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## Fire Fighters Association of Missouri



### ABOUT THE COVER

Junior Firefighter contest at FFAM convention in Springfield, MO.  
Image by Gail Hagans

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#### CONTENT

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# President's Remarks

Hello and Welcome to Summer



Larry Jennings

**H**ello and welcome to summer. From the heat and lack of rain so far my part of the state has been experiencing I believe summer is trying to make another statement and has settled in for a few months. Remember to use extra caution when working in these hot and dry conditions as they take an extra toll on our bodies and our equipment.

The 67th Annual Convention and the Annual Meeting took place the first weekend in June and although not heavily attended this year, those present all appeared to have a good event experience. The Board of Directors hosted the event at the Oasis Hotel and Convention Center in Springfield, which provided us with a great venue to host one of the largest vendor expos we have had in many years with nearly 40 vendors represented. My thanks to Lee's Summit Fire Chief Mike Snider for delivering an excellent keynote address at the Saturday evening banquet. He did a great job of tying our theme of *Bringing the Family Together* and his career and life experience all together relating to each of our careers and agencies. My thanks also go out to everyone that participated in the contest or who helped with the weekend activities in any fashion.

Information for the Convention/Annual Meeting 2024 will be released when available, but in the meantime consider putting some time aside and joining us at that event.

Summer fire school hosted by the University of Missouri Fire and Rescue Training Institute (MU FRTI) has come and gone. From the reports I have received those that attended were treated to some excellent training. The classes were challenging and left those in attendance better prepared to serve their communities. If you didn't have the opportunity to attend I encourage you to keep next year's session penciled in the corner of your calendar until the dates are set and then get signed up for classes. The benefit-to-cost ratio certainly makes the training a good fiscal value and the training will help you enhance your skills. Good job once again MU FRTI.

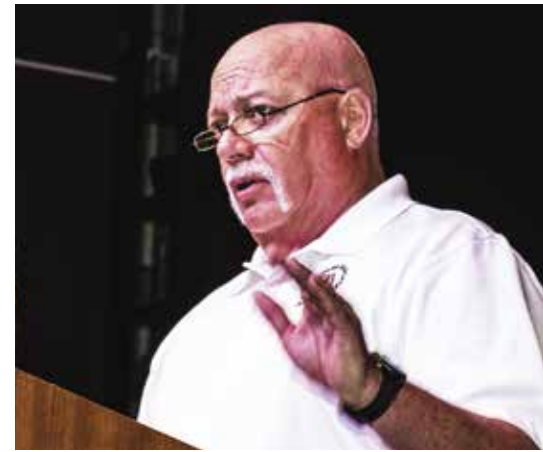
As your president, I had the opportunity in June to speak at the Jefferson City Elk's Lodge #513 Flag Day celebration from the fire service perspective concerning our nation's flag.

Personnel from the Jefferson City Fire Department were on hand and retired an existing flag from the flag pole and replaced it with a fresh one as part of the ceremony. The Benevolent and Protective Order of Elk's have a long history of honoring the flag of the United States of America and the ceremony and information provided about the flag was very educational. There were several veterans in attendance, which made the ceremony even more moving, understanding what they had done to help protect the life and freedoms we enjoy.

The Missouri State Fair Fire Department personnel have been busy getting ready for the 2023 Missouri State Fair, which will be held in Sedalia, August 10-20. If you will be working there, do so with my thanks as you represent the FFAM and make our Association shine in the eyes of the many fair visitors and dignitaries that will be there. The relationships forged and the education provided serve to make all who visit better and certainly keep us in the eyes of the fair personnel and the State government leaders who strive to assist the fire service as we continue to operate in our home communities and during the span of the Fair.

If you are not working, but you find yourself at the Fair please make sure you stop in and visit the fire station, take in one of the demonstrations or tour the station. You may just find you might like to apply to work at the next fair. Keep up the great work everyone involved.

The foundation that oversees the Memorial and Museum/Educational Center in Kingdom City is hard at work preparing for the Memorial Services to be held October 7-8. This group of dedicated people plans almost all year to make sure a suitable ceremony is provided to honor those that we have lost in the Missouri fire service and support the surviving families. If you have never attended the services I recommend you put this on your calendar and make an effort to be there. While there you will also be able to see the ongoing museum/educational center project located adjacent to the actual memorial.



The construction is still underway, but progress is being made with hopes to finish the building in the near future. The only way for this project to be completed is for continued financial contributions to be made. This can be a simple fundraiser in your community or finding a corporate donor that can add to the funds needed. With everyone's help gathering the needed financial support, this project can continue to move toward completion.

Continue to be active in your local communities. Other groups/clubs/organizations in your area no doubt could use your support just as we often ask them to support us. Reach out and find opportunities to be visible in your communities. Always remember you represent not only your local fire agency but in essence the entire Missouri Fire Service through your actions and service. Do so with dignity, pride and enthusiasm.

If any of the Board of Directors can be of assistance please reach out. We are here to work for you, the members. As always, be safe!



# Fire Marshal's Update

Wow, what a whirlwind this month has been. Seems like I just wrote an article for this awesome magazine. With that being said, I would like to express my appreciation to Jamie Miller, Gail Hagans-Reynolds, and whoever else produces an awesome magazine for us to enjoy, "Thank You"!

I would like to congratulate FFAM for another great 2023 convention. Thank you to the convention committee, and everyone who made it successful. I enjoyed the large vendor display that was made available, the banquet area was great, and amazing fellowship. Thank you for making Judy and me feel welcome in your organization.

Since the last article, the 102 legislative session come to a close, with a balanced budget presented to Governor Parson. Within the budget, legislators added \$500,000 more dollars to firefighter training. We had a shortfall of about \$500,000 in requests from you as the Missouri Fire Service for training. If approved we will work hard for you to get your request fulfilled. We need you to continue to request classes. Please continue to submit your training needs. We would like to go back next year and show we spent all of the funding and continue to have a shortfall of funds. Here is the site to apply for your training needs: <https://bit.ly/3CNecW6> (Contracted Training Course List and Request Form). Provided on this link is a video from Deputy Chief Landwehr to walk you through if it is your first time. Here is Deputy Chief Landwehr's desk number, 573-522-1625, mine is 573-751-1742.

Recently the fire education / advisory commission met. I am extremely pleased

to report they voted and directed us to fund and prioritize the new updated "Introduction to the Fire Service" class. This is the old Basic Firefighter class we all grew up on. The old basic class was out of date and the curriculum did not meet the updated NFPA 1001 standard. The University of Missouri Fire and Rescue Training Institute (MU FRTI) took the old class, updated it, and added more hands-on skills. Again the Fire Education Commission directed us to move this class to the front of the line to be funded and delivered.

We recently took delivery (after a three-year wait) of our new dually flatbed truck that will pull our new NFPA-compliant 1403 burn trailer. With this prop opportunity, we will be able to assist your department in your live fire training and certifications. This is a no-cost tool to assist areas of our state that do not have certified burn trailers or fixed burn facilities available. Deputy Chief Landwehr is the contact to schedule the burn prop to your area. We plan to deliver the trailer to you and leave it until you have finished your burns, then come and pick it up. You will be held financially liable if it is misused or compromised. I desire to add three more to the fleet and stage them throughout our state for easy access.

Another historical event took place this year during the legislative session. Senate Bill 24 sponsored by Senator Lincoln Hough District #30 out of Green County pass both chambers and is wait the Governors' signature. If signed 7 million dollars was allocated to establish a Critical Illness Pool similar to our Cancer Pool. This bill is designed to assist us as first responders with assistance when we become ill due to mental/



Tim Bean



behavioral health. Through the Critical Illness Pool services will be available by certified professionals to aid us in our recovery. I have, and know many others who have had mental/behavioral health breakdowns throughout our careers. We need you to be able to get the needed assistance when you find yourself or a member of your department in these crises. The old saying "Suck it up Butter Cup" days are over! This pool will be a great tool in the toolbox to recruit and retain our firefighters and first responders in the days, weeks, months, and years to come. Thank you to the men and women who devoted hours working on this legislation, it takes everyone working together to accomplish this. This is a great example of you as the Missouri Fire Service getting to know your local Senator or State Representative makes a difference here in Jefferson City! We will push out more information as it becomes available, keep an eye out for an email through our office as it becomes available. Here is part of the language on Senate Bill 24.

## **WORKERS' COMPENSATION - PTSD AS OCCUPATIONAL DISEASE IN FIRST RESPONDERS (SECTION 287.067)**

This act establishes post-traumatic stress disorder (PTSD), as described in the Diagnostic and Statistical Manual of Mental Health Disorders, Fifth Edition, (DSM-5) as a compensable occupational disease under

*Continued on page 41.*



## OPENING SESSION

President Larry Jennings opened the 67th Annual FFAM Convention by ringing the bell on Friday, June 2, 2023, at the Oasis Hotel and Convention Center in Springfield, MO. The Springfield Fire Department Honor Guard posted the colors. 1st Vice President Charlie Peel led the *Pledge of Allegiance*. District 2 Director Greg Wright gave the invocation.

President Jennings recognized the convention committee and key supporters. The FFAM Officers, Directors and dignitaries were introduced.

Guest speaker Springfield Fire Department Assistant Chief Olan Morelan gave a welcoming address to the attendees.

1st Vice President Peel made final announcements.

Door prizes were awarded.

President Jennings closed the opening session at 8:30 p.m.

## AWARDS BANQUET

President Jennings welcomed everyone to the awards banquet on June 3, 2023, at the Oasis Hotel and Convention Center in Springfield, MO.

District 2 Director Greg Wright gave the invocation followed by the meal.

Keynote speaker Lee's Summit Fire Department Chief Mike Snider presented a program.

## SCHOLARSHIP COMMITTEE

Scholarship Committee Chair Larry Eggen announced the scholarship winners and presented certificates to those in attendance. Ryan Cruse of Salisbury; Bailey James Carter of Montrose; Kaden Hartman of Columbia; James Jones of Windsor; Keara McDonnell of Meta.

## FIRE PREVENTION COMMITTEE

Fire Prevention Committee Chair Andrew Caldwell announced the 2023 poster contest award winners.

## SPECIAL NEEDS DIVISION

1st Place, Olivia Edwards, Washington FD; 2nd Place, Andrew Deimeke, Little Dixie FPD; 3rd Place, Kendyll Bonine, Galt FD.

## 1ST AND 2ND GRADE DIVISION

1st Place, Mason Brinker, Washington FD; 2nd Place, Airabella Mahnken, Little Dixie FPD; 3rd Place, Gemma Wallach, Washington FD.

## 3RD AND 4TH GRADE DIVISION

1st Place, Sydney Gipson, Little Dixie FPD; 2nd Place, Blaze Kriete, Washington FD; 3rd Place, Ava Rodenbaugh, Little Dixie FPD.

## 5TH AND 6TH GRADE DIVISION

1st Place, Evelyn Jasper, Washington FD; 2nd Place, Emily Garbs, Washington FD; 3rd Place, Lydia Richardson, Washington FD.

Contest Committee Chair Gary Berendzen announced the 2023 convention contest winners.

## FIREFIGHTER DIVISION CHALLENGE

### 2 PERSON HOSE COUPLING:

1st Little Dixie #1; 2nd Little Dixie #2; 3rd Southern Stone #2.

### REPLACE A SECTION OF HOSE

1st Southern Stone #1; 2nd Little Dixie #2; 3rd Little Dixie #1.

### EXTENDING A LINE

1st Southern Stone #1; 2nd Little Dixie #1; 3rd Southern Stone #2.

### WATER BARREL FIGHT

1st Little Dixie #1; 2nd Little Dixie #2; 3rd Southern Stone #1.

### BUCKET BRIGADE

1st Little Dixie #1; 2nd Southern Stone #1; 3rd Little Dixie #2.

### OVERALL

Little Dixie #1.

## FEMALE DIVISION CHALLENGE

### 2 PERSON HOSE COUPLING

1st Southern Stone #1.

## REPLACE A SECTION OF HOSE

1st Southern Stone #1.

## EXTENDING A LINE

1st Southern Stone #1.

## WATER BARREL FIGHT

1st Southern Stone #1.

## BUCKET BRIGADE

1st Southern Stone #1.

## OVERALL

Southern Stone #1.

## JUNIOR DIVISION CHALLENGE

### 2 PERSON HOSE COUPLING

1st Little Dixie #2; 2nd Southern Stone #1; 3rd Little Dixie #1.

### EXTENDING A LINE

1st Southern Stone #1; 2nd Galt; 3rd Little Dixie #2.

### WATER BARREL FIGHT

1st Galt; 2nd Southern Stone #1; 3rd Little Dixie #1.

### OVERALL

Southern Stone #1.

## AWARD COMMITTEE

Award Committee member Charlie Peel announced the 2023 award winners:

### LIFE SAVING AWARD

Joe Auffert, Chris Wilbanks, Christel Cantrell, Terry King – Howell County Rural FD #1.

### MERITORIOUS AWARD

Joe Auffert, Tim Dailey, Christel Cantrell, Daniel Dennis, Joey Smith, Lucas Cyr, Jerry Wirtz – Howell County Rural FD #1.

### MERITORIOUS AWARD

Chris Sterner, Wayne Cormier, Corbin Thompson, Dylan Summers, Dave Masterson, Jeremiah Jones – West Plains FD.

### AWARD FOR VALOR

Ashton Dabbs, Warrenton FPD.

### FIRE FIGHTER OF THE YEAR

Anthony Griggs, Southern Stone FPD.

**CHIEF OFFICER OF THE YEAR**  
Michael Moore, Southern Stone FPD.

**DEPARTMENT OF THE YEAR**  
Southern Stone FPD.

**PHIL SAYER LIFETIME ACHIEVEMENT AWARD**  
Chief Larry Jones, Madison West Monroe FPD.

President Jennings recognized retiring directors for their years of service to the Board of Directors. District 2 Director Greg Wright was recognized for 11 years and District 3 Director Larry Jones was recognized for 18 years.

President Jennings gave closing remarks. The banquet was followed by the dance.

**BOARD OF DIRECTORS MEETING**

President Jennings called the meeting of the Board of Directors of the Fire Fighters Association of Missouri to order at 9:00 AM Sunday, June 4, 2023, at the Oasis Hotel and Convention Center in Springfield, MO.

**ROLL CALL OF BOARD OF DIRECTORS AND OTHER OFFICIALS:**

**OFFICERS**

President Larry Jennings, Johnson County FPD; First Vice President Rob Erdel, Little Dixie FPD; Second Vice President Grant Oetting, Higginsville FPD; Secretary-Treasurer Jaime Miller, Johnson County FPD #2; Sergeant-at-Arms Rex Reynolds, Southern FPD of Holt County.

**DIRECTORS**

District 1 Terry Wynne, Galt FPD; District 2 Greg Wright, Shelbina FD; District 3 Larry Jones, Madison West Monroe FPD; District 4 Joe Vaughn, Pleasant Hill FPD; District 5, Terry Plumb, Southern Stone FPD; District 6 Gary Berendzen, Cole County FPD; District 7 RB Brown, Union FPD; District 9 Kurt Wilbanks, West Plains FD; District 10 Greg Brown, Eureka FPD; District 11 Billy Smith, North Central Carroll Co FPD; District 12 Rob Francis, Fruitland FPD; District 14 Rick Dozier, Southern FPD of Holt County.



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**ASSISTANT DIRECTORS**

District 1 Janet Cain, Shoal Creek FPD; District 3 Josh Loyd, Martinsburg Area FPD; District 3 Rob Erdel, Little Dixie FPD; District 4 Jonathan Evans, Lincoln FD; District 5 Shelby Honea, Southern Stone FPD; District 5 Dylan Honea, Southern Stone FPD; District 6 Alan Braun, Cole County FPD; District 6 Shawn Ritchie, Holts Summit FPD; District 7 Andrew Caldwell, Boles FPD; District 10 Harriett Vaucher, Eureka FPD; District 11 Kris White, Mayview FPD; District 11 Josh Koepke, Kansas City FD.

**GUESTS**

Tim Bean, Missouri Division of Fire Safety; Gail Hagans, Harry Ward, University of Missouri Fire Rescue Training Institute; Randy Norden, Missouri 811; Chris Sterner, West Plains FD; Brian Zinanni, Supporting Heroes; James C Peffermann, Kurt Ploch, Boles FD; Jim L Peffermann, Washington FD; Larry Eggen, Johnson County FPD; David Miller, Johnson County FPD #2; Hunter Hanes, Brian Smiley, Tim Hoselton, Galt FPD; Chad Wolfe, Madison West Monroe FPD; Chris Thompson, Holts

Summit FPD; Jim Brockett, Southern Stone FPD; Rob Schrage, Jefferson R7 FPD; Keith Smith, Warrenton FPD.

