the property. Luckily, this fire was unable to be sustained and the occupants were able to escape the fire safely. Investigators were able to view video surveillance footage but were unable to identify any suspects in the commission of this crime. This investigation is open and ongoing.

continued...



FIRE INVESTIGATION

Significant Criminal Cases

Later in the year, two juveniles vandalized a building, then returned days later, forced entry into the building and set multiple fires causing tens of thousands of dollars damage to the property. Investigators were able to obtain video surveillance footage showing two juveniles exiting the building. These individuals were ultimately located through an extensive search of schools in Madison and the surrounding communities. In conjunction with MPD and the MFD Community Education Unit, these juveniles were identified and charged with six counts of arson, burglary to a building, and criminal damage to property. The two juveniles were placed into the Deferred Prosecution Program in lieu of further prosecution.

In November, multiple outside fires were set: one which led to the destruction of a Madison Metropolitan bus shelter. In a cooperative effort with the MPD, video surveillance was obtained and a suspect was identified, arrested, and charged with two counts of arson to property other than a building. Prosecution is ongoing.

There was one death in 2018 as a result of fire. Fatal fires are extremely challenging for fire investigators due to the complexity of these types of incidents. This fire caused extensive damage to the residence as well as damaging adjacent vehicles and buildings. After interviewing a survivor, days of scene reconstruction, and fire pattern analysis, investigators theorized the fire was likely the result of improper use of supplemental oxygen while smoking, but definitive evidence was not available to confirm this theory.

In February, in the early hours of the morning, a single MFD engine responded to an odor of smoke in a neighborhood. The engine crew was unable to locate the source of the smoke initially, but during their investigation, found smoke emanating from a vent at large commercial structure blocks away from the initial call. Once the engine crew found the source of the smoke, a full structure fire response was initiated and subsequently a second alarm. MFD crews battled this fire for hours. The compartmentalization of this building, fire damage to the stairs and low visibility were some of the problems crews encountered fighting the fire. This landmark building sustained severe heat, smoke, and fire damage which was estimated in the millions of dollars. Investigators spent days interviewing numerous tenants, workers, and owners, and excavating and reconstructing the scene. With this information investigators were able to place the origin of the fire in the basement and more specifically identified the cause of the fire as an extension cord, which was placed under a floor mat, had deteriorated and finally failed due to a high resistance condition as the cause of the fire.

In March, MFD crews responded to a residential structure fire. This residence was under construction at the time of the fire and sustained severe fire damage which caused a partial floor collapse. The MFD Heavy Urban Rescue Team (HURT) was utilized to shore up the structure for investigator safety. Through a number of interviews, over the course of several days, along with fire scene reconstruction and fire pattern analysis, investigators obtained information pointing to spontaneous combustion of improperly discarded oil based stain rags as a possible cause, but could not rule-out an electrical failure as another possible cause.

continued...



FIRE INVESTIGATION

Juvenile Fire-Setter Program

FID investigators continue to concentrate their efforts on not only solving fires but also intervening when suspicious fires involve juvenile suspects. In 2018, there were several such incidents, where juveniles caused damage to buildings with fire. Investigators ultimately identified all of the juveniles involved. With the assistance of the MFD Community Education Unit and the Madison School District, the offenders were enrolled in the "Children & Fire Program."

The focus on intervention is particularly important when juveniles have no prior history of fire-setting activity. Intervention efforts allow the option of addressing juvenile offenders through educational efforts that include the "Children & Fire Program." These efforts, coordinated by the MFD Community Education Unit, are undertaken with the belief that such intervention can help prevent future fire setting behavior and reduce or eliminate dangers to the home and community before involving the criminal justice system.

Product Safety/ Recall

FID investigators continue to work with the U.S. Consumer Product Safety Commission and insurance companies when the specific cause of a fire may have been a faulty appliance or product. The purpose of such collaboration is to not only determine how or why the product may have failed, but also ensure this



information is documented to possibly initiate a recall of the product. Dehumidifiers and dishwashers are a few examples of products that were identified as potential ignition sources in 2018.

Background Investigations

FID investigators are responsible for pre-employment background investigations for all prospective MFD hires. Each background investigation involves approximately twenty-five hours of work which includes contacting various law enforcement agencies, interviewing employer and personal references, querying numerous databases, and ultimately providing a written report to the Fire Chief for review prior to offers of employment. In 2018, FID conducted approximately twenty-five background investigations on applicants for various positions offered within the Fire Department.

continued...