**AGENDA**

President Jennings asked for additions to the agenda. Gary Berendzen moved to accept the agenda as presented. RB Brown seconded the motion and all approved.

**MINUTES**

President Jennings asked for corrections or additions to the April 2, 2023 board meeting minutes. Rick Dozier moved to accept the minutes as presented. Billy Smith seconded the motion and all approved. President Jennings asked for corrections or additions to the May 2022 convention meeting minutes. RB Brown moved to accept the minutes as presented. Grant Oetting seconded the motion and all approved.

**FINANCIAL REPORT**

President Jennings asked for a review of the March-April 2023 financial report. Gary Berendzen moved to accept the financial

*Continued on page 44.*

By David E. Hedrick, Fire Service Director (RET)

The American Fire Service has a complex history that is interwoven with the important inventions that significantly changed the operations and traditions of the fire service. Early on water was the best accepted method for the extinguishment of fires. American colonists quickly learned to utilize bucket brigades to get the “wet stuff on the red stuff”. As communities grew, the population soon recognized the need for substantial water supplies for their normal daily lives, as well as for providing a means of fighting the constant danger of fire.

As water supplies were developed and improved to meet daily needs, as well as for firefighting use by hand pumpers, things were set for the dawn of a new age. This new age would come about in the mid-1800s with the invention of the steam fire pump, along with its accompanying improvement in fire hose. The final piece of infrastructure to bring about the modern fire service was the need for a large and ready water supply.

Regarding these developments, Hebert Jenness in his early fire service history chronicle, said “with the steam engine and its hose tender ready for action, the need of a convenient and adequate water supply was apparent.<sup>1</sup> This would drive the further development of water systems and the engineering and implementation of the modern fire hydrant.

In a recent article in this series, the historic development of fire hose or “brandslang” was related to the important changes in operations and tactics that it brought to the fire service. As part of the study, early water supply and fire hydrants were briefly mentioned. However, there is significantly more to the development of fire hydrants and their impact on fire service. Mike Wieder, Executive Director of the International Fire Service Training Association, relates that “the ability to identify a sufficient water supply source and use it effectively to control a fire is one of the most basic functions of the fire service.”<sup>2</sup>

Whether it is called a fire hydrant, fire plug, spigot, tap, or firecock, the hydrant is an important part of the water supply infrastructure that provides the most common source of extinguishing agent used by the American Fire Service - water. The development of the fire hydrant is a part of history

that played an important role in establishing fire service operations and tactics that would lay the foundation of the modern fire service.

## FIRE HYDRANT DEFINED

The National Fire Protection Association’s (NFPA) *Illustrated Dictionary of Fire Service Terms* defines a “Fire Hydrant” as “a valved connection on a water supply system having one or more outlets and that is used to supply hose and fire department pumpers with water. NFPA 1141, 2003 ed.”<sup>3</sup> Interestingly, an earlier edition of *Fire Terms* (1980) gives a similar definition but with additional information relating that a “Hydrant” is “an upright metal casting that is connected to a water supply system and equipped with one or more valved outlets to which a pumper or hose line may be connected. (Also called fire hydrant, fire plug; see also wet barrel hydrant, California hydrant.)<sup>4</sup> This earlier book of fire terms lists a number of other terms involving hydrant parts, tools, and hose lay. Curiously these additional definitions were dropped over time.

A California Hydrant is a wet barrel hydrant that incorporates a unique feature in that it has separate internal valves located at and controlling each outlet on the hydrant.<sup>5</sup> Like other wet barrel hydrants it is used in areas that are not subject to freezing weather.

The change over time of the fire hydrant from a fire plug to a modern hydrant is related to its operational use and functions that affected its design and appearance. As will be seen later in this article, the first adaption from the fire plug was to insert a temporary metal pipe into the plug hole that was equipped with a fire department hose connection on the other end. Today, in the United Kingdom (Great Britain) the hydrant base connection is still underground (or “flush” with the ground), and a connector pipe is quickly hooked in to access the water by the fire apparatus. Usually a signpost and a yellow metal street cover with the letter “H” or “FH” mark the location. In the United States, almost all hydrants today are above-ground post or pillar-type hydrants.<sup>6</sup>

The American fire hydrant sits on the top of the ground and is connected to the below-ground water main via a pipe to the hydrant barrel. The two basic types of hydrant are wet and dry barrel. Though they both provide the same access to water,



Print of firefighters connecting steam fire engine to a hydrant.

their operating principles are different. The wet barrel “are designed to have water in the hydrant at all times.”<sup>7</sup> It is subject to water stagnating or freezing in cold climates. The Dry Barrel hydrant “has its operating valve located at the base or foot of the hydrant rather than the barrel of the hydrant. When operated properly, there is no water in the barrel of the hydrant when it is not in use.”<sup>8</sup> This is accomplished by a separate drain mechanism to drain water from the barrel when the main valve is closed. Because of the simple design and function of the wet barrel hydrant, they were the first type developed in America.

Though there is significantly more terminology and mechanics to know about water main systems and hydrants, the space limitations of this article prevent them from being covered here. It is hoped that the firefighter’s basic training has provided the pre-requisite knowledge sufficient to utilize and operate water supply connections for firefighting operations. The Fire Officer should also be well versed in water supply capacities and capabilities to effectively develop their tactical plan for fires or other emergencies requiring sustained water flows.

So where did the word hydrant come from? According to Paul Lyons’s book *Fire in America!*, the term hydrant originated in the





Courtesy National Fire Heritage Center Archives.

United States and is “derived from hydro (Greek: hudor, water).”<sup>9</sup> Merriam-Webster Dictionary gives the etymology or origin of hydrant as the Greek root “Hydro” or the derivative “Hydor” meaning water, and the word “Hydrant” appears to be first used in Philadelphia ordinances in 1806.<sup>10</sup>

When the historical development of the fire hydrant is examined later in this article, it will be seen that the fire hydrant was a derivative invention coming about from a simple device called a “fire plug.” The fire plug is an actual device first used with wooden water mains in the late 1700s. In the 1980 NFPA book *Fire Terms* the word “plug” is listed as part of the fire service lexicon. It is defined as “a term for a fire hydrant arising from the time when water was obtained by removing



Early Wood Water Pipe. Photo courtesy Firefighters Association State of New York Museum of Firefighting.

a wooden plug from the water main.”<sup>11</sup> The fire plug was a precursor to what would transition over time to become the fire hydrant. The term fire plug is still used today in some fire departments as a synonym for hydrant. Though a plug and hydrant were both used to gain access to a water supply, historically they were two different mechanisms.

### NON-PRESSURIZED (DRY) HYDRANTS

In addition to the types of hydrants mentioned, there is another variant used in rural areas that should be mentioned, the non-pressurized or dry hydrant. This hydrant or water access point usually resembles more of a standpipe steamer connection. It is found in rural areas or farms that have no municipal pressurized water supply. Generally, it is a fixed pipe and riser with a fire department connection that connects directly with a local static water source, such as a pond, or river. It provides a fixed site for the fire engine to connect the draft hose to and refill the booster tank by drafting for water shuttle operations.

While the definitions and descriptions of a Hydrant aid in defining modern fire hydrants, it will be seen that the ability to access a connection to the water supply

system started out significantly different in the early days of America’s Fire Service, starting with the “fire plug”.

### EARLY WATER SUPPLY AND FIRE FIGHTING

In examining the early development of the fire hydrant, a review of early fire fighting techniques and a community’s water supply needs to be covered. In the settlement of a new area, a number of necessities would have been considered by early colonists, with a freshwater (drinkable) supply a major factor. Because of this, settlements were first established near readily available freshwater supplies such as streams and lakes. In addition to surface water, early civilizations made use of groundwater supplies. To reach and utilize groundwater, shallow wells were constructed. Later deeper more elaborate wells were dug and constructed with brick or stone linings.

The Romans were some of the first to design and develop impressive water systems and sanitation sewers around 312 BCE.<sup>12</sup> Besides stone and brick aqueducts for water transport, Romans also constructed clay and lead pipes as well as used hollowed-out wooden logs.<sup>13</sup> However, during the Middle Ages



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(5th century to 13th century) little progress was made in water supply systems, and these early advancements in many instances appear to have been lost.

A resurgence of water system projects occurred in the 13th Century when London, England, channeled water from a spring to the city “through lead pipes and conduits.”<sup>14</sup> At the time the adverse health effects created by lead pipes were not known. In the early 1600s, London switched to using bored-out wooden logs as pipes fitted together to form water mains for the growing city. In 1664 France began using cast-iron pipes for water mains.<sup>15</sup> However, water system innovations would not show up in America until the 1700s.

In the settling of the American Colonies, initially, there was little industry and resources available and the colonists settled near-surface water supplies and also dug wells. This initially provided the necessary consumable water supply, along with providing a source for fire extinguishment.

In the early days of colonial America, a fire bucket was one of the first pieces of firefighting equipment. Fire buckets were traditionally made from leather and constructed by local leather artisans or craftsmen from available resources (tanned cow hides).<sup>16</sup> Some of the first fire prevention and protection ordinances in the American Colonies were passed by Boston in 1631 and later in New Amsterdam (to become New York) in 1647.<sup>17</sup> Additional strict fire ordinances were instituted in New Amsterdam by Governor Stuyvesant. One of these required “citizens to fill three, 3-gallon buckets of water at sunset and leave them on their doorstep.”<sup>18</sup> Since they were filled with water they were ready for use and saved time trying to draw water from a well or local stream. However, for a large fire, a water supply would have to be established.

To combat a fire, Bucket Brigades were commonly organized and consisted of two lines of people stretching from the town well or water source to the fire. They passed buckets of water to the fire, where the water was thrown from the bucket onto the flames. The empty buckets were passed back by an adjacent line of people to the water source to be refilled. Even though this means of fighting fire was rudimentary at best, it was at least a minimal level of fire protection. For more information on this unique era of fire history see the FFAM article *The Fire Bucket, a Part of Fire Service History*.<sup>19</sup>

Boston was the first community to purchase and utilize a hand-pumped fire engine to improve their firefighting capability. They purchased a “Newsham” hand-pumped fire engine from England and placed it in service around 1678.<sup>20</sup> Over time, other communities followed their lead by adding hand-pumped fire apparatus to their firefighting arsenal. These hand-pumped fire apparatus provided a more effective application of water and reach on the fire. However, early hand-pump engines still needed a water supply and relied on bucket brigades to fill the water box on the engine (pumper). So bucket brigades continued to be used to relay water from nearby wells or cisterns to the engine.

Later the limitation of using bucket brigades for the transfer of water was overcome by the invention of flexible suction hose by the Dutch artist and inventor, Jansz van der Heyden, in the early 1700s.<sup>21</sup> However, due to the Anglo-Dutch war, the adoption of techniques of using draft and attack hose was not implemented in England and America until much later.<sup>22</sup> With the development of more efficient pumps and draft or suction hose, the pump could be set up at the water source and supply itself by drafting water through the pump intake. The development of dependable riveted leather fire hose in America by James Sellars and Abraham Pennock in Philadelphia, PA, in 1803, provided the ability to stretch attack hose from the pumper to the fire.<sup>23</sup> This allowed better use of water supplies near the actual fire, as well as the new tactic of a direct fire attack on the seat of the fire. With the development of pressurized water supply systems, this new hose would soon be used in service as a supply line from the water main to the engine.

As villages grew, “water became critically scarce,” and these communities not only faced the need for potable (drinking) water for use by the citizenry in the growing and crowded communities but also a need for a water supply for firefighting.<sup>24</sup> The proximity of wells and family sanitation facilities (outhouses) created a health problem in obtaining readily available drinking water for the citizens.

In the late 1700s, several Yellow Fever epidemics struck the major cities of the American Colonies. In the summer of 1798, a severe epidemic broke out in Boston, New York City, and Philadelphia. Many causes have been speculated about what started the

Yellow Fever Epidemic. It was assumed that the disease had originated from shipboard immigrants and slaves arriving in the city. However, a number of others along with the city’s most prominent physician, Dr. Benjamin Rush, “believed it originated in the poor sanitary conditions and contaminated air of the city itself.”<sup>25</sup>

With stagnant and contaminated well water suspected of contributing to health epidemics and the combination of wells and cisterns unable to provide the necessary water for firefighting, public leaders and businessmen would embrace the need for a public water system.<sup>26</sup> This would lead to the development of the first community water supply projects in America.

### **THE FIRST AMERICAN WATER PROJECTS, WATER MAINS, AND FIRE PLUGS**

In America, the first community water projects involved simple water access through the construction of community wells or the placement of water cisterns (reservoirs) in strategic areas of the town. Cisterns (in groundwater storage containers) were kept filled with water through a variety of sources including capturing rainwater or hand-filling with buckets or hand-powered pumps. These cisterns, public wells, or alternative water storage systems provided a source of water for fire prevention efforts, as well as making consumable water available to citizens.

Some of the first water system projects involving piping or distribution of water were sponsored by innovative businessmen. They formed public corporations issuing stock to raise funding to build the necessary infrastructure to “introduce a copious supply of wholesome water” to the citizens and businesses of the community.<sup>27</sup> We will find that the impetus for most public water system projects was a combination of a need for both clean drinking water and water for firefighting purposes. However, there were some cases where the water supply project was primarily for firefighting.

The earliest known water supply project in the American Colonies was completed in 1652 in Boston.<sup>28</sup> It consisted of wooden pipes that carried water from local springs to fill a reservoir located near Dock Square.

References indicate that the next public waterworks were constructed at Bethlehem, PA, in 1761 by a millwright, Hans Christopher Christensen, who was originally

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from Denmark. It was the first known system to use a steam pump.<sup>29</sup> Though it was not a distribution system, it lifted water from a spring into a storage tank located in the village square.

The Aqueduct Corporation in Boston was incorporated in 1795 to bring water from Jamaica Pond to downtown Boston. They used “pitch-pine logs with three and four-inch bores” buried underground to carry water over fifteen miles. This first major American water supply project supplied over 1500 homes.<sup>30</sup>

A major water project was planned for New York by Aaron Burr, a famous businessman and in his youth a volunteer fireman. He formed the Manhattan Water Company with a plan to bring water from a distant pond into the city via a series of aqueducts and iron pipes. Though this plan did not come to be, the company instead built a reservoir on Chambers Street that was supplied with water pumped from neighborhood wells. The water was distributed through a series of “pitch-pine water mains” constructed of hollowed-out logs.<sup>31</sup> In addition to supplying water to their customers, the fire service had access to use the water mains as well. Fire plugs in New York were “first introduced in 1807.”<sup>32</sup> The institution of fire plugs soon spread, and according to John Morris in his book *Fires and Firefighters* “every half block or so a wooden plug was inserted which could be readily removed in case of fire.”<sup>33</sup> Unfortunately in this instance, the water system provided too little water flow for effective firefighting.

Though there is no definitive documentation, empirical evidence would point to this being the period and circumstance that would lead to the origin of the term “Fire Plug”. According to Paul Lyons’ book, *Fire in America*, “the letters ‘F P’ are still widely used to mark the location of ‘fire hydrants’.”<sup>34</sup>

Philadelphia’s water system project was one of the most successful providing ample water supply and pressure. Beginning operations in 1801, it provided water from the Schuylkill River to the city, servicing “63 houses and four breweries.”<sup>35</sup> The water system was also fitted with 37 fireplugs and had sufficient volume and pressure to meet firefighting needs. This effective pressure-fed water system led to an interesting new development in the history of the fire service.



Excavated old wooden water pipe. Note the original fire plug to the left.



Water Pod Auger 1750, used for drilling waterways in logs. *Photo from the Davistown Museum/Maine Memory Network,*

With the establishment of Philadelphia’s Hose Company One, an understanding was reached that they would lay hose and supply water from the fire main to Engine Number One at fires. On the first fire response, the Hose Company arrived before the Engine Company and went ahead and hooked to the main and laid hose to the fire. They began fighting the fire using adequate pressure off the water main system without being pumped by an engine. A novel new concept. The Engine Co. arrived and expected the Hose Co. to switch from attacking the fire directly to supplying their engine with water. The Hose Co. declined and continued to fight the fire, which one can only imagine led to some harsh words.<sup>36</sup> Over time rivalries increased between volunteer companies in Philadelphia and other large American cities to see who could put first water on the fire, and later on who could take control over the nearest fire hydrant. But that is another story in fire service history.

As water supply systems were developed they could be considered to be divided into two types, a static system or a pressurized system. A static supply would be represented by a passive water supply stored in tanks, cisterns, wells, or reservoirs. A pressurized supply system provides water under some amount of pressure created by gravity (gradient drop), flowing sources such as rivers or streams, or a fixed mechanical pumping system. An elevated storage tank would cross over from a static supply to a pressurized supply as it flowed from the bottom of the tank under head pressure. Static supplies required bucket brigades or hand or steam-powered pumps drafting to move the water from storage to



Colonial Hand Auger. *Photo from Colonial Williamsburg - Augers, Grimlets, and Braces.*

the fire. Pressurized supplies could move the water through water mains or fire hoses, depending on the available volume and pressure, from the supply to the area of need without further assistance. Modern water supply systems usually use a combination of gravity-fed (water towers) and direct pumping to provide constant water pressure on the supply distribution system.

Despite the expansion of the United States and the growth of cities, many communities still depended on wells and cisterns for water supply. Records indicate that in 1850, “there were only 83 waterworks systems in the United States.”<sup>37</sup> However, by 1896 public water works systems in the U.S. had expanded to over 3,000.<sup>38</sup> The introduction of cast iron pipe would substantially change the construction of water mains and the development of hydrants in the mid-1800s.

Of course, there are numerous other developments in water supply systems that led to the modern water utilities that the fire service utilizes today. The development of water grids for better multi-direction water

*Continued on page 34.*



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By Billy Smith, Director

As Memorial Day was approaching a few weeks ago, I was asked by Chief Lonnie Sensenich of the Carrollton Fire Department, with whom I also volunteer, to accompany him to a few cemeteries around Carrollton to put Fire Department flags on the graves of past firefighters of Carrollton FD. So of course I said I'd be honored, and he and I and Captain Ron Nolke set off with a list of names and maps of the locations of the graves. The three of us had a great time reminiscing and telling stories about some of the firefighters on the list. Those guys, although not with us in person anymore, are still with us in the lessons they taught us and the legacies some of them left behind.

Two of the graves that I placed flags on that day were my mentors. I started volunteering for the North Central Carroll Fire Protection District in Bogard in 1992. This rural fire protection district was formed in 1986 as the first fire protection district in Carroll County with the help of two of my mentors, Joseph A. Jackson and Billy Martin. When I joined North Central, Joe was our Training

Officer. He was a no-nonsense type of guy with a vast knowledge of the fire service and a lot of connections around the state, but he taught me

everything I needed to know as a firefighter and helped and encouraged me to become active in the FFAM. His question to us at EVERY training night was, "Ok, you can do it here tonight, but can you do it when you're half asleep at 2 o'clock in the morning?" We still recite these wise words.

Another great mentor of mine was Billy Martin. Billy was my Chief for a few years at North Central. He and Joe were great friends and both served on the Carrollton FD before joining North Central. In 1999, Billy retired and the Board, at his recommendation, appointed me as Fire Chief in his place. We had a retirement barbeque at the station in Bogard in honor of his dedication to the fire district. After the meal, he motioned me to follow him around the corner of the station and in private he said, "I want to give you something." He reached into his pocket and pulled out a gold money clip that looked like a miniature replica of his Chief's badge. He handed it to me and with a bit of a grin said, "This is all I have to pass on to you as the new Chief. I know it's small, but it's awfully heavy as you will soon find out." Man, was he right! Wiser words were never said.

So, I truly believe that I have succeeded in being the Fire Chief for North Central for 24 years now, because of the lessons I learned from those two great men that I'm proud to call my mentors. They both

stressed the importance of helping others in need and especially other fire departments. So, now several years have gone by since they passed, but I still do what I do because of what they taught me. I've become more active in the FFAM serving as District 11 Director and trying to offer help in any way I can to my neighboring fire departments. In May, I got to go to the Hale Fire Department's Station 2 in Avalon for a Fish Fry fundraiser. The fish was awesome, but the fellowship with those guys and gals was even better. The Hale Fire Department has gotten a good group of dedicated volunteers that are very new to the service. So, with them being my neighbors, I try to help whenever I can. I think of Joe and Billy would approve.

So, in closing, I ask you, "Who are your mentors?" Talk about them around the firehouse and the lessons they've taught you. Tell the stories. Listen to the Old Timers. Help your neighbors, especially your brothers and sisters in the fire service.

As always, let me know if there's anything I can do to be of service to your departments. Until next time, stay safe!



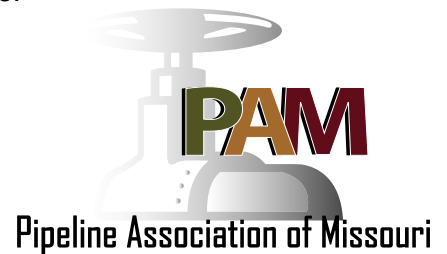


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2	Branson	09/26/23	6:00 PM
3	Springfield	09/27/23	11:30 AM
4	Buffalo	09/28/23	6:00 PM
5	Cabool	10/02/23	6:00 PM
6	West Plains	10/03/23	6:00 PM
7	Sikeston	10/04/23	6:00 PM
8	Jackson	10/05/23	6:00 PM
9	St. Louis	10/10/23	11:30 AM
10	Chesterfield	10/11/23	11:30 AM
11	Troy	10/12/23	6:00 PM
12	Hermann	10/16/23	6:00 PM
13	Washington	10/17/23	11:30 AM
14	Cuba	10/18/23	6:00 PM
15	Waynesville	10/19/23	6:00 PM

#	City	Date	Time
16	Jefferson City	10/23/23	11:30 AM
17	Boonville	10/24/23	11:30 AM
18	Mexico	10/25/23	6:00 PM
19	Hannibal	10/26/23	6:00 PM
20	Canton	10/30/23	6:00 PM
21	Macon	11/01/23	6:00 PM
22	Trenton	11/02/23	6:00 PM
23	Cameron	11/06/23	6:00 PM
24	Carrollton	11/07/23	6:00 PM
25	Warrensburg	11/08/23	6:00 PM
26	Laurie	11/09/23	6:00 PM
27	Harrisonville	11/13/23	6:00 PM
28	Kansas City	11/14/23	11:30 AM
29	St. Joseph	11/15/23	11:30 AM
30	Maryville	11/16/23	6:00 PM



To learn more about our pipeline safety programs, visit [www.showmepipeline.com](http://www.showmepipeline.com). Meeting registration will go live on the PAM website by mid-August.



Training Center is a self-paced online training available 24/7 for those unable to attend in-person meetings, or as an enhancement to annual programs. Register for access at [trainingcenter.pdigm.com](http://trainingcenter.pdigm.com) and use code: 2023CORE



# OVERDUE DEPARTMENT REGISTRATION

By Eric Hartman, Mutual Aid Coordinator, Missouri Division of Fire Safety



The following Missouri fire departments are overdue with their fire department registration for 2023. All Missouri fire departments are required to register with the State Fire Marshal annually IAW RSMo. 320.271. For assistance in completing your registration, please contact Eric Hartman at 573-751-1601 or by email [eric.hartman@dfs.dps.mo.gov](mailto:eric.hartman@dfs.dps.mo.gov).

Albany Community Fire Protection District  
Alton Fire Department  
Amsterdam Fire Department  
Anderson Fire Department McDonald  
Anniston Volunteer Fire Department  
Arbyrd Volunteer Fire Department  
Armstrong Fire Protection District  
Ashburn Rural Volunteer Fire Department  
Aurora Fire Department  
Auxvasse Fire Department  
Avilla Fire Protection District  
Barnard Fire Protection District  
Bell City Volunteer Fire Department  
Belle Fire Protection District  
Berkeley Fire Department  
Bethany Fire Department  
Bevier Fire Protection District  
Birch Tree Volunteer Fire Department  
Bismarck City Fire Department  
Bismarck Fire Protection District  
Bismarck Rural Fire Protection Assoc, Inc.  
Blairstown Fire Department  
Bois D'Arc Fire Protection District  
Bolckow Fire Protection District (BOLC)  
Browning Volunteer Fire Department (BROW)  
Bucklin Volunteer Fire Department  
Cabool Fire Department  
Cainsville Fire Protection District  
Caney Mountain Volunteer Fire Department  
Caplinger Mills Volunteer Fire Department, Inc  
Carterville Fire Department  
Center City and Rural Fire Department  
Central Polk County Fire Protection District  
Charleston Department of Public Safety  
Clarence Community Fire Association  
Clarence Community Rural Fire  
Clarksville Volunteer Fire Department  
Clarkton Fire Department (CLAR)  
Claycomo Fire Department  
Clever Fire Protection District  
Columbia Fire Department  
Competition Volunteer Fire Department  
Concordia Fire Protection District  
Conway Volunteer Fire Department  
Cosby Helena Fire Protection District  
Crane City Fire Department  
Dent County Fire Protection District  
Doe Run Fire Protection District  
Downing Community Fire Association  
Dudley Volunteer Fire Department  
Duke Rural Fire Department (DUKE)  
Dunnegan Rural Fire Department  
East Lynne-Gunn City Fire Protection District  
East Perry County Rural Fire Protection Assoc.  
East Prairie Fire Department  
Edgar Springs Fire Protection District  
Eldridge Fire Department  
Elmer Rural Fire Association  
Everton City Fire Department  
Everton Rural Fire Department (EVTR)  
Fairfax Volunteer Fire Department  
Farber Volunteer Fire Department

Festus Fire Department  
Fillmore Fire Protection District  
Foster Volunteer Fire Department  
Frankford Volunteer Fire Department  
Fremont Fire Protection District  
Gilman City Fire Protection District  
Glasgow Fire Protection District  
Goldman Fire Protection District  
Goose Creek Lake Fire Department  
Green City Fire Department  
Green City Rural Fire Department, Inc.  
Green Township Fire Protection Dist. #40666  
Halfway Fire and Rescue  
Hamilton Fire Department  
Hayti Fire Department  
Hermann Volunteer Fire Department  
Houstonia Fire Department  
Humansville Fire and Rescue  
Hume Fire Department (HUME)  
Hurdland Volunteer Fire Department  
Hurley Fire Protection District  
Jameson Fire Protection District  
Jerico Springs Fire Protection District  
Joplin Fire Department  
K.A.W. Fire Protection District  
Kearney Fire & Rescue Protection District  
King City Fire Protection District  
Koshkonong Volunteer Fire Department  
Laclede Community Fire Protection District  
Lake City Fire and Emergency Services  
Lake Creek Fire Department  
LaMonte Community Fire Association  
Lawson Community Fire & Rescue Prot Dist  
Lemons Rural Volunteer Fire Dept  
Liberty Township Fire Protection District  
Lick Creek Valley Volunteer Fire Department  
Little Dixie Fire Protection District  
Locksprings Fire Dept  
Lockwood Fire Protection District  
Louisburg Comm Fire Prot Assoc. Inc. (LOUI)  
Louisiana Volunteer Fire Department  
Mansfield Fire Department  
Mc Fall Fire Department  
Medicine Creek Fire Protection District  
Mercer Fire Protection District (MERC)  
Metro North Fire Protection District  
Middletown Community Fire Protection Dist  
Milan Fire Department  
Milan Rural Fire Department  
Miller Rural Fire Protection District  
Millersburg Fire Protection District  
Miner Fire Department  
Montauk Rural Fire Department  
Montrose Fire Dept (Mont)  
Mt Pleasant Fire Protection District  
Myrtle Volunteer Fire Department  
Naylor City Fire Department  
New Cambria Volunteer Fire Department  
New Hampton Fire District  
Northeast Ambulance & Fire Protection Dist  
Northern Reynolds County Fire Protection Dist  
Northwest Holt County Fire Protection District

Novelty - Plevna Fire Department  
Otterville Fire Protection District  
Park Hills Fire Department  
Parnell Fire Protection District  
Pattonsburg Rescue and Fire Protection Dist  
Perryville Fire Department  
Pineville Rural Fire Department  
Plato Rural Fire Protection Association  
Pleasant Valley Fire Department  
Point Lookout Fire Department  
Polo Volunteer Fire and Rescue Department  
Poynor Volunteer Fire Department  
Protem Fire Protection District  
Quad County Fire Protection District  
Regional West Fire Protection District  
Richwoods Fire Protection District  
Robertson Fire Protection District  
Rock Community Fire Protection District  
Roscoe Township Volunteer Fire Department  
Rover Volunteer Fire Department  
R-V Fire Protection District  
Saline County Rural Fire Protection District  
Sarcoxie Rural Fire Protection District  
Schell City Rural Volunteer Fire Department  
Senath Fire Department  
Seymour Fire Department  
Shelby Community Fire Department  
Shoal Creek Fire Protection District  
Skyline Area Volunteer Fire Department  
Southern Fire Protection Dist of Holt County  
Southwest City Volunteer Fire Department  
Spickard Fire Protection District  
Stet Rural Fire Protection District  
Stewartsville Fire Protection District  
Stotts City Fire Department  
Taberville Volunteer Fire Department  
Tarkio Fire Department  
Tarkio Rural Fire Protection District  
Tecumseh Volunteer Fire Department  
Timber Knob Volunteer Fire Department  
Tri-C Volunteer Fire Department  
Union Township Fire District  
Van Buren Fire Department  
Vandalia Fire and Rescue (VAND)  
Versailles Rural Fire Protection District  
Walker Rural Fire Department  
Warrenton Fire Protection District  
Warsaw Fire Protection District  
Washburn Fire Protection District  
Wasola Fire Department  
Waverly Fire Protection District  
Webb Creek Volunteer Fire Department  
Webster Groves Fire Department  
Wellsville Fire Protection District  
West Central Fire Protection District  
West Platte Fire Protection District  
West Republic Fire Protection District  
Whiteman AFB Fire Emergency Services  
Williamsville Volunteer Fire Department  
Winfield-Foley Fire Protection District  
Yellow Creek Fire Protection District  
York Township Volunteer Fire Department



# WINNER!

## MISSOURI 811®



Each year, fire stations throughout Missouri can submit a photo of a safe digging banner displayed at their location which enters them into a giveaway for a 65" TV. Fire Chief David Miller represented this year's winner, the Johnson County Fire Protection Dist #2, at the Fire Fighters Association Convention held in Springfield on June 3rd. The prize was awarded to him by Charlie Peel, Damage Prevention Manager for Missouri 811.

# THANK YOU

to all who participated!

By Caruthersville Fire Department

Friends, family, members of the fire department, and neighbors from across the state joined with leaders last Saturday to celebrate Caruthersville Fire Chief Charlie Jones and to honor him for his 53 years of service to the community through the fire department. Jones is a pillar in the community, a great blessing to many, and will continue to be an asset to his friends and neighbors.

Assistant Chief Lynn Moss will be stepping into the Chief position and Jones assures the community Moss is ready and able to take the lead.

“Yesterday I celebrated my Retirement Celebration after 53 years as a member of the Caruthersville Fire Department, 37 years as Fire Chief,” said Jones. “I was overwhelmed by the celebration, how well planned it was and to those who took the time to come and celebrate with me. It was definitely an awesome event. Something I will cherish for the rest of my life. I would like to thank Mayor Sue Grantham and all of the members of the Fire Department, my family and everyone who helped to make it such a great time.

The presentations were fantastic from the resolutions to certificates to all of the cards, gifts, money, flowers and a beautiful gold-plated axe given by the great guys at the Hayti Fire Department, and a check from the Steele Fire Department. I had the opportunity to meet with former Firefighters and Fire Chiefs. I thank God for having served this community for the past 53 years, and I appreciate all who have wished me well in my upcoming retirement on May 31. May God Bless!”





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**District 12**

**SUMMARY FROM THE SOUTHEAST**

**By Rob Francis, Director**

I hope your summer is going well and all is going well in your organizations. At the time of writing, we are getting ready for the July 4th activities and watching the weather hoping for rain. Hopefully, emergency calls were minimal with maximum help when they did occur in your organizations.

The 2023 Convention was fun for those that made it to Springfield. The venue was outstanding, with very nice rooms, and nice pools, and the staff was great. The attendance was down but everyone in attendance seemed to have a good time. One of the things discussed in the general meeting on Sunday was the attendance and the format of the Convention. If anyone has ideas reach out to the Convention Committee or your district board members.