FIRE INVESTIGATION

Training and Certification

FID investigators continue to be very involved in professional organizations that provide continuing education in the field of fire investigation. These organizations include the International Association of Arson Investigators (IAAI), the Wisconsin Chapter of the International Association of Arson Investigators (WI-IAAI), CFITrainer and the Dane County Arson Response Initiative (DCARI). Investigators attend seminars, presentations and training conducted by each of these organizations throughout the year. In addition, FID hosted multiple classes to include; "Juvenile Firesetters," "Photography for Fire Investigators," and "Case Review: The Chocolaterian Fire" for regional investigators. These opportunities not only allow networking with other investigators but information sharing as well. Investigators completed numerous hours of training through these organizations, by the use of instructional programs and seminars. 350 hours of fire investigation training were documented. In addition, one investigator was able to be recertified as a Fire Investigative Technician (FIT) through the IAAI, which is a 3 year certification. Another investigator was able to attend a training program presented by the National Fire Academy (NFA) in Emmitsburg, Maryland on "Electrical Systems."

FID investigators delivered fire investigation training to recruits in the Madison Fire Academy as well as recruits in the Madison Police Academy. Investigators also provided in-service fire investigation and report writing training to newly promoted Lieutenants and Apparatus Engineers and delivered fire investigation training to fire crews at the company level.

2019 Goals

The focus on obtaining advanced training and certification in the field of fire investigation will continue in 2019. Various seminars, training programs, and other educational opportunities are being examined with the goal of further developing and certifying each FID investigator; as well as honing the skills of each investigator to better serve the City of Madison Fire Department and the community.





EMERGENCY MEDICAL SERVICES DIVISION - EMS

Paramedics

Paramedics: As the highest level of an Emergency Medical Technician, the requirements to be a paramedic are extremely rigorous. In 2018, the Madison Fire Department activated 16 new paramedics to help provide emergency care to the citizens of Madison. A paramedic not only operates at the skill level of a Basic EMT (BLS), which allows them to treat wounds, perform CPR, deliver babies, and perform patient assessments, but they are also trained and certified to perform advance life support (ALS) which includes administering IV fluids, injecting medications, and performing advanced respiratory procedures. We are pleased to share the 2018 CARES (Cardiac Arrest Registry for Enhanced Survival) report for the Madison Fire Department. Thanks to the continued collaborative efforts by the Dane County EMS Office, Communication Center, EMS providers, local hospitals, and Medical Direction team we are able to collect and share this meaningful data.

In 2018, there were 131 cardiac arrest resuscitations that required life-saving efforts by our highly-trained Madison Fire Department paramedics and firefighters. The Utstein (witnessed arrest with a shockable rhythm) survival rate was 50%, far exceeding the national average of 32%. Bystander CPR rate was 46% and Public AED (Automated External Defibrillator) was 36%, which are both much higher than the national averages.

These numbers truly demonstrate the lives saved by the Madison Fire Department and show the enormous impact that the prehospital system provides for our patients and community. We look forward to continuing to work together to provide the best lifesaving care possible.



Twelve of the sixteen new paramedics, flanked by Fire Chief Steve Davis, far right, Medical Director Megan Gussick, MD second from right, and EMS Division Chief Scott Bavery, far left.

Peer Support

With support from the City of Madison's Employee Assistance Program (EAP), a **Peer Support Team** was implemented in 2018. The team consists of 12 members from within the MFD family who were trained to provide support and referral to employees, family members, and retirees who are seeking assistance. Team members serve as a confidential support person for issues such as work or personal stress, emotional stress, addictions, financial stress, relationship difficulties and family concerns, and any other behavioral health concern.



EMS TRAINING DIVISION

2018 Highlights

- 16 personnel were trained and activated as Madison Fire Department Paramedics.
- Classes 6 and 7 Fire/EMS Academies saw 12 new personnel get their State licenses as EMTs.
- Renewal of all 267 EMT and 109 Paramedic licenses through the year 2020.
- All EMTs completed a minimum of 30 hours of continuing education, while Paramedics' continuing education was a minimum of 48 hours each. This means MFD accumulated over 12,000 total EMS training hours in 2018!
- MFD staff trained for three days with UWPD on forming Rescue Task Force teams to save lives in the event of Active Threat Incidents.