Chief Charlie Jones retired from Caruthersville Fire Department on May 30, 2023, after 53 years of service which included 37 years as Fire Chief. A lunch and reception were held on May 20th in Caruthersville to celebrate Chief Jones's retirement. It was a great turnout to celebrate the career of a great man and a good friend. Several awards were given to Chief Jones for his service to the citizens of Caruthersville and the Missouri fire service.

The Cape Girardeau County Firefighters Memorial located at Jackson Fire Rescue in Jackson, MO installed the first brick for Captain Ivan LeGrand on May 4. Officers and the Honor Guard from Cape Girardeau Fire Department were in attendance to honor Captain LeGrand as well as

firefighters and public officials from around Cape Girardeau County.

On April 20 Sedgewickville Fire Protection District held an open house which included food, games, and live music from local musician Zack Robinson. The Missouri State Highway Patrol, Air Evac Membership Team, and American Red Cross were also there with safety items. The Southas Coalition for Roadway Safety and Around the Clock Medical Alarms sent safety literature as well. Around 50 of the residents of the District came out and participated. Great job Sedgewickville in promoting safety for your district and community involvement.





# A Message From The 2nd VP



Grant Oetting

The FFAM just had its annual convention in Springfield, where we brought families back together. The keynote speaker Mike Snider of the Lees Summit Fire Department had a very moving speech about putting our families first and sticking together. After the speech, Chief Snider received a standing ovation and I had several of our members come up to me saying what a great speaker he was and received many calls and texts on how well they loved Chief Snider’s message. Thanks, Chief Snider for your great message, our membership loved it.

As you have seen in my previous articles I have been talking about important issues in the fire service today, I would like to continue that message with this article. In this article, I will talk about thermal imaging cameras.

Thermal imaging camera (TIC) use in the fire service is becoming more widespread and more commonplace than ever before.

With the overall reduction in cost and different manufacturers competing for a small market share, the fire service has seen tremendous improvements in thermal imaging in the past decade. Or has it?

The issue is this: Fire service TICs are being purchased by fire departments as common tools. But in many cases, they are being purchased without the necessary research, education, and training. In my research and travels, I have found the following to be a common thread statewide.

A lack of performance-based testing or needs assessment criteria: These criteria define the best TIC for an organization’s use, which is done through a needs assessment process. A fire department needs a specific criterion to make its final thermal imaging purchasing decision, which should include a testing program that allows it to see how its top three choices perform in live fire situations. A TIC should not be purchased based on how it performs on the sales floor or in nonfire conditions. It should be evaluated in the environment in which it is designed

to function and tested by those who will be the primary users of the technology, such as the company officers. This provides the fire department with valuable feedback on the TIC’s performance, its ergonomics, and a chance to place a few different brands side by side in the fire environment. In the fire environment, firefighters can truly “see” how their choice of TIC will enhance or diminish their job performance on the fireground. All TICs are NOT the same, and simply purchasing one because it is economical will often cost the organization even more of the citizens’ tax dollars in the future.

A lack of thermal imaging education and training: The fire service is in a transitional period of our history as we are shifting from fighting fires in predominantly light-weight and standard construction types to fires in more performance-based designed buildings that consist of engineered lumber, glues, laminates, etc. These structures present numerous challenges for firefighters by themselves, but the increased use of synthetic components produces a rapidly developing fire environment with almost zero visibility. This rapid-fire progression is primarily because of high-heat-release-rate fuels, such as a mattress that produces 4.5 MW of heat energy whereas only 2.5 MW is needed to produce flashover conditions in a standard-sized bedroom. These conditions, along with our advances in personal protective equipment (PPE), demand a thermal diagnostic tool to assist firefighters with assessing and mitigating this environment.

A firefighter’s senses are often deprived of them in these environments because of the higher thermal protective performance (TPP) ratings of his PPE and the limited visibility of the ventilation-limited fires created from high-heat-release-rate fuels. As a general rule, if a firefighter is feeling painful heat sensations, he may have already been burned or is about to receive a second-degree burn, and this warning sign is felt often too late. Regarding firefighter training, very little applicable information is taught regarding TPP, total heat loss (THL), thermal classifications, and how high heat release rates combined with heat flux limit the amount of time that firefighters are protected. The fact that each piece of equipment is designed to perform under certain temperatures for a certain duration isn’t considered in how long crews should remain

inside for the attack effort. Depending on conditions, firefighting crews can saturate their gear with heat at lower temperatures and become burned after long exposures and have no signs of damage to their PPE whatsoever. According to M.K. Donnelly, “Shell fabrics used in the construction of NFPA 1971 compliant thermal protective ensembles typically do not exhibit thermal damage until they reach temperatures above 300°C (572°F). NFPA 1971 [1] calls for firefighters’ protective ensembles to be tested at a thermal exposure of 260°C (500°F) for five minutes.”

Therefore, because of these conditions, the TIC is being incorporated into self-contained breathing apparatus (SCBA) face pieces, and handheld decision TICs are becoming more prevalent. But, the fact remains that the fire service doesn’t emphasize training and education in the area of thermal imaging. It is apparent in many cases as several departments are purchasing situational awareness TICs—designed to assist the firefighter in locating the fire and or a point of egress—to replace their older decision-making TICs, which are higher resolution, have faster processor speed, and are designed to assist with enhanced tactical decision making. A situational awareness TIC is not sufficient to replace a handheld decision-making TIC. This is but one example of the fire service latching onto technology without the proper understanding or education of its original intent and limitations.

The consensus standard on training for thermal imaging use follows. Ask yourself if you are abiding by these.

- A thermal imaging training program SHALL be implemented.
- Risks to participants during training shall be kept to a minimum
- The authority having jurisdiction (AHJ) shall establish written policies for TIC training that meet the requirements of this standard.
- The policy shall address the training requirements for types of incidents where TICs may be used.
- The training policy shall include an annual review of member competence in TIC technology, operation, application, use and limitations, care, and maintenance.

- TIC training shall include practical evolutions using TICs.
- The training program shall include both individual and crew training.
- Before new or unfamiliar TICs are placed into service, training, and education relating to those imagers shall be provided for all affected members.
- Members shall be provided with classroom education and hands-on familiarization in TIC functions before being permitted to operate TICs

The National Institute for Occupational Safety and Health (NIOSH) has identified that in firefighter line-of-duty deaths (LODDs), the TIC failed to be deployed by firefighters in 38 percent of these incidents. This can be attributed to many factors, but often the reasons that I find in my travels are that they only use the TIC during search and overhaul operations. Joseph DeVito says it best in his program “Thermal Imaging—It’s More than Search & Overhaul” that we can be more efficient and successful if we would expand our understanding of the tool. While using the TIC in search and overhaul is warranted, we are reducing our overall effectiveness significantly by not using the TIC tactically in the following areas:

- Hazmat incidents.
- Size-up.
- Directing hose streams.
- Checking the thermal environment.
- Maintaining situational awareness.
- Motor vehicle accidents.

Firefighters who conduct search and rescue efforts with the assistance of a TIC are 60 percent more effective; reduce their overall search time by 50 percent; and, if they become disoriented or lost, find their way out of the structure 100 percent of the time if equipped with a TIC.

These are the many ways our firefighters can use a TIC for their safety and also for others. If the FFAM can be of any assistance to you or your department please feel free to email me at [grant\\_oetting@yajoo.com](mailto:grant_oetting@yajoo.com) or call my cell at 660-229-4525. If I don’t answer please leave me a message and I will get back to you. Until next time...be safe my brothers and sisters.

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**Missouri Women of Fire: Formed by the Past; Guiding the Future**

# 5 DRIVING EXPERIENCES YOUR TEEN NEEDS

Teen drivers are the most accident-prone of all drivers because of one major factor: inexperience. In fact, their first **6-12 months** of solo driving is the most dangerous stretch of their lifetime as a licensed driver.

Because they've logged far fewer hours compared to other drivers, they are less able to predict – and properly respond to – hazards, sudden changes in traffic and erratic behaviors by other drivers. They also typically haven't made a habit of defensive driving techniques, leaving them vulnerable to making wrong decisions in the moment.

If you have a young driver (or soon-to-be licensed driver) in the house, as a parent, your years of driving experience are an invaluable asset. Here are some ways you can leverage that knowledge and expertise to help boost your teen's safe driving know-how.

## The Learning Permit Phase: A Golden Opportunity

Many new teen drivers complete their learner's permit training lacking important real-world driving skills. You can help your teen shore up that deficit by serving as co-pilot in a range of driving scenarios and situations during the permit phase. By exposing them to – and



coaching them through – diverse experiences behind the wheel, you will help them become a confident, safe and independent driver.

Although you may feel more secure behind the wheel, here are some driving scenarios that teens need to experience.

### 1. Bad weather

There's a big difference between answering driver test questions about how to handle bad weather and how to actually do it in the moment. When possible, have your teen drive you during the following weather events.

- Snow
- Wind
- Heavy rain
- Sleet

### 2. Different roads

Different roadways (and intersections) call for different driving skills and techniques. Ditto for traffic situations. Expose them to as many as you can, including:

- One-way roads
- Two-lane roads with high speed limits
- Peak commute traffic
- Multi-lane highways and interstates
- Congested roads in urban centers
- Residential streets

### 3. Day, night, and everything in between

Bright light at dawn and sunset, as well as low light at dusk, affects drivers' visibility and also influence traffic patterns and behaviors. Practice driving with your teen at different times of day and night. Coach them on the adjustments they need to make in terms of following distance and defensive driving, as well as personal adjustments with visors, sunglasses, headlights and more.

### 4. Switch up passengers

For a new driver, devoting their full attention to driving and the road is incredibly important. Knowing that your teen won't be driving alone forever, why not invite another family

member or friend along so your teen can start strengthening their "focus muscles"? Distractions are a major cause of accidents among teens, so the sooner they can begin successfully managing distractions while driving, the better.

### 5. Different cars

If your family has multiple cars, have your teen practice in each of them. Sedans drive much differently from SUVs, and stick shifts from automatics, etc. – all are good for them gaining familiarity with a variety of vehicles.

## Teen Drivers' Most Common Errors

In addition to exposing your young driver to a range of on-the-road experiences, be sure to also help them cultivate good driving habits. Here are the top errors that inexperienced drivers make – keep an eye out for them and coach your teen along the way.

- 1. Lack of scanning** – Inexperienced drivers typically detect hazards later than more experienced drivers and may be unsure how to react. Left turns are especially dangerous for them.
- 2. Distractions** – No matter whether they come from inside or outside the vehicle, distractions are a common reason for teen crashes.
- 3. Speeding** – This includes driving too fast for road conditions or weather as well as inadequate braking. This error commonly ends in rear-end events.
- 4. Tailgating** – Inexperienced teens haven't yet gained a feel for safe cushion distances and can easily follow other vehicles too closely.

Teens need extra time and experience to master good driving skills. By accompanying them in a variety of driving settings and conditions – as well as lending your years of expertise – you'll help them develop critical skills for more safely navigating our roadways. For more teen driver safety tips, visit: <https://mycalcas.com/2019/10/teen-driver-safety-tips/>.



# District 3

Larry Jones  
Director

Greetings from District 3. Thank you! Thank you!! Thank you!!! Thank you for letting me become a member of FFAM such a loooooong time ago. Thank you for letting Art Smith talk to me not only about FFAM but becoming a director such a loooooong time ago. Thank you for letting me be your District #3 Director such a loooooong time ago.

There is so much that goes into an FFAM year that it's a good thing we have a year to do everything. We usually start with Legislative Day at Jefferson City.

Meeting with our State Fire Marshall and then going to the capital to meet with our representative or senator from our district. It is a trip well worth your time and effort. The FFAM Convention is always a learning time. You travel to a destination in Missouri that allows you to compete with other firefighters during competition, visit with fellow firefighters, and take care of the business of the FFAM. You make firefighting friends that become part of your family. When the Mo State Fair comes in August, you have a chance to work in a fire department that is only in service for 11 days. You will learn about fire stations in different parts of the state, have a chance for training, and again make friends that will become part of your family. If you can't serve, you should at least spend time there to see all that is going on at the Fair. One of the great things that is done by the FFAM Museum/Memorial Committee, is the Candlelight Service for our fallen firefighters held at the Museum in Kingdom City on a Sat. night. The next Sunday is a service to honor our firefighters that have died during the year before and firefighters that have not been honored in years past. Both days are very special and should be one of the things you put on your calendar every year. There are other things going on at different times and by reading the FFAM magazine you can follow all the happenings in FFAM.

I have now reached the age where it's time for new and younger firefighters to take over. This will be my last newsletter post as



# District 7

Robert Brown  
Director

Hello from the east side of the state and District 7. I hope all is well. I first want to extend my thanks to the FFAM Board for an excellent convention, job well done and thank you. And a big congratulations to the firefighter challenge winners for a job well done. To Southern Stone County Fire Protection District for their top winners *Firefighter of the Year, Chief Officer of the Year, and Department of the Year*, congratulations to all.

At this convention we said goodbye to two important Directors of the FFAM; District 2 Director Greg Wright and District 3 Director Larry Jones. Both were recognized for their dedication and service to the FFAM Board of Directors. Director Jones was also honored as the 2023 VFIS Phil Sayer Lifetime Achievement Award winner, a very deserving honor.

Can you believe how fast time is going by? When this article will be published it will be in the middle of July, so I hope everyone had an outstanding, safe and great 4th. Just think after the 4th the next big event will be the Missouri State Fair August 10-20th and I'm extending an open invitation to attend the State Fair on the first Saturday, *First Responder Day*. With proper ID, First Responders will get in free of charge and immediate family will get in at a reduced price. Stop by the station for some refreshments and cool off.

And a friendly reminder that the Fire Prevention Poster Contest winners are welcomed to the fair with their immediate family as guests of the Missouri State Fair Fire Department and get your prize money for your masterpiece. Hope to see many at the State Fair. It's a great time and I hope each and every one has a great safe summer until then.

your District #3 Director. I'm still going to be around but as an FFAM member. Thank you again for allowing me to serve the Missouri firefighters.

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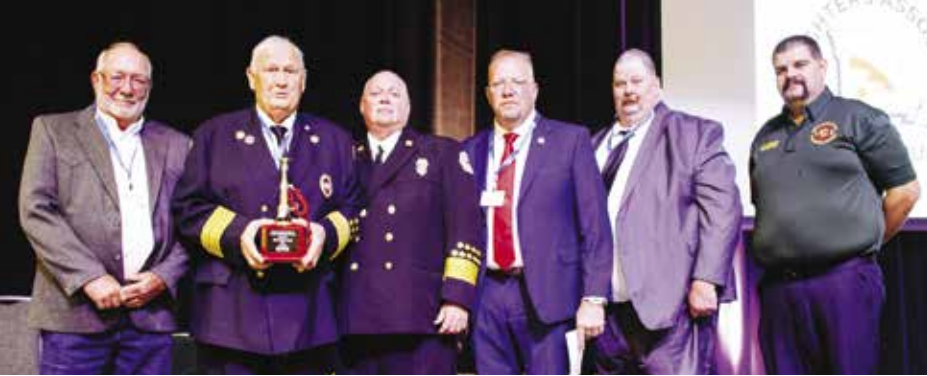
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*Thank you to Gail Hagans for taking photos of the convention.*



## FIRE FIGHTERS DIVISION (MALE)

Event	3rd Place	2nd Place	1st Place
2 Person Hose Coupling	Southern Stone 2	Little Dixie 2	Little Dixie 1
Extending a Line	Southern Stone 2	Little Dixie 1	Southern Stone 1
Replace Section of Hose	Little Dixie 1	Little Dixie 2	Southern Stone 1
Water Fight	Southern Stone 1	Little Dixie 2	Little Dixie 1
Bucket Brigade	Little Dixie 2	Southern Stone 1	Little Dixie 1
<b>Overall</b>			Little Dixie 1



## FIRE FIGHTERS DIVISION (FEMALE)

Event	1st Place
2 Person Hose Coupling	Southern Stone 1
Extending a Line	Southern Stone 1
Replace Section of Hose	Southern Stone 1
Water Fight	Southern Stone 1
Bucket Brigade	Southern Stone 1
<b>Overall</b>	Southern Stone 1

## JUNIOR DIVISION

Event	3rd Place	2nd Place	1st Place
2 Person Hose Coupling	Little Dixie 1	Southern Stone 1	Little Dixie 2
Extending a Line	Little Dixie 2	Galt	Southern Stone 1
Water Fight	Little Dixie 1	Southern Stone 1	Galt
<b>Overall</b>			Southern Stone 1

# 2023 FIREFIGHTER CONTEST

*Thank you to Gail Hagans for taking photos of the contest.*



# 2023 POSTER CO



1st Place • First and Second Grades:  
Mason Brinker • Washington Fire Department



2nd Place • First and Second Grades:  
Airabella Mahnken • Little Dixie Fire Protection District



1st Place • Third and Fourth Grades:  
Sydney Gipson • Little Dixie Fire Protection District



2nd Place • Third and Fourth Grades:  
Blaze Kriete • Washington Fire Department



1st Place • Fifth and Sixth Grades:  
Evelyn Jasper • Washington Fire Department

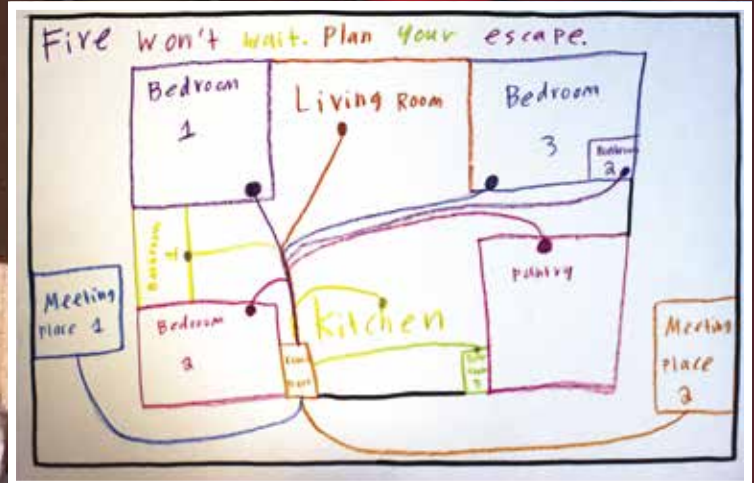


2nd Place • Fifth and Sixth Grades:  
Emily Garbs • Washington Fire Department

# CONTEST WINNERS



3rd Place • First and Second Grades:  
Gemma Wallach • Washington Fire Department



1st Place • Special Needs:  
Olivia Edwards • Washington Fire Department



3rd Place • Third and Fourth Grades:  
Ava Rodenbaugh • Little Dixie Fire Protection District



2nd Place • Special Needs:  
Andrew Deimeke • Little Dixie Fire Protection District



3rd Place • Fifth and Sixth Grades:  
Lydia Richardson • Washington Fire Department



3rd Place • Special Needs:  
Kendyll Bonine • Galt Fire Department

By Josh Koepke, Assistant Director

Greetings from District 11 on the west side of the state, I hope everyone is enjoying and having a safe 2023 thus far. I was able to catch up with a lot of you that had attended the annual convention and I want to thank those that were able to make the trip to Springfield, MO. I hope to see more at the 2024 convention. One of the topics I seem to hear during discussions at the convention and while interacting with other departments in my district was the recruitment of new young people. Not only to the fire service but public safety in general. I was approached by Captain Whetro with KCFD regarding the opportunity to interact with and observed what I think is a great partnership with an organization called Camp Fury which was hosted in Kansas City June 11-16, 2023. The aspiration and teamwork I witnessed with the participants and volunteer staff from the numerous agencies was impressive. I had a great conversation with the founder of Camp Fury, Chief Cheryl Horvath in Tucson, Arizona on the day of the aerial climb and what the camp had progressed and become. I was impressed with how many camps she said are beginning to be established throughout the country. This unique opportunity for high school-age ladies is an excellent example of how to promote jobs and create a career interest in public safety. After the camp conclusion on the 16th I spoke with Captain Whetro the following Monday regarding how the camp went and the feedback from the participants and she stated:

“It was another successful year that concluded at Camp Fury KC. This was the camp’s second consecutive year after being canceled right before its original launch in 2020. Camp Fury is a weeklong fully immersive experience for high school girls regardless of career aspirations, although the

focus is on gaining insight on public safety professions. The girls stay the night at Camp Prairie Schooner while spending their days at various public safety entities throughout the week.

Life Flight kicked off the first night with a surprise presentation and landing at Camp. Then the week was spent at the Kansas City Police Academy, Kansas City Kansas Fire Department Station 6, Kansas City Fire Department Station 14, and the Johnson County Crime Lab among other places. The campers spent time rappelling, climbing an aerial, doing search and rescue in smoked-out environments, learning defensive tactics and handcuffing with KCPD, and even got to participate in a tactical vehicular intervention. The purpose of the camp is not only to shed light on some of the things a public safety career may entail, but also to build courage, confidence, character, and leadership skills among the campers. Throughout the week, campers are spent working in a team-building environment and building their confidence with each situation they are able to successfully participate. They are mentored by female instructors who work in public safety professions around the metro area. At the end of the week, several young people graduate from Camp as completely changed individuals. Last year, one camper applied for the Fire Department while she was still at camp. Another is currently in EMT school after her experience.”

Camp Fury was started 14 years ago by Chief Cheryl Horvath in Tucson, Arizona. When asked what the motivation for the camp idea her response was, “She wanted to shed light on public safety professions for young women who may be interested or had never thought about the career path previously.”



Now, there are several Camp Fury’s throughout the country. Illinois will be hosting its first one in just a few short weeks. The organization has the week-long Camp Fury but also has a one-day version that they call Catching Fury which is for 7th, 8th, and 9th grade age ladies to get a glimpse of what the week-long camp will entail.

Although Camp Fury is an entity of Girl Scouts, campers do not have to have been a Girl Scout before attending. Part of the application process for Camp Fury includes signing up for Girl Scouts, but there are no other Girl Scout requirements or obligations outside of Camp Fury if the camper doesn’t

Volunteers and staff that make Camp Fury happen in Kansas City.





Camp Fury founder Chief Cheryl Horvath with camp attendees.

Captain Whetro with camp attendees.

want to participate in any other programs. There are scholarships available thanks to sponsorship from local firefighter unions.

Camp Fury is a great opportunity for young women to physically and mentally challenge themselves in an encouraging environment.

If you are interested in starting a Camp Fury in your local area, the first step is to get in touch with the head of your local Girl Scout council and tell them you are interested in starting the program. Camp Fury KC has a lead team with one person from each major department that participates. The lead team

works with Girl Scouts to plan, fund and organize the program.

You can also reach out to Captain Kelsey Whetro via email at [Kelsey.whetro@kcmo.org](mailto:Kelsey.whetro@kcmo.org). Captain Whetro is one of the lead team members for Camp Fury KC.

Graduation from camp with the ladies and mentors.



## NEW ENGINE FOR WESTERN TANEY COUNTY FIRE DISTRICT

The Western Taney County Fire District placed a new Rescue/Engine in service on June 3, 2023. Besides being a regular engine, it is set up for rescue work, primarily vehicle extrication. The Engine was built by Rosenbauer and has a 1,500GPM rear-mounted pump, a 750-gallon water tank and a light tower. The engine fights a lot of house fires in non-hydrant areas and the rear-mounted pump allows the porta-tank to be set up behind the truck instead of beside it. It also provides a long compartment behind the cab for brooms, shovels, etc. This engine replaces a 2000 Freightliner.



## GRAVOIS FPD PROMOTION AND RETIREMENT ANNOUNCED

Congratulations to Captain Chad Nicholson on his promotion to Deputy Chief/Training, he is filling the position vacated by Deputy Chief John Scheper following his acceptance to a position with Fruitland Area Fire Protection District.

Fire Chief Hancock has set the date of April 1, 2024, as his retirement and applications for Fire Chief are being accepted. The application period closed on September 1, 2023. The initial contract will be for a 3-year period with full benefits, the following contract will be for 5 years.

Application package with full information at: [www.gravoisfire.org](http://www.gravoisfire.org) under the job opportunities tab.

Immediate opening for one firefighter position and accepting applications for a future hiring list.



Fire Chief Hancock has announced his retirement for April 2024. Congratulations to Captain Chad Nicholson on his promotion to Deputy Chief/Training.





## MCELYA RETIRES FROM OSAGE VALLEY FPD



Jean McElya retired from the Osage Valley Fire Protection District after 14 years as Head Dispatcher, Reports Officer and Ladies' Auxiliary. Thank you, Jean!



## DRAGER UNITS FOR TIPTON

The Tipton Rural Fire Protection District just received nine new Drager ACBA units with nine extra bottles. They were purchased with the help of the Moniteau County Commissioners helping the communities in the county with ARPA funds. These units are replacing old dated units that had been in service for the past 25 years. On June 13, the firefighters were trained on the units and they were put into service.

In addition to the Rural, the Tipton City Fire budgeted 7 new units with spare bottles. These were also put into service and while training was done on the new units, we also had a refresher training on the Air Supply Trailer that we have had in service since 2005.

The units and training were provided by Billy Hurt who works for Alex Air Apparatus. Alex Air is located out of Alexandria, MN with Billy being a local rep out of Boonville, MO.



## CHIEF LARRY JONES RETIRES

On Saturday, March 25, from 1-4 pm, a retirement celebration was held for Fire Chief Larry Jones by the Madison West Monroe Volunteer Fire Department. At 2 pm, a ceremony was held with words honoring Larry. The Madison Fire Board presented Larry with a plaque for serving the Madison Fire Dept. for 50 years. Missouri State Fire Marshall Tim Bean presented Larry with a certificate honoring him for 50 years of Fire Service. FFAM President Larry Jennings added words about Larry's work as an FFAM member and board director. There were also other firefighters that spoke, new and old sheriffs from Monroe County that had worked with Larry on different incidents, and Paris Fire Chief Steve Jones (Larry's brother). Larry and his wife received folding canvas rocking chairs with their names on them to be used to watch the Madison firefighters work. Dale and Nancy Ransell gave him a handmade firefighter quilt to cover himself while he was watching the firefighters working. There were many other gifts and lots of cards for Larry's retirement. The Madison Community Center was decorated with fire-related items by the Madison Firefighters. Cake, cookies, and punch were served to the many guests that were there.

Larry wants to thank all of his fellow FFAM members that showed up at the retirement celebration. For many of them, it was a long drive, but he was so glad to see all of them. Again, thank you!

flow; maintenance of mains to prevent corrosion and tuberculation that limits water flow; hydrant maintenance, testing, and preplanning fire flow calculations are all part of the modern water system and the fire service. All these are subjects with which the experienced firefighter and fire officer should be knowledgeable.

The burgeoning water system projects in the early days of the United States began to solve the problem of meeting the need for potable water for citizen health and sanitation and use in community fire protection in the growing communities and cities. However, there were still issues to overcome and improvements to be made to effectively utilize the available water supply. A number of these improvements would be developed by the Fire Service members themselves.

### MAKING WOOD WATER PIPE

Originally wood water pipes were made of wood logs that were hollowed out by boring a hole, length-wise, in the center of the log using an auger. The log ends were “beveled to fit together and when soaked with water would swell and form a water-tight seal.”<sup>39</sup> The size of the log and the diameter of the borehole varied by resources and locations. Generally, logs used to make water pipes (or pump logs) were made from freshly cut trees that were “eight to nine inches in diameter.”<sup>40</sup> The logs were sections of tree trunks eight to nine feet in length. The log was secured on a bench frame (horse) and a hole was bored lengthwise in the center of the log from both ends using a “pod auger”. This tool was different from a hand auger having one cutting edge that allowed it to stay true in the center of the log.<sup>41</sup> Generally, the waterway hole was three to four inches in diameter. The ends of the pump log were shaped with a male and female end to fit together with another log in sequence. The male end “was pointed something like a pencil with a tool called a ‘sheeps-head’.”<sup>42</sup> The female end was trimmed with a tool called a “rimmer” that made “a cone-shaped pocket in the end of the log.”<sup>43</sup> Logs were driven together to seat the ends and the water flowing through them helped swell the logs to make a water-tight joint.

For larger wood water mains a method of constructing wood pipes of individual wood staves were used, similar to constructing a bucket. Wood staves with tongue and groove-type joinery were used to construct a round pipe and secured with metal

bands and a coating of tar on the outside. Staves were of “staggered lengths” to fit in additional boards at the ends to make a continuous section of pipe.<sup>44</sup> The short cross-grain openings for fire plugs could be bored after the pump log was in place with a large diameter hand auger of the day.

### THE FIRE PLUG-IN USE

Generally, the procedure to access water for firefighting from wooden water mains by the firemen of the day would be to dig down to the buried water main piling dirt up to form a temporary dike around the hole creating a small basin or reservoir. They would then bore a hole using a hand auger to drill into the wood water main to release water to fill the earthen basin. From there fire buckets could be filled or a drafting hose inserted from the hand pumper.<sup>45</sup> In the case of existing fire plug locations, the site was generally marked in some way, such as a wooden post or sign indicating the location of the plug. In this instance, the firemen could dig down and remove the existing plug. After use, the new hole or existing hole in the water main were plugged with a round tapered wooden plug (Fire Plug), the earthen hole refilled with dirt, “and the street surface restored.”<sup>46</sup> Pre-sized, tapered wooden plugs were usually carried by the engine or hose company for plugging holes.

Later on, a short length of iron pipe sized to fit pre-drilled plug holes was carried on the engine to insert in the plug hole. The other end of this “standpipe” would have a “screw” or threaded type coupling to match the fire hose connection of the engine or hose company. Using this connection a drafting hose from the engine could be connected, or where sufficient pressure from the water system was available a regular hose line could be stretched to supply water. Firemen who were assigned the job of taking out the plug and inserting “the tapered standpipe against good pressure” usually found it to be “a difficult and always wet task.”<sup>47</sup> This soon led to the addition of a controlling gate valve or cock fitting on a branch connection to the main. These innovations would form the basic concept that would lead to the introduction of the permanent above-ground “post-style” fire hydrant.

### FIRE PLUGS TO FIRE HYDRANTS

As water systems were improved or expanded, the concept of inserting predrilled holes in the wooden water mains fitted with “fire plugs” improved fire protection in

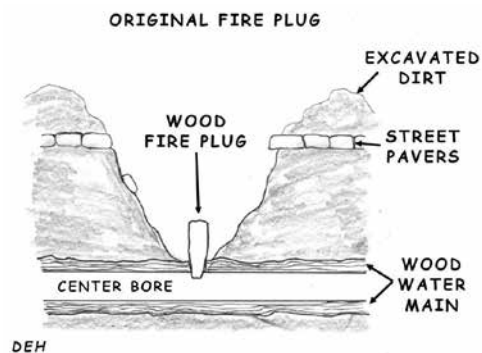


Illustration depicting a cross-section of a hole dug to access an original fire plug and wood water main.

the communities by having readily identified access points to a water supply for fire department use spread throughout the community. However, digging down into the street to access the water main, pulling a plug, and inserting a standpipe connection against a pressurized water source could be difficult, wasteful, and took time. Firefighters looked for a better and more efficient way of accessing water.

As mentioned previously, a number of engine companies or fire departments began carrying a short section of iron pipe tapered and sized to fit the fireplug hole with a fire hose connection on the other end, thus providing a direct connection for the pumper to a water supply. This would quickly lead to the concept of installing a permanent valved water tap in the fire main.

The use of cast iron pipe risers and the change from wood water mains to cast iron was tied to the growing iron foundry manufacturing in the United States. One of the early manufacturers was Henry Foxall.

Henry Foxall (1758-1823), who learned the iron foundry trade in Great Britain

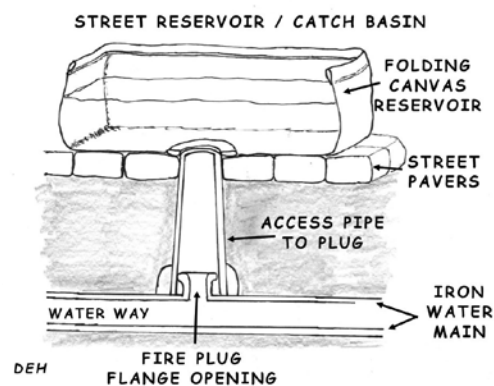


Illustration depicting a cross-section of a street reservoir or catch basin and water main access.

# FIRE FIGHTER'S FIELD OF FLAGS

## A FIRE FIGHTER MUSEUM FUNDRAISER

For \$35 each, you can designate a flag to be flown in memory, honor, or appreciation of an individual you choose. If you would like to have your flag mailed to you, please add \$5 per flag for postage. Flags will be raised in mid September and be flown at the Firefighters Memorial in Kingdom City, Missouri. All proceeds will benefit the Firefighter Museum Project and are tax-deductible.