SAVE A LIFE

- "Trained the Trainer" for over 100 Madison Metropolitan School District members on "Stop the Bleed" procedures. They will now be able to train their schools' staff in these life saving techniques.

- CPR training and renewals for the staff of several City agencies:

- Public Library
- Engineering
- Water Utility

2018 Logistics

- Placed two new ambulances in service to serve the City's East and West sides; Medic 7 and Medic 8.
- Despite a 2% increase in the number of EMS related calls, thousands of dollars were saved in EMS supply costs due in large part to efficiency in inventory tracking and supply usage.



2018 Special Events

The number of special events in the city is ever increasing. New guidelines were created and vetted by the Street Use Committee to help spread the events out over the entire city and ease congestion on the isthmus. The Madison Fire Department staffs the majority of these events with EMS personnel and will continue to find ways to upgrade care for the participants and spectators who attend.



FIRE TRAINING DIVISION

One of the main goals for the Fire Training Division is to continue to offer training opportunities that are challenging and take place in a positive, safe atmosphere. Training Staff are better able to assess training needs and receive feedback as a result of building trusting relationships with field personnel through training contacts.

The Fire Training Staff consists of a Division Chief, 3 Shift Training Captains, and two full-time Training Officers. During the Recruit Academy, the overall training staff more than doubles in size to meet the needs of training delivery to our newest members. A Training Captain who oversees the day-to-day operations of the academy and directly supervises recruits as well as academy instructors is added to the staff.

Online training is one of the options the Training Division utilizes to deliver training to line personnel. Target Solutions continues to be a valuable tool in meeting these training needs in addition to teleconference presentations and, of course, hands on evolutions which is the preferred method of training delivery.

Current training programs delivered and administered by the Division include:

- Recruit Academy
 - FFI and FFII Certification
 - Hazmat Technician
- Apprentice Program
 - approx. 75 Apprentices
- Mentorship Program
- Acting Engineer Program
- Acting Officer Program
- New Engineer Orientation
- New Officer Orientation
- Quarterly Officer Training
 - 2018 Topic: Leadership
- Annual Safety Stand Down
- Doctor Ops Day



2018 Division Highlights include:

- Addition of two 40 hour Training Division staff members
- Recruit Class 7 – 17 new firefighters
- Recruit Class 8 – 13 new firefighters
- AE Orientation Week – 10 new engineers
- Radio System Upgrade – Training Rollout (725 hours)
- Acquired Structures – Ground Ladders, Peaked Roof Ventilation
- Line of Duty Death Reviews
- Training video production

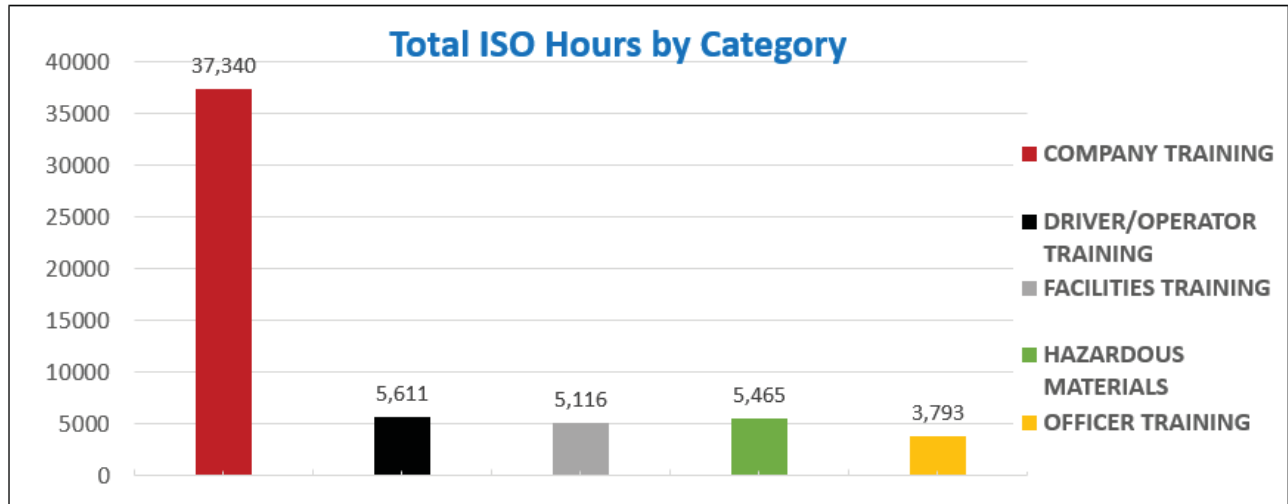




FIRE TRAINING DIVISION

2019 Goals

- Support Shift Captains' efforts to increase contact hours with field personnel
- Support Tractor Drawn Aerial Initial Training
- Continued education in drill recording for accuracy of training records
- Transition to utilizing Station 14 for training delivery





RECRUITMENT

The MFD Recruitment Committee continued to be busy in 2018 even though the MFD was not accepting new firefighter applications. The members continued to work to recruit potential applicants by appearing at career fairs, small and large group presentations, station tours, ride-alongs, and individual meetings. The focus also included community education school programs that spotlighted topics like safety and what to do if you need to call 911 for help. Through these opportunities we get to share with children in our community what we do as firefighters, how we serve the community, and perhaps get kids thinking about a career in emergency services.

Other highlights from 2018:

- Winter/Spring: participating in African American, Latino-American, and Asian-American Youth Career and College Fairs at Madison College, and completing a recruitment survey from all members of our last 5 hiring classes.
- Summer: hosting 30 Latino middle school youth during the Latino Youth Leadership Academy for a morning of fire related hands-on stations.
- Fall: a presence at our Annual Free Pancake Breakfast at Station #3.
- The Recruitment Committee is dually invested in the long-term recruitment conversations with youth, as well as adults, as we strive as a department to hire and retain employees who reflect the diversity of the community we serve.

The Recruitment Committee's efforts toward promoting diversity within the MFD bore fruit with Recruit Class 8, which was the first class hired in 2018. The breakdown of Recruit Class 8 was:

- 6 Women
- 7 Men

- 2 African American
- 1 Hispanic
- 10 White

In the last quarter of 2018, letters went out to start the second round of interviews from the 2017 applications, which will create Class 9, slated to start in the fall of 2019.



Recruit Class 8, flanked by Fire Chief Steve Davis, far left, and Division Chief Tracy Burrus, far right.



HEALTH & WELLNESS

Dean Health serves as the Occupational Medicine provider for the MFD. All medical services provided by Dean Health are based on the **NFPA 1582 Standard on Comprehensive Occupational Medical Program for Fire Departments**. Medical exams are required for all Hazmat Team members and most were completed with Dean Health at their Fish Hatchery Road facility. Medical exams were offered to non-Hazmat commissioned members as well. Although not mandatory, 106 elected to receive the exam.

Dean Health also conducted 26 pre-employment medical exams for new hires in 2018. This medical exam is the most thorough process of all the medical services provided by Dean Health.

The Department offered flu vaccinations to all commissioned and civilian personnel of the MFD again this year. Approximately 145 personnel took advantage of the offer.