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City _____	State _____		Zip _____	Card # _____		Exp. Date _____	
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							<i>Make checks payable to "FFAM Museum"</i>
Number Of Flags: _____ X \$35		Mail?: _____ X \$5	= Total Amount Enclosed: \$ _____				
Name On Flag #1: _____		<input type="checkbox"/> In Honor of	<input type="checkbox"/> In Memory Of	<input type="checkbox"/> In Appreciation			
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<input type="checkbox"/> Firefighter		<input type="checkbox"/> Veteran	<input type="checkbox"/> Active Duty	<input type="checkbox"/> Army	<input type="checkbox"/> Navy	<input type="checkbox"/> Air Force	<input type="checkbox"/> Marines
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and Ireland, immigrated to America to Philadelphia in 1797. He partnered with Robert Morris, Jr. to build the Eagle Iron Works in Philadelphia. He moved to Georgetown and established the Columbia Foundry in 1800.<sup>48</sup> He worked closely with Thomas Jefferson (3rd President of the United States) and made cannons for the United States military. His foundry also began making cast iron pipe for plumbing and later water mains. The City of Philadelphia commissioned him to manufacture cast iron standpipes that were used as the first temporary and later permanent hydrants inserted in wooden mains.<sup>49</sup>

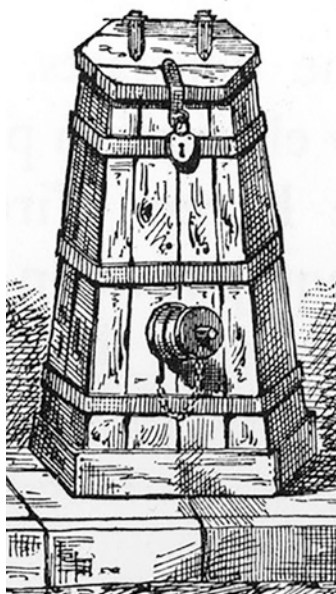
Another transitional step occurred with fire plugs when cast iron pipes started being used in place of wood pipes. With the cast iron pipes, "sockets or branch fittings" were connected to the water mains, and a forged opening was provided with a wooden plug inserted.<sup>50</sup> Along with this "a metal or wooden shield extended from the main to the street surface. This prevented excessive washing away of the soil under the street surface."<sup>51</sup> A special tool was used to clamp around the wood plug and pull it loose when

access to water for firefighting was needed. Still, there could be a considerable waste of water. One of the inventions that were used with this type of system was a folding canvas tarp that could be deployed to form a cistern (catch basin) or "street reservoir" around the opening that filled with water.<sup>52</sup> This worked well as a drafting pond for steam fire engines to drop their hard suction hose into for water supply. Though there has been no implied reference by a historian to this concept and its relationship to modern-day tactics, this perhaps was the forerunner to the concept of the portable folding water tank used with tanker shuttle operations today.

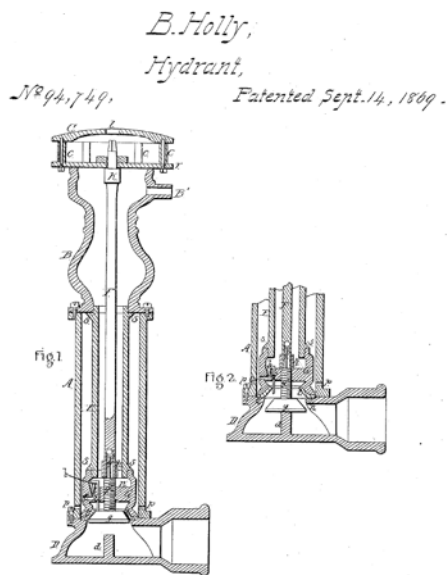
The capability for increasing water pressure in water systems using fixed pumps and cast iron mains soon created difficulty in reseating the wood plug against substantial pressure. To overcome this problem, a new addition was soon added to the water system, a manually operated valve between the main and the branch fitting to open and close the water flow to the plug hole. With these features, a branch line and a street valve, the basic infrastructure was in place for the addition of a permanent

above-ground water connection, the hydrant.

Before we move on to fire hydrants, it needs to be mentioned that there are some fire personnel and internet sites that espouse there was no such occurrence or use of the "fire plug". They relate that even in actual incidences of wood water mains being dug up and found with rounded plugs inserted, the plug was used to seal off a disconnected branch line, not for firefighting. From the historical records of the fledgling water systems and fire service records, it is readily apparent that "fire plugs" did exist for use by the local fire fighting units. Though when gaining access to water, it is more probable that holes were bored into the wood water main by hand drills (augers) so later they could be easily closed with the insertion of a tapered wood plug. Chopping and opening the wood main with axes to access water where no previous plug existed was probably a means of last resort in an emergency. As an example of plugs versus hydrants, Philadelphia records from 1811 mention both claiming "230 wooden hydrant pumps and 185 fire hydrants."<sup>53</sup>



Early wood box cover standpipe hydrant.



Birdsill Holly Fire Hydrant Patent Drawing 1869.



Marker identifying buried Fire Plug.



R.D. Wood & Company Fire Hydrant Advertisement.

## THE DEVELOPMENT OF EARLY FIRE HYDRANTS

In researching this article, it was found that there are a number of historical references that vary about who was the first inventor of the fire hydrant and when it came into being. This part of fire service history may be like a number of other instances that have been covered in this series where innovation and developments were occurring simultaneously in different areas of the country or pursued by different people building on a predecessor's work. Though the internet is a ready source of information, the information provided on most internet sites, including fire service sites, generally has not been discriminately researched and is based mostly on the oral traditions passed down over time regarding fire service history. Regarding the fire hydrant, we will find its history especially difficult to research. A major part of this is due to the ironic fact that the United States Patent Office, the repository of dated patents for new inventions, suffered a devastating fire on December 15, 1836, in which "many patent documents and models from the preceding three decades were irretrievably lost."<sup>54</sup> The original patent for the fire hydrant also perished in the fire.<sup>55</sup> However, a number of historians' research of old archived fire company and water system records has helped establish a historical accounting of the fire hydrant.

Most fire service historians identify Frederick Graff, the Chief Engineer of the Philadelphia (PA) Water Works as the inventor of the post-type hydrant around 1801.<sup>56</sup> Graff's hydrant consisted of a short pipe riser with

a combination hose and faucet outlet and a control valve on the top. The type of barrel was a wet barrel type. To protect this standpipe style hydrant and iron pipe connection to the wood water main, it was enclosed in a wood polygonal housing.<sup>57</sup> This "post style" hydrant seems to have been readily accepted and was soon adopted, with continuing modifications, by other communities.

Because these early hydrants had wet barrels, they were subject to freezing. During periods of freezing weather conditions, "watchmen inspected the hydrants hourly, releasing small amounts of water to prevent freezing."<sup>58</sup> Another method was to pack the wood hydrant cover "in winter with manure, tanbark, straw &c., as practiced in many cities, to lessen the liability of freezing."<sup>59</sup> A year later Graff improved the design of his hydrant by placing the operating valve at the base of the riser and adding a separate valve and operating rod to drain the hydrant barrel.<sup>60</sup> Another alternative method to prevent freezing for other hydrant variations, that had a base shutoff valve but no separate drain, was to use a suction hand pump and pump the hydrant barrel dry after use.

The first fire hydrant to be installed in New York is credited to George B. Smith in 1817. Smith was a member of Engine Company 12, and he built and placed the hydrant at his own expense placing it in front of his home on Frankfurt Street.<sup>61</sup> The hydrant he built incorporated a number of design improvements.

The fire hydrant was quick to capture the imagination of other inventors and many

new additions or supposed improvements were patented by various people. G.G. Flexer in his article "From Fire Plugs to Fire Hydrants" related that between 1850 to 1864, "patents were issued for fifteen devices to improve drainage, ten devices on valve improvement, and three devices on frost protection."<sup>62</sup> One patent was for a device as simple as a "combination hydrant and hitching post."<sup>63</sup>

As mentioned previously, a branch pipe and valve were instituted to provide a shutoff for fire plugs to save water in the system and to make it easier to re-insert the wooden fire plug after use. This design feature was incorporated into the development of hydrants. The modern-day hydrant is usually hooked to a short branch line installed in the water main with an underground gate valve that controls the branch line to the hydrant. This allows the hydrant and piping to be serviced without shutting down the water main to which it is connected. Operation of this underground branch valve is through an in-ground valve box and pipe to the gate valve. A separate long-handled street key ("T" Valve wrench) is inserted in the valve box/pipe to reach and operate the valve.

In the historical development of the hydrant, a mechanical engineer and inventor, Birdsill Holly, should be mentioned. Some readers may remember Holly from a previous article in this series regarding "The Age of Steam Fire Engines".<sup>64</sup> While working for Silsby, Mynderse, & Co. of Seneca Falls, NY, Holly invented the rotary-style pump that was a highly popular feature of the Silsby Steam Fire Engine.

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Birdsill Holly, Jr. (1820-1893) was a highly prolific inventor holding 150 patents, regarding water systems and hydrants. Holly formed his own business, the Holly Manufacturing Company in Lockport, NY, where he “developed water turbine and steam-powered pumps and pressurized water systems for communities and industry.”<sup>65</sup> Looking to improve water delivery and fire protection to communities, in 1863 he “built the Holly Fire Protection and Water System, which used water-turbine or steam-engine-powered pumps to propel water into the town water mains under a consistent pressure and to fire hydrants around town.”<sup>66</sup> Soon many cities in the U.S. and Europe adopted Holly’s water system. This system included the installation of a new type of hydrant that earned patent # 94749. Because of the constant pressure water system, in some instances, fire hoses could be charged and used for firefighting directly off of the hydrant. The Hydrant itself was not the real success of the story, but the design and capability of a constant water pressure supply system that elevated the delivery of water supply and fire protection to the community. Some websites proclaim Holly

as the inventor of the modern fire hydrant, but there were a number of inventors and engineers that were the first to contribute modern features to the hydrant.

In Missouri, the City of Columbia utilized a pressurized water system. Initially, water supplies were provided by a private utility company located on Hinkson Creek. The city bought the company in 1904 and transitioned to a public waterworks and light utility.<sup>67</sup> Firefighting was first provided by a volunteer fire company using a hand pumper in 1875. Due to a devastating fire at the University, the city established a career department in 1901.<sup>68</sup> Initial fire response was handled by a chemical fire extinguisher and hose wagon, using pressurized hydrants to charge the hose and fight the fire. At a fire in the Haden Building in 1921, “it became necessary to call the city’s Water and Light Department to increase water pressure in the mains because the fire department didn’t have a pumper to do this job at a hydrant.”<sup>69</sup> CFD added its first combination pumper in 1922.

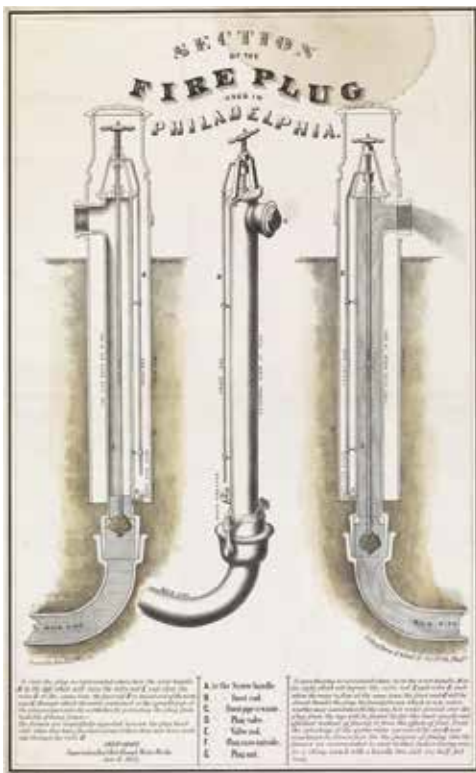
In 1874, a new concept was instituted in Rochester, NY, that of a separate water main

just to support firefighting operations.<sup>70</sup> The water system was a high-pressure water system and provided for firefighting directly off the hydrant connections. This method was adopted by a number of cities, while others with sufficient pressure used the water system for both water consumption and firefighting.

## TRANSITION TO MODERN HYDRANTS

With the expanding manufacturing of cast iron in America, many water supply systems began switching to cast iron pipe and cast iron hydrant designs. Philadelphia, PA, as covered previously began using Graff’s cast iron riser-type hydrants inserted in the wood mains using a tapering joint in 1801. By 1811, Philadelphia had a combination system made up of “230 wooden hydrant pumps and 185 cast iron fire hydrants.”<sup>71</sup> The city had switched to all cast iron hydrants by 1865.<sup>72</sup>

Throughout the 1800s, various cities installed hydrants built to different specifications. Fire companies called in to help out in neighboring municipalities often found their hoses were incompatible with the local



Cutaway drawing of a fire plug used in Philadelphia 1854. Courtesy *Library Company of Philadelphia*.

hydrant outlets. Even today there is not a uniform standard for hydrant discharges. Because of their longevity, the expense, and the sheer number of hydrants—more than 70,000 in New York City alone—retooling them to a single standard is often not an option. More on this historical issue later in the article. Fire companies today often carry hose adapters for different types of hydrant nozzles (outlets).<sup>73</sup>

With the coming of steam-driven fire pumping apparatus in the mid-1800s, the ability for larger fire flows became possible. To support this, an additional discharge, supplemental to the 2½” outlets, was added to the hydrant to allow for larger fire flows through the large drafting hose that connected from the steam engine intake to the hydrant. This new larger diameter outlet would become known as the “steamer connection.”<sup>74</sup> The first patented hydrant design (US37466A) with a larger “steamer port” was designed by Richard Stileman in 1863, and sold by the R.T.H. Stileman Company of Philadelphia, PA.<sup>75</sup> This began as a four or 4½ inch diameter connection and later increase to a six-inch, with larger variation today in some cities.

As industry grew in America, more iron foundries started in business providing the new iron pipe for water and sanitation systems. This grew into the addition of

plumbing products, valves, and the manufacturing of hydrants. The A B & C Company was among the first to install iron hydrants in New York City. Later, Ayers & McLean Fire Hydrants and Valves of New York installed hydrants in the city. The Samuel P. Ayers Hydrant was a unique design that had a flip lid that was opened by turning a nut on top. An internal “T” handle operated a valve to open the single discharge.<sup>76</sup>

A number of reference sources relate that the Mathews style hydrant first patent issued to W. Race and S.R.C. Mathews in 1858 (and later patents by Mathews) was the forerunner of the modern fire hydrant design. The Mathews Hydrant was sold through R.D. Wood & Company in the 1870s. Other manufacturers in the late 1800s that were involved with pipe, valves, and hydrants include James B. Clow & Sons; Kennedy Valve, Mueller Company, Eddy Valve Company, and Union Hydraulics Works of Philadelphia.

In the late 1800s to early 1900s, engineering of hydrant design became more prominent using hydraulics factors to reduce friction loss and maximize flow characteristics to make them more efficient. The American Water Works Association (AWWA) established the first national standard in 1913, which covered “the uniform manufacture of fire hydrants.”<sup>77</sup> This standard first addressed wet barrel hydrants and then the later dry barrel. The AWWA standards have continued to evolve, and there are now 190 Standards that cover the design of water system components and operations.<sup>78</sup>

With the increase in automotive transportation and the result of more vehicles hitting hydrants by the 1930s, “traffic hydrants” were designed “to break off on impact without damaging the main [underground] valve.”<sup>79</sup>

The National Fire Protection Association began in 1896 and focused on the safe use of water and electricity. Over time the NFPA became a major component of the fire service, promulgating national consensus standards. Today the NFPA is considered the “premier organization for reducing the burden of fire and related hazards.”<sup>80</sup> In 1897 the NFPA formed the Hose and Hydrants (Now Fire Hose) Committee to develop standards in these areas.<sup>81</sup>

The current standard on hydrants is *NFPA 291, Recommended Practice for Water Flow Testing and Marking of Hydrants*, 2022 edition.

This standard includes information on fire hydrant types, classification, and color coding for flow capacity.

### THE PROBLEM OF THE HYDRANT/HOSE CONNECTION

As was covered in the article in this series, *The Development of Fire Hose, A Part of Fire Service History*, with the development of fire hose, the threaded hose coupling connector varied by manufacturer and created problems.<sup>82</sup> In the beginning, there were no standards used for hose size or threaded couplings (threads per inch, or thread pitch) that were made by individual artisans or various companies. This created a problem many times for neighboring fire companies to respond to mutual aid fires. The result of these connection differences came into play when trying to connect different fire hoses, but more importantly when neighboring fire apparatus (pumpers) tried to connect to the water supply via the early standpipe or later hydrant.