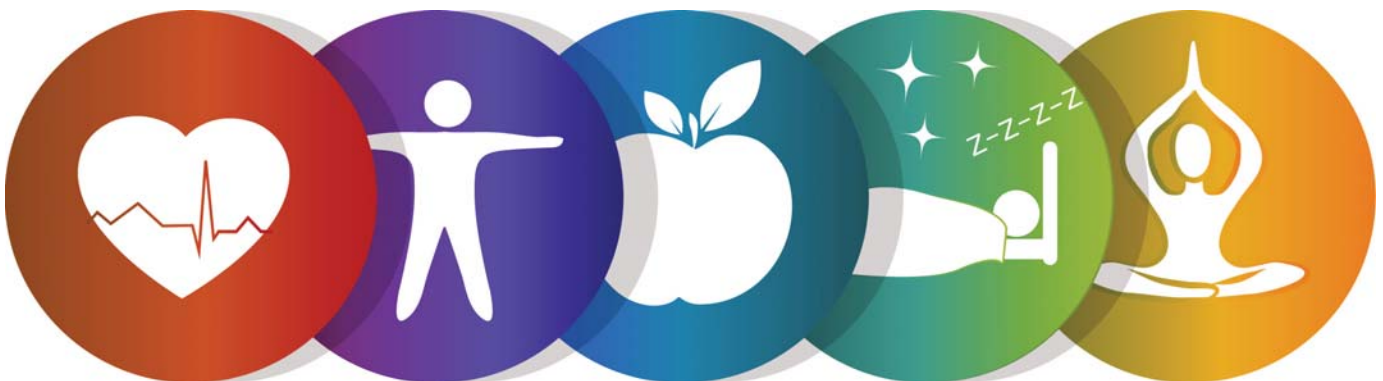
The Health & Wellness Committee

- The MFD Peer Fitness team consists of five members who work to improve the health and fitness of the MFD. In 2017 the **Peer Fitness Team (PFT)** played a pivotal role in implementing the **Tactical Athlete Health & Performance Institute (TAHPI) program**. This program became active in the spring of 2018 and will help reduce cost of time lost wages due to injuries. The team now utilizes the Target Solutions platform to provide workout ideas, nutrition tips, and videos that promote fitness for on and off duty.

Madison Fire TAHPI Utilization

As of 2019-02-27 15:25:01 • Generated by Katie Dyess

Type of Injury →	WC	Group Health	Courtesy	Total
Department: Opportunity Name ↑	Record Count	Record Count	Record Count	Record Count
Madison Fire Department	27	28	7	62
Total	27	28	7	62





EMERGENCY MANAGEMENT

Emergency management is often perceived as a response by the police and fire departments. This perception is partially correct. However, emergency management includes many city agencies working together to plan, respond to, mitigate, and recover from natural- and human-caused incidents or disasters. Others see emergency management as something the county, state, or federal government provides for local government.

Emergency management is very much a local responsibility. In the event of an incident or disaster, city agencies are the first to arrive and the last to leave.

The roles and responsibilities of the city's emergency management functions were front and center for the flooding in August, September, and October of 2018.

The Emergency Operations Center (EOC) activated within minutes of the onset of flooding. EOC

operations and staffing were based on Incident Action Plans, immediate needs, future needs of residents and agencies handling the response and recovery. The EOC operated daily for up to 18 hours a day.

The seamless coordination of the response and recovery operations during the flooding demonstrated the need for a strong emergency management function at the city level. Recently developed plans include a Multi-Agency Resource Center Plan and Debris Management Plan. Goals for 2019 include training for EOC staff, a review and update of the City's Emergency Management plan, and at least three tabletop exercises. One exercise will examine response and recovery operations to

support Madison's most vulnerable populations. Exercises provide the team with an after-action report outlining steps for improvements.





FIRE PREVENTION

Fire prevention services are provided to the citizens and visitors of Madison through four distinct work units: Code Enforcement, Community Education, Fire Protection Engineering, and Elevator Inspections.

The Fire Prevention Division works hard to provide quality services to the citizens and visitors of our great city through a multi-tiered approach to code compliance. This approach helps the city be a safe and vibrant place for people to live and work, while providing a measure of safety for our firefighting personnel that keeps them out of harm's way.

In 2018, the Fire Prevention Division exceeds many goals on an annual basis, set both inside and outside the department:

- Our plan review numbers continue to increase, and we continue to maintain our 5 day turn-around on average, despite the large number, size, and complexity of today's buildings.
- All of our inspectors contribute to help spread community education throughout the City, allowing for more personalized, area-driven results.
- Last October, MFD prevention personnel were in every school in the city--public and private--reaching thousands of children with fire prevention programming based on nationally recognized models.
- Staff provided above- and below-ground tank plan review, inspection and approval city-wide.
- The Division started a massive key vault box rekeying initiative to update and secure the fire department's rapid entry system city-wide.
- For the first time in 18 months, the elevator inspection unit was at full staffing.



The FPD Division continues to strive for excellence in all that we do to serve City of Madison residents and visitors. Our training is the core guiding principal of the work that we do. Working closely with field staff, command staff, business owners, and residents allows us to tailor our code enforcement and safety education strategies to meet the needs of our citizens.

The Fire Prevention Division has a multi-modal revenue model incorporating plan review fees, elevator inspection fees, 2% fire dues (paid by the State), tank inspection program, and other miscellaneous fees and fines. In 2018, the combined revenue streams added up to over \$2 million in gross budget revenues and to the City General Fund. Expectations for 2019 include a continued increase in gross revenues. Additional revenues for 2019 and beyond were initiated in 2018: the Common Council approved some fee increases and new fees to boost revenues by more than \$100,000. Due to a policy correction with the state, the elevator inspection program will see an additional \$100,000+ in overall revenue.



FIRE PREVENTION

Code Enforcement Unit

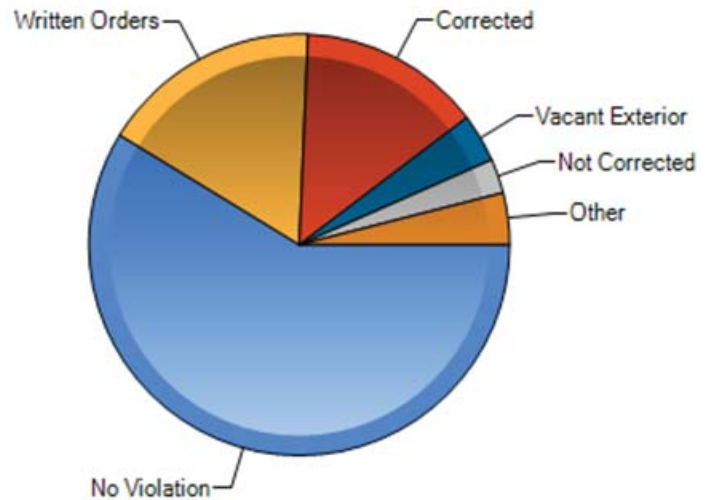
The Code Enforcement Unit of the Fire Prevention Division is made up of 10 Fire Code Enforcement Officers and 1 hybrid Code Enforcement/Community Education Officers. The unit focuses on verifying that all commercial buildings in the city are operated and maintained safely.

Our primary responsibility and focus is on performing fire safety inspections in all multi-unit residential and commercial properties. The field staff (firefighters) assists with many of the inspections, allowing us to be inside the majority of buildings twice a year. While that is our primary focus, our unit assists in many other areas such as PIO, community education, supplementary plan review, and many other assigned duties. Along with the additional duties that our unit performs, the number of inspections increases every year, as does the complexity of the inspections.

The Madison Fire Department performed 25,597 inspection activities in 2018, an increase of 4%. The vast majority of inspections performed are routine in nature, with a small percentage being code enforcement or new construction activities.



No Violation	68.2%
Written Orders	11.6%
Corrected	10.6%
Vacant Exterior	3.5%
Not Corrected	2.5%
Verbal Orders	0.9%
Re-Issue Orders	1.0%
10 Day Notice	0.9%
Rescheduled	0.3%
Scheduled	0.3%
Cancelled	0.1%





FIRE PREVENTION

Community Education Unit

In 2018, fire prevention staff delivered presentations to more than 27,000 adults and children in schools, workplaces, residential facilities, and community organizations.

The community educator for the department also schedules and coordinates station visits. MFD's 14 fire stations reported hundreds of people visiting City firehouses in 2018.

Madison's elementary school children make up the greatest number of residents reached, with the bulk of these visits occurring during Fire Prevention Month in October. Fire prevention staff visited all MMSD and private schools in 2018, with a total of over 6,000 children and teachers participating.



Safety Town, a partnership with the American Family Children's Hospital, is a program designed for children entering kindergarten in the fall which teaches children how to be safe in their community. Safety Town uses hands-on activities to teach children about many different aspects of safety and injury prevention. In 2018, Safety Town reached over 200 children.

Safety Saturday is an event that educates parents, children, and the public on ways to make safe decisions, prevent injuries, and to encourage the use of safety devices such as seat belts, bike helmets, and smoke alarms. Using the State Capitol Square and Dane County Farmers' Market as a setting, thousands of community members attend the Safety Saturday event each year.



The MFD and Madison Area Safe Kids Coalition sponsored 22 car seat checks at fire stations. In 2018 the partnership provided over 400 car seats, at low cost, to families in need. An additional 375 car seats were checked for proper installation.