The disastrous loss resulting from the Boston fire of 1872 and the Baltimore fire in 1904 were prime examples of this problem. In both cases surrounding community fire departments sent help, but they soon found that they were “unable to render assistance because their engine and hose connections would not couple up with outlets of local fire hydrants which were of a different type and diameter.”<sup>83</sup>

From a National Bureau of Standards (NBS) study in 1904, it was found that there were over 600 variations in hose sizes and couplings in the United States.<sup>84</sup> One can only imagine how this affected the hydrant discharge (nozzle) connections.

After many years, the National Association of Fire Engineers voted to support a national standard for couplings. In 1913 many national organizations and the federal government agreed on a standard.<sup>85</sup> Unfortunately, there was still the issue of cost for those departments and municipalities with non-standard fire thread to convert. There are still a number of cities across the country with differing hose threads on their hydrants. However, these days through pre-planning there are usually adapters that can be used for making connections for other departments.



## FIRE HYDRANT OPERATING NUT

In the United States over time, most hydrants standardized on an operating nut that is of a pentagonal prism shape (five-sided nut). This geometric shape “was chosen to offer a measure of tamper resistance.”<sup>86</sup> Other hydrant designs or guards may be found that protect this operating nut from being operated by pipe or other clamping-type wrenches. Fire departments should survey all their hydrants to assure they have an appropriate wrench that will operate any hydrant variations in their jurisdiction.

## MUSEUMS AND COLLECTIONS

As can be seen from this research on the development of water systems and the fire hydrant, these mechanisms played a historical role in both the development of community infrastructure, as well as direct fire protection. Perhaps because hydrants have been grouped as part of this community infrastructure they have not been given the proper veneration that would elevate their position in exhibits in some of the fire museums. Also, because of their weight and difficulty to display, they may not have been preserved or on exhibit. The hydrant was a key part of the significant role water supply played in the trifecta that changed the culture of the fire service: mechanical (steam) pumpers, hose, and mobility (man-power to a horse to mechanization). These interwoven changes would lay the foundation of the modern fire service and the foundation of its traditions. It is hoped that more museums will embrace this significant role of water and hydrants and place a greater emphasis on telling their story through comprehensive displays and the preservation of these rapidly disappearing artifacts.

There are a number of collectors who have specialized in fire hydrant collections and water system components. Many firefighters have an old fire hydrant in their collection (despite the weight), or at least fire hydrant collectibles. The lineage of the hydrant and rarity of a particular artifact is sometimes hard to judge due to limited reference resources. Some rare books remain in collections on early American waterworks and components, along with some original manufacturer’s advertisements can be used in identifying hydrants and dates.

Several fire academies and state fire training agencies had full-scale “cutaways” of hydrants mounted

on an example riser and shoe to show the operation of the hydrant and water main connection. I remember many years ago teaching hydrant operations with both a full-scale cutaway and an operating scale model at LSU Fireman Training. These days, perhaps because of weight and expense, instructors have replaced real hydrant props with PowerPoint graphics or animations.

## THE LEGACY OF CHANGE AND TRADITIONS

Today, there are about a dozen foundry companies that manufacture valves and hydrants in the United States. There are some still in business today that trace their roots back to the early days of cast iron hydrants, though most have gone through various mergers, acquisitions, and name changes. This ongoing linkage to the past continues to help preserve the history of water supply systems and the ubiquitous fire hydrant.

Beginning with early American communities’ need for a useable sufficient water supply for daily use, as well as firefighting, the development of water storage or supply systems became an important part of public infrastructure. The need to access water from buried wooden water distribution mains for firefighting resulted in the first invention of fire plugs, soon followed by street reservoirs, and inserted standpipe risers. Further innovations by firefighters and inventors would bring all the design pieces together to construct the first working fire hydrants in the 1800s. Though the fire hydrant has gone through a number of changes and improvements over the decades, its basic purpose and function have remained the same, to provide the fire service with quick ready access to sufficient water supplies on the scene to mitigate fires and other related emergencies.

So what is the future of fire hydrants? In an article on Hydrants by fire service writer Curt Wohleber, he provided a thought-provoking quote by Thomas Ingalsbe, a fire hydrant collector and co-creator of Firehydrant.org, who said: “My guess is that the fire hydrant of today will look very similar to the fire hydrant of 2101.”<sup>87</sup> With modern improvements, we are starting to see barcodes used in identifying hydrants and recording service and test data. We may soon see microchips and computer technology monitoring and controlling water systems and flows from the fire scene in major emergency operations.<sup>88</sup>



Fire Insurance Company of New Orleans Fire Mark issued in the late 1800s, depicting early wood-cased fire hydrant and hose. *Smithsonian, National Museum of American History.*

Our fire service predecessors worked to overcome limitations and found ways to develop new tools that would enhance their capabilities to perform their mission. The development of the fire hydrant is a part of history that played an important role in establishing fire service operations and tactics that would lay the foundation of the modern fire service. Though our technology and techniques continue to change to embrace improvements in fire protection, our history and tradition of the protection of life and property remain the overarching tenant of the Fire Service. As we remember our past, we continue to honor and observe the grand history and traditions of the early American Fire Service.

## AUTHOR'S COMMENTS

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## ENDNOTES

1. Herbert Theodore Jenness, *Bucket Brigade to Flying Squadron: Fire Fighting Past and Present*, Cambridge, Mass, 1909, p. 7.
2. Michael Wieder, *Fire Service Hydraulics and Water Supply*, 3rd Edition, Fire Protection Publications, International Fire Service Training Association (IFSTA), 2019, introduction/synopsis.
3. Jennifer L. Reed, Editor, "Fire Hydrant", *Illustrated Dictionary of Fire Service Terms*, National Fire Protection Association, Jones and Bartlett Publishers, Sudbury, Massachusetts, 2006, p. 55.
4. Ralph W. Burklin, and Robert G. Purington, "Hydrant", *National Fire Protection Association's (NFPA) Fire Terms, A Guide To Their Meaning and Use*, NFPA, Boston, MA, 1980, p. 98.
5. Arthur E. Cote, Editor-in-Chief, "Hydrants", *Fire Protection Handbook*, Eighteenth Edition, National Fire Protection Association, Quincy, MA, 1997, p. 6-41.
6. Sam Crudginton, "What does a Fire Hydrant look like? No, really?", *Total Safe*, June 22, 2018, web article accessed May 12, 2023, <https://totalsafeuk.com/blog/fire-hydrants/what-does-a-fire-hydrant-look-like-no-really/>.
7. Frederick M. Stowell, Writer and Lynne Murnane, Senior Editor, *Essentials of Fire Fighting and Fire Department Operations*, International Fire Service Training Association, Fire Protection Publications, Oklahoma State University, Stillwater, OK, 2013, p. 795.
8. Ibid, p. 1554.
9. Paul Robert Lyons, *Fire in America!*, National Fire Protection Association, Boston, MA, 1976, p. 52.
10. "Hydrant." Merriam-Webster.com Dictionary, Merriam-Webster, <https://www.merriam-webster.com/dictionary/hydrant>. Accessed 10 May. 2023.
11. Ralph W. Burklin, and Robert G. Purington, "Plug", *National Fire Protection Association's (NFPA) Fire Terms, A Guide To Their Meaning and Use*, NFPA, Boston, MA, 1980, p. 139.
12. Jerry A. Nathanson, "water supply system." *Encyclopedia Britannica*, April 4, 2023. <https://www.britannica.com/technology/water-supply-system>.
13. Ibid.
14. Paul Robert Lyons, *Fire in America!*, p. 52.
15. Ibid.
16. David E. Hedrick, "The Fire Bucket - A Part of Fire Service History", *FFAM Magazine*, Fire Fighters Association of Missouri, Warrensburg, MO, November/December 2021, Vol. 64, Issue 6, p. 16.
17. Dennis Smith, *History of Firefighting in America, 300 Years of Courage*, First Edition, The Dial Press, New York, 1978, p. 4.
18. Ibid, p. 5.
19. Hedrick, "The Fire Bucket - A Part of Fire Service History", *FFAM Magazine*, p. 16.
20. Herbert Theodore Jenness, *Bucket Brigade to Flying Squadron: Fire Fighting Past and Present*, Cambridge, Mass, 1909, p. 100.
21. John V. Morris, *Fires and Firefighters*, Bramhall House: New York, 1955, p. 60.
22. Susan Donahue Kuretsky, "Saving Amsterdam. Jan van der Heyden and the Art of Firefighting", from the work: *Urb's incense Aesthetic Transformations of the Brennenden Stadt in der Frühen Neuzeit*, by Herausgegeben von Vera Fionie Koppenleitner, Hole Rößler and Michael Thimann, © 2011 Deutscher Kunstverlag GmbH Berlin München, p. 162.
23. Paul Hashagen, "Firefighting in Colonial America", *Firehouse Magazine*, September 1998, Cygnus Publishing: New York, p. 74.
24. Morris, *Fires and Firefighters*, p. 75.
25. Sarah Pruitt, "When the Yellow Fever Outbreak of 1793 Sent the Wealthy Fleeing Philadelphia", History, A&E Television Networks, published June 11, 2020, Updated April 19, 2023, web article accessed May 8, 2023, <https://www.history.com/news/yellow-fever-outbreak-philadelphia>.
26. Morris, *Fires and Firefighters*, p. 75-76.
27. Ibid, p. 76.
28. Gene J. Kuhn, Editor, "Development of the Fire Hydrant Parallels Growth of Water Works", *Mueller Record*, Vol. XXXIV, No. 6, May-June 1948, Mueller Company, Decatur, Illinois, p. 4.
29. Ibid, p. 5.
30. Morris, *Fires and Firefighters*, p. 76.
31. Ibid, p. 77.
32. A.E. Costello, *Birth of the Bravest, A History of the New York Fire Department from 1609 to 1887*, Abridged 2002, Tom Dougherty Associates, LLC, New York, Original published 1887, abridged edition copyright 2002, p. 70.)
33. Morris, *Fires and Firefighters*, p. 77.
34. Lyons, *Fire in America!*, p. 52.
35. G.G. Flexer, "From Fire Plug to Fire Hydrant", *Journal of the American Water Works Association*, Vol. 58, Issue 11, November 1966, Download Wiley Online Library, p. 1419.
36. Morris, *Fires and Firefighters*, p. 78.
37. Gene J. Kuhn, Editor, "Development of the Fire Hydrant Parallels Growth of Water Works", *Mueller Record*, Vol. XXXIV, No. 6, May-June 1948, Mueller Company, Decatur, Illinois, p. 6.
38. Ibid.
39. Jean Maher, "Wooden Water Pipes", *Tri State Museum*, Belle Fourche, SD, Apr 4, 2017, web article accessed May 31, 2023, <https://www.thetristatemuseum.com/2017/04/04/wooden-water-pipes/>.
40. Ron Patch, "Water Pipe History", *The Vermont Journal*, Ludlow, Vermont, March 30, 2022, web article accessed May 31, 2023, <https://vermontjournal.com/featured-articles/water-pipe-history/>.
41. Ibid.
42. Ibid.
43. Ibid.
44. Maher, "Wooden Water Pipes", *Tri State Museum*, web article accessed May 31, 2023, <https://www.thetristatemuseum.com/2017/04/04/wooden-water-pipes/>.
45. Flexer, "From Fire Plug to Fire Hydrant", *Journal of the American Water Works Association*, p. 1418.
46. Paul Robert Lyons, *Fire in America!*, National Fire Protection Association, Boston, MA, 1976, p. 52.
47. Ibid.
48. "Henry Foxall", Thomas Jefferson Encyclopedia, Thomas Jefferson Monticello, Charlottesville, VA, web article accessed May 16, 2023, <https://www.monticello.org/research-education/thomas-jefferson-encyclopedia/henry-foxall/>.
49. "A Brief History of the Hydrant", *FireHydrant.org*, 2004, web article accessed May 17, 2023, [http://www.firehydrant.org/pictures/hydrant\\_history.html](http://www.firehydrant.org/pictures/hydrant_history.html).
50. Kuhn, Editor, "Development of the Fire Hydrant Parallels Growth of Water Works", *Mueller Record*, p. 6.
51. Ibid.
52. Lyons, *Fire in America!*, p. 53.
53. Ibid.
54. "Key Events in Patent History", LexisNexis, Alexandria, VA, 2023, web article accessed May 12, 2023, <https://www.lexisnexisip.com/resources/key-events-in-patent-history/>.
55. Ibid.
56. Lyons, *Fire in America!*, p. 54.
57. Curt Wohleber, "The Fire Hydrant, Beautiful? Maybe not. But its basic design has endured for a century and a half", *American Heritage.com, Invention and technology magazine*, web article accessed May 11, 2023, [https://web.archive.org/web/20100428162059/http://www.americanheritage.com/articles/magazine/it/2002/3/2002\\_3\\_10.shtml](https://web.archive.org/web/20100428162059/http://www.americanheritage.com/articles/magazine/it/2002/3/2002_3_10.shtml).
58. Ibid.
59. J.A. Rhodes, *The Fire Service History, Traditions, & Beyond*, Booklocker.com, Inc., 2006, p. 35.
60. Flexer, "From Fire Plug to Fire Hydrant", *Journal of the American Water Works Association*, p. 1421.
61. Ibid, p. 1422.
62. Ibid.
63. Ibid.
64. David E. Hedrick, "The Age of Steam Fire Engines, A Part of Fire Service History", *FFAM Magazine*, Fire Fighters Association of Missouri, Warrensburg, MO, November/December 2022, Vol. 65, Issue 6, p. 12.
65. Marion Hart, "Birdsill Holly, Jr.", *The American Society of Mechanical Engineers*, May 7, 2012, web article accessed May 19, 2023, <https://www.asme.org/topics-resources/content/birdsill-holly-jr>.
66. Ibid.
67. "History of the Columbia Fire Department", City of Columbia Missouri, 2022, web article, <https://www.como.gov/fire/about-us/history/>.
68. Ibid.
69. Ibid.
70. Curt Wohleber, "The Fire Hydrant", *Rutland Waterworks District*, News Update, March 28, 2013, web article accessed May 23, 2023, [https://www.rutlandwaterworks.com/get-in-touch/news/page:3/story/2/The\\_Fire\\_Hydrant/](https://www.rutlandwaterworks.com/get-in-touch/news/page:3/story/2/The_Fire_Hydrant/).
71. Harry Kyriakodis, "Not Your Ordinary Fire Plugs", *Hidden City, Exploring Philadelphia's Urban Landscape*, March 19, 2012, web article accessed May 20, 2023, <https://hiddencityphila.org/2012/03/not-your-ordinary-fire-plugs/>.
72. Ibid.
73. Curt Wohleber, "The Fire Hydrant", *Rutland Waterworks District*, [https://www.rutlandwaterworks.com/get-in-touch/news/page:3/story/2/The\\_Fire\\_Hydrant/](https://www.rutlandwaterworks.com/get-in-touch/news/page:3/story/2/The_Fire_Hydrant/).
74. Ralph W. Burklin, and Robert G. Purington, "Steamer Connection", *National Fire Protection Association's (NFPA) Fire Terms, A Guide To Their Meaning and Use*, NFPA, Boston, MA, 1980, p. 177.
75. "Improvement in hydrants - US37466A" Google Patents, web archive accessed May 25, 2023, <https://patents.google.com/patent/US37466A/en>.
76. "Samuel P. Ayers - New York City", *FireHydrant.org*, web page accessed May 25, 2023, <http://www.firehydrant.org/pictures/samuel-ayers.html>.
77. Paul Nussbickel, The Fire Hydrant, *Fire Engineering*, Jan. 1, 1989, web article: <https://www.fireengineering.com/leadership/the-fire-hydrant/#grf>.
78. "ANSI-Accredited Standards of Minimum Requirements", American Water Works Association, Denver, CO, 2023, website accessed May 25, 2023, <https://www.awwa.org/Publications/Standards>.
79. Wohleber, "The Fire Hydrant", *Rutland Waterworks District*, [https://www.rutlandwaterworks.com/get-in-touch/news/page:3/story/2/The\\_Fire\\_Hydrant/](https://www.rutlandwaterworks.com/get-in-touch/news/page:3/story/2/The_Fire_Hydrant/).
80. Casey Cavanaugh Grant, P.E., Executive Director of the Fire Protection Research Foundation, "History of NFPA", National Fire Protection Association, Web article accessed May 25, 2023, <https://www.nfpa.org/About-NFPA/NFPA-overview/History-of-NFPA>.
81. Percy Bugbee, "A Chronology of NFPA Committee Appointments", excerpt from *Men against Fire: The Story of the National Fire Protection Association, 1896-1971*, Published by National Fire Protection Association, 1971, web article, <https://www.nfpa.org/-/media/Files/Codes-and-standards/Standards-development-process/HistoryNFPACodesStandards.ashx>.
82. David E. Hedrick, "The Development of Fire Hose, A Part of Fire Service History", *FFAM Magazine*, Fire Fighters Association of Missouri, Warrensburg, MO, March/April 2023, Vol. 66, Issue 2, p. 31.
83. S. W. Stratton, Director, "National Standard Hose Couplings and Fittings for Public Fire Service", *Department of Commerce Circular of the Bureau of Standards*, No. 50, 2nd Edition, June 8, 1917, Government Printing Office, Washington, p.3.
84. Momar D. Seck and David D. Evans, "Major U.S. Cities Using National Standard Fire Hydrants, One Century After the Great Baltimore Fire", *United States Department of Commerce Technology Administration, National Institute of Standards and Technology*, Gaithersburg, Maryland, 2004, p. 8. <https://www.govinfo.gov/content/pkg/GOVPUB-C13-c33f9384233e5a13eca491ede462acd/pdf/GOVPUB-C13-c33f9384233e5a13eca491ede462acd.pdf>.
85. S. W. Stratton, Director, "National Standard Hose Couplings and Fittings for Public Fire Service", *Department of Commerce Circular of the Bureau of Standards*, No. 50, 2nd Edition, June 8, 1917, Government Printing Office, Washington, p. 10.
86. "What Shape Is the Nut on a Fire Hydrant, and Why?", *FireHydrant.org*, web article accessed May 25, 2023, <http://www.firehydrant.org/info/shapes.html>.
87. Wohleber, "The Fire Hydrant, Beautiful? Maybe not. But its basic design has endured for a century and a half", *American Heritage.com*, [https://web.archive.org/web/20100428162059/http://www.americanheritage.com/articles/magazine/it/2002/3/2002\\_3\\_10.shtml](https://web.archive.org/web/20100428162059/http://www.americanheritage.com/articles/magazine/it/2002/3/2002_3_10.shtml).
88. Wohleber, "The Fire Hydrant", *Rutland Waterworks District*, [https://www.rutlandwaterworks.com/get-in-touch/news/page:3/story/2/The\\_Fire\\_Hydrant/](https://www.rutlandwaterworks.com/get-in-touch/news/page:3/story/2/The_Fire_Hydrant/).