FIRE PREVENTION

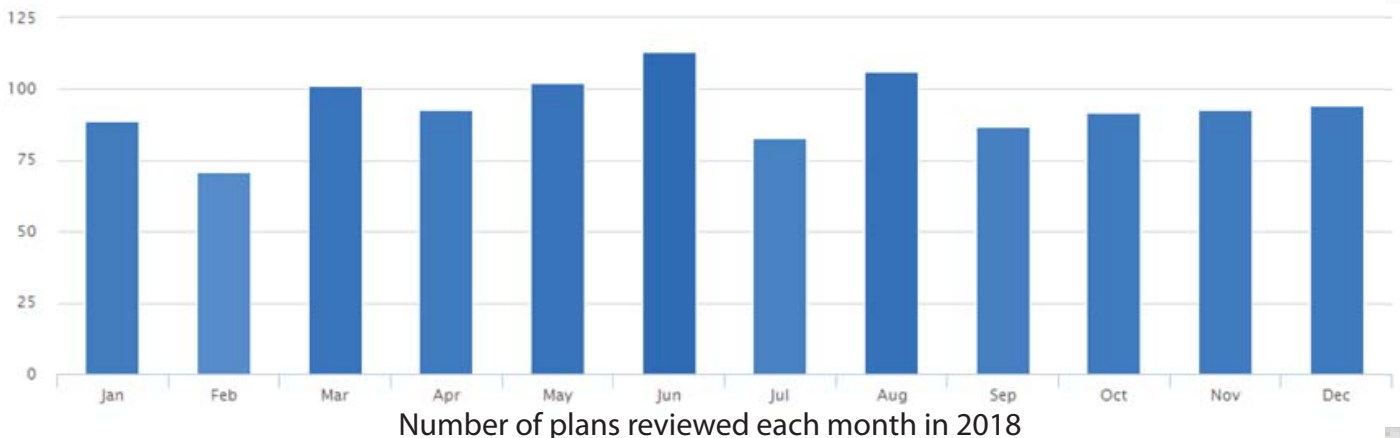
Fire Protection Engineering Unit

The Fire Protection Engineering unit is responsible for ensuring that site development, new construction, and alteration projects comply with building and fire codes as well as Madison General Ordinances. This is accomplished by working with owners, developers, and contractors in the design phases of projects, reviewing construction documents, and inspecting and testing installations of site access, fire suppression, fire alarm, controlled egress, smoke control, and fire command centers.

In 2018, the MFD again exceeded the previous year's totals in plan review submittals. Despite the ever increasing complexity and number of reviews, our prevention staff is maintaining an average of 5 days to turnaround reviews. Revenue again exceeded the previous year, with plan review exceeding \$600,000 in permit fees.

The City of Madison has seen an unprecedented boom of high-rise buildings. Each one of these represents an enormous amount of work by our FPE, and our fire prevention staff. The Fire Protection Engineering Unit works tirelessly to provide safe housing to our residents, which protects our first responders as well.

In 2018, the FPE Unit performed nearly 1,200 plan reviews. Plan reviews are done by multiple staff members of the Prevention Division, showing our multi-disciplinary approach to code enforcement. Our staff not only reviews the plans, but does field inspection and approval on all systems that are reviewed.





FIRE PREVENTION

Elevator Inspection Unit

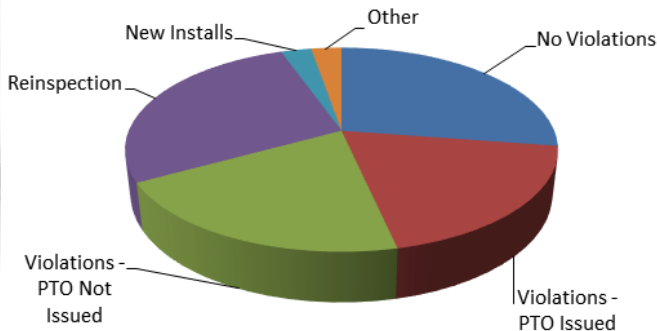


The Elevator Inspection Unit consists of 3 State of Wisconsin Certified Elevator Inspectors. The unit works to ensure the safe installation, alteration and operation of conveyances, which includes elevators, escalators, chair lifts and dumbwaiters.

The primary focus is on timely plan review, accurate and safe new installations, and annual inspections to grant the required Permit to Operate.

2018 was a year of rebuilding for the Elevator Inspection Unit, and our staff worked hard to keep the new elevators inspected safely, and the existing elevators operating properly. Our unit provides training on a regular basis to the firefighters and command staff, showing safe operation and control for all types of conveyances.

In 2018, our elevator inspectors logged almost 3,000 inspection activities, including 90 new installations. The City of Madison continues to see an increase in new elevators every year. Currently, the City records inspections on over 2,900 conveyances, all of which require an annual visit.



No Violation	29.3%
Violations – PTO Issued	20.5%
Violations – PTO Not Issued	21.9%
Re-inspections	29.5%
New Installs	2.9%
Other	2.9%



INFORMATION TECHNOLOGY

The Madison Fire Department Division of Information Technology has one full time staff member responsible for managing and coordinating the diverse technology needs of the Madison Fire Department.

Technology Changes in 2018

- In 2018 we completed the three-year rollout of replacing consumer grade “hot spots” with hard wired vehicle routers (Cradlepoint routers) in all front line units. This finished the final 17 remaining units that needed updating. The reliability of the routers increased our automatic vehicle location (AVL) and network connectivity while reducing vehicle downtime.
- MFD continued the search for a new 2-in-1 tablet for med unit frontline rigs by testing out new styles of tablets from Dell in the M7 & M8 units. Based on the feedback from various medics and durability testing we decided to migrate from the Panasonic CF-20 to the Dell Rugged Extreme 2-in-1 laptop.
- A new Mobile Data Computer (MDC) was tested in 2018 with positive results. A Dell Rugged was tested and will be replacing the Panasonic CF-31 in the upcoming year.
- Established quarterly updates of MedVaults and key secures in all 41 frontline mobile units for maximized security and optimal auditing results.
- Completed implementation of Keyscan access control systems to all 14 stations.
- Optimized and continued management, mobilizing, and demobilizing of Command Post for City wide events and trainings.
- Established new GPS protocols language for sending GPS coordinates from Cradlepoint routers to CAD for increased vehicle location accuracy.
- Began FirstNet outline needs for next project phase upgrade and new units.
- Upgraded Microsoft Office on all workstations and mobile data computers from Office 2007 to Office 2016.
- Set up a new station by coordinating and working with several vendors on designing and implementation of Station 14’s AV systems and setup of the Community Room.
- Coordinated with IT and vendors regarding upgrading equipment:
 - o Upgraded 12 mobile data computers.
 - o Migrated 7 chiefs from laptops to tablets.

New projects for 2019

1. FirstNet – We look to explore what it will take to migrate current network to FirstNet. This will include testing of new equipment, coverage areas and analysis of data usage and costs.
2. In 2019 City IT will be migrating all City owned workstations from Windows 7 to Windows 10.
3. Will begin designing and planning for Station 1’s training room remodel.



INFORMATION TECHNOLOGY

New Projects for 2019, continued...

4. Continue to work with City IT and Dane County 911 to enhance connectivity for emergency vehicles and cloud based applications utilized on vehicles.
5. Work on rolling out BrightSign players in Fire Admin that will allow for situational awareness by having Mobile displayed on the TVs in the Fire Admin area.
6. Migration from the Panasonic CF-20 to the Dell Rugged Extreme 2-in-1 laptop tablets will begin this year.
7. Through the course of 2019 we will replace Panasonic CF-31's as needed and will start replacing CF-31s with the new Dell Rugged laptop.
8. With the collaboration of City IT, looking to implement a new ticking system that will allow MFD to migrate from using SharePoint for technology work orders and potentially other things like fitness work orders and vehicle work orders. The new system will allow for better management of notifications, devices and collaboration with other city agencies.





FINANCE

2018 OPERATING BUDGET AS OF FEB 28, 2019

	Adopted Budget	Actual with Encumbrances	Balance
*Permanent & Premium Salaries	\$ 34,245,403.00	\$ 34,102,173.17	\$ 143,229.83
Hourly wages	10,000	10,866	(866)
Overtime Salaries	941,753	1,175,566	(233,813)
Special Duty	88,000	91,696	(3,696)
Benefits	13,890,059	13,805,338	84,721
Other Grants/Transfers	(46,249)	353,490	(399,739)
Purchased Services	1,543,340	1,354,162	189,178
Materials & Supplies	1,295,022	1,140,900	154,122
Inter-Agency Charges	3,831,035	4,033,281	(202,246)
Capital Assets	-	-	-
Inter-Departmental Billings	(1,500)	-	(1,500)
*Revenue	(3,165,485)	(2,797,780)	(367,705)
Net Budget	\$ 52,631,378.00	\$ 53,269,691.28	\$ (638,313.28)

* Includes Grant Funding

2018 CAPITAL BUDGET

PROJECT	AMOUNT
Fire Equipment	\$ 602,500
Communications Equipment	400,000
Minor Building Improvements	50,000
Fire Station 14	6,300,000
TOTAL	\$ 7,352,500