workers' compensation when diagnosed in first responders, as defined in by law. A first responder shall not require a physical injury in order to be eligible for benefits, but preexisting PTSD is not compensable. The time for notice of injury or death in cases of compensable PTSD is measured from exposure to one of the qualifying stressors listed in the DSM-5 criteria, or the diagnosis of the disorder, whichever is later. Any claim for compensation for an injury shall be properly noticed to the Division of Workers' Compensation within 52 weeks after the qualifying exposure, or the diagnosis of the disorder, whichever is later.)

This provision is substantially similar to a provision in HCS/SS/SCS/SBs 119 & 120 (2023).

Stay tuned for Senate Bill 24. We will forward the information along as it becomes available through our fire department registration email list.

Our state is presently experiencing drought conditions. Each Thursday the National Weather Service releases its drought monitor map. Here is the link to view this information weekly. <https://bit.ly/3CIItLy6>, this is a great tool for you to keep informed of what presently is going on, and the long-term predictions that may be coming down the road.

I may add, Burn Ban orders are established by statute at the local level.

**49.266. COUNTY COMMISSION BY ORDERS OR ORDINANCE MAY REGULATE USE OF COUNTY PROPERTY, TRAFFIC, AND PARKING — BURN BANS.**

1. The county commission in all counties of the first, second, third, or fourth classification may by order or ordinance promulgate reasonable regulations concerning the use of county property, the hours, conditions, methods and manner of such use and the regulation of pedestrian and vehicular traffic and parking thereon.
2. Violation of any regulation so adopted under subsection 1 of this section is an infraction.
3. Upon a determination by the state fire marshal that a burn ban order is appropriate for a county because:
  - (1) An actual or impending occurrence of a natural disaster of major proportions

# Jeffco Fire Engine Rally



**Saturday - September 30, 2023 • 10:00 AM - 3:00 PM**  
Herculaneum City Park • 776 Joachim Avenue • Herculaneum, Missouri

## APPARATUS PARADE - 9:00 AM

**ANTIQUÉ AND MODERN FIRE APPARATUS • EMS VEHICLES • AIR RESCUE HELICOPTERS • MEMORIAL SERVICE • SAFETY HOUSE • FIREFIGHTER COMPETITIONS • DALMATIAN CONTESTS • EQUIPMENT DISPLAYS DEMONSTRATIONS • VENDOR BOOTHS • FOOD AND CONCESSIONS FACE PAINTINGS • PHOTO AREA • BOUNCE HOUSE AND SLIDE • SCAVENGER HUNT FOR CHILDREN • CHILDREN'S FIREFIGHTER CHALLENGE AND MORE!**

**FOR INFORMATION: 314-852-4964 or [billh6300@hotmail.com](mailto:billh6300@hotmail.com)**

**[jeffcofireenginerally.com](http://jeffcofireenginerally.com) • Jeffco Fire Engine Rally on Facebook**

within the county jeopardizes the safety and welfare of the inhabitants of such county; and  
(2) The U.S. Drought Monitor has designated the county as an area of severe, extreme, or exceptional drought, the county commission may adopt an order or ordinance issuing a burn ban, which may carry a penalty of up to a class A misdemeanor. State agencies responsible for fire management or suppression activities and persons conducting agricultural burning using best management practices shall not be subject to the provisions of this subsection. The ability of an individual, organization, or corporation to sell fireworks shall not be affected by the issuance of a burn ban. The county burn ban may prohibit the explosion or ignition of any missile or skyrocket as the terms "missile" and "skyrocket" are defined by the 2012 edition of the American Fireworks Standards Laboratory, but shall

not ban the explosion or ignition of any other consumer fireworks as the term "consumer fireworks" is defined under section 320.106.

4. The regulations so adopted shall be codified, printed and made available for public use and adequate signs concerning smoking, traffic and parking regulations shall be posted.

(L. 1988 H.B. 1653, A.L. 2003 H.B. 267, A.L. 2013 H.B. 28, A.L. 2014 S.B. 672, A.L. 2021 H.B. 271)

In closing it is an honor to be your State Fire Marshal. Thank you each for everything you do across our great state. Judy and I wish you a Happy Independence Day. May God continue to bless America and you, land of the free! If there is anything you need please reach out to my email at [tim.bean@dfs.dps.mo.gov](mailto:tim.bean@dfs.dps.mo.gov) or desk phone at 573-751-1742.



# Missouri Emergency Response Commission

# TRAIN WITH US!

## Missouri Emergency Response Commission | Training Schedule

Date	Course #	Title	Location
7/24	MERC034	Handling Propane Gas Emergencies	Jackson
7/24	MERC043	Anhydrous Ammonia Awareness	Vichy
7/29	MERC068	Highway Tanker Emergency Response for First Responders	St. Clair
7/31	MERC019	Chemical Suicide:Information for Emergency Responders	Ballwin
8/2	MERC004	Hazardous Materials Technician Refresher Training	Springfield
8/3	MERC004	Hazardous Materials Technician Refresher Training	Springfield
8/4	MERC004	Hazardous Materials Technician Refresher Training	Springfield
8/5	MERC024	Railroad Emergency Response and Hazardous Materials Awareness	St. Clair
8/7	MERC034	Handling Propane Gas Emergencies	Pineville
8/12	MERC034	Handling Propane Gas Emergencies	Kahoka
8/14 8/15	MERC033	Ignitable Liquids Ethanol Blended Fuels	Lancaster
8/21 - 9/1	MERC037	Hazardous Materials Incident Response: 80 Hour Technician	Blue Springs
8/26	MERC052	MERRTT(Radiation Training)	Rockport
9/2; 9/9; 9/10	MERC058	OSHA Hazmat Technician 24 Hour	Jefferson City
9/5; 9/6	MERC034	Handling Propane Gas Emergencies	Montgomery City
9/7	MERC019	Chemical Suicide:Information for Emergency Responders	Holts Summit
9/9	MERC034	Handling Propane Gas Emergencies	Bloomsdale
9/13	MERC057	Hazmat Rapid Sizeup for the First Due	Joplin
9/14	MERC057	Hazmat Rapid Sizeup for the First Due	Joplin
9/14; 9/28	MERC001	Hazardous Materials Incident Response: Awareness	Savannah
9/15	MERC057	Hazmat Rapid Sizeup for the First Due	Joplin
9/16	MERC054	Air Monitoring for Fire Department Operations	Butler
9/23	MERC032	Ignitable Liquids and Class B Foams	Ozark

View the MERC Training Schedule at [www.sematraining.com](http://www.sematraining.com)

# AUXILIARY

Sunday, June 4, 2023

The meeting called to order by President Jessica Weisz at 9:04 a.m.

## MEMBERS PRESENT

Jessica Weisz, Norborne FPD; Diane Wynne, Galt FPD; Sheri Berendzen, Cole County FPD; Theresa Cox, Wentzville FPD; Carissa Thompson, Holts Summit FPD; Joni Fields, Paris RFPD; Ann Jones, Madison West Monroe FD; Debbie Ransdell, Madison West Monroe FD; Debbie Meyers, Concordia FD; Robin Schrage, Jefferson R-7 FPD; Lachrissa Smith, North Central Carroll Co FPD; Rosanne Jorgenson, South Holt FPD; Jennifer Sterner, West Plains FD; Sarah Sue Brockett, Southern Stone FPD; Missy Erdel, Little Dixie FPD; Deidra Batlmer, Gravois FPD; Ashley Hoselten, Galt FPD; Reta Smiley, Galt FPD; Haley Hanes, Galt FPD.

*Pledge of Allegiance* was recited. Ann Jones read a poem, "My Husband is a Fire Fighter" as our devotion. Roll Call was read by Joni Fields. She reported 19 auxiliary members present, representing 14 departments.

## MINUTES

Theresa Cox read the Sunday, May 8, 2022, Sunday convention meeting Minutes. Shelby pointed out a typo it should read; Shelby Teter, Northeastern Fire. Jessica also stated COID was misspelled and should be COVID. Ann Jones made a motion to accept the meeting minutes as read with two corrections made. Reta Smiley seconded the motion; the motion passed.

## MEMBERSHIP

Sheri Berendzen reported we have 111 paid auxiliaries, and 13 Honorary, totaling 124 auxiliary members from 29 departments. She thanked everyone for their help that responded to her calls and emails. Theresa stated on the front table are two reports for those who want to look over who are Long Standing and Honorary Members.

## FINANCIAL REPORT

Theresa gave the financial report. Missy Erdel made a motion to accept the financial report as read second was made by Sheri Berendzen. Motion passed. Theresa also stated the books were audited by Diane Wynne and Reta Smiley, and they found the books in order.

## CONTEST

Sheri reported there were 4 men, 4 junior, and 1 female team(s) this year for the contest. The contest this year took 2 1/2 hours to complete.

The contest committee sent a huge thank you to everyone who pitched in and put all of the equipment away. This year we did have some new equipment for the contest. They are looking into plaques for next year instead of the trophies.

## POSTER CONTEST

Reta Smiley reported there were posters from about 7-8 departments to judge. The main issue for disqualification was the size of the posters.

Ann Jones asked what did the winners get? First-place winners all receive family passes to the Missouri State Fair; they eat at the fair firehouse along with the firefighters and receive passes to the carnival rides. The 1st, 2nd, and 3rd place winning posters are displayed at the firehouse during the fair.

## HISTORIAN

Carissa stated if anyone has pictures she will take them. This past year she has gotten PayPal set up for us.

## OLD BUSINESS

Jessica reported the bi-monthly board meetings tried starting their meetings at 10:00 am for several meetings. This has been changed recently to currently starting these board meetings promptly at 9:00 am. Every Auxiliary member is welcome to attend these meetings.

This year's Memorial Service will be Saturday, October 21st, and Sunday, October 22nd at Kingdom City at the Memorial. Discussed the Auxiliary is no longer making the ribbons for this event.

## NEW BUSINESS

Theresa let the members know we made about \$1,500 on the Silent Auction, about \$1,600 on the 5-item raffle, about \$245 on the Helmet Raffle, and about \$355 from sales of challenge coins, Auxiliary T-shirts, cookbooks, and dues collected. Again these are estimates about how much was taken in by the Auxiliary. Ann Jones commented since we know what we have in the bank and



now we have made this amount of money from convention, are there any plans for using this money?

Jessica stated that at this time there are no plans because it is a possibility of us hosting next year's convention. And we have not paid all of the bills for this year's convention.

Tim Bean, Missouri State Fire Marshall stepped into our meeting to talk. Tim started by thanking the Auxiliary for everything we have done.

He commented the Auxiliary has been in existence since 1956. He expressed how great this year's convention turned out.

Tim's message to us today was five parts;

1. We as an organization and individual fire departments have had a decline in membership, personnel, and attendance in all aspects. He said this is happening on our Watch". There is no one answer why, but we need to change this going forward or we will fail.
2. Tim challenged us to get out and know your Senators and have conversations with them. Let your voice be heard. He said there were over 1400 bills and only 7 were passed this year. "This is very sad". There are so many different opinions of the senators no one can agree on what is best for the majority, so bills fail. "Something has to change," Tim said.
3. Talked about the pool of monies set aside; for Fire Fighters who are fighting 17

different types of cancers contracted, which is a common danger of their job. This comes in the form of a Supplement Policy.

4. Tim spoke about the Mental Health issues which everyone as First Responders are facing. We need to stop the stigma of Mental Health as a bad thing. The mayhem is real for first responders; we need to deal with how it affects mental health through proper support and training.
5. Recently the very first Female Fire Fighter Symposium was held. They established a board at this symposium. Tim said it would be great if our auxiliary reached out and supported them by paying for the snacks or something at their next symposium. Hopefully, this will happen in the fall.

Jessica Weisz asked everyone go to back to their department and talk about the "Auxiliary Member of the Year" award. Many people are doing things to receive this award. More information is available on the website.

Jessica reminded the members at next year's convention we will be holding an election of officers. Several of the current officers are wishing to step aside so new people can get involved.

Jessica asked if there was any more business, there was none. Carissa made a motion we adjourn the meeting, seconded by Reta. Motion passed, meeting adjourned at 10:17 a.m.

Respectfully Submitted,  
Theresa Cox; Secretary/ Treasurer

report as presented. RB Brown seconded the motion and all approved.

### **REPORT OF OFFICERS AND SPECIAL GUEST(S):**

Harry Ward with the University of Missouri Fire and Rescue Training Institute (MU FRTI) reported that the end of the fiscal year is the end of June. They are busy finishing up scheduled classes. They are working on updating classes and programs. A special thanks to the instructors for their work on that project. There is now a Fire Officer 3 program available, and they are working on a Fire Officer 4 program.

Currently, MU FRTI is self-funded. They receive no money from the University of Missouri. They are working with the University President and Chancellors to get additional funding through the university.

If you are interested in an MU FRTI class, go to the Division of Fire Safety website and request a class. Lots of funding is available. The classes need to be filled so don't wait to sign up to attend a class or it runs the risk of getting canceled due to low enrollment.

State Fire Marshal Tim Bean with the Division of Fire Safety discussed that while going around the state, everyone is trying to figure out a solution to the low manning problem. Everyone is facing the same challenges. Discussion points included how we get people involved and how we need to unite as an organization.

Bean discussed that only seven bills were passed in the legislature this year, but the fire service did well.

If you wish to host a training class, the request must be made through the Division of Fire Safety. This year over \$1 million was requested for classes.

\$800k was given from state funding with an additional \$500k added to the budget through lobbying for firefighter training for next year, beginning in July.

Last year a one-day female firefighter symposium was held in Jefferson City. 100+ attended and a committee was formed. Help support this group and watch the FFAM magazine for more information.

Bean gave a special thanks to the Funeral Assistance Team for everything they do.

Executive Director Randy Norden with Missouri 811 addressed the group and discussed what Missouri 811 does. Their 1st priority is damage prevention, and the 2nd priority is safety. There are lots of opportunities where 811 can partner with fire departments for training.

This year Missouri 811 was proud to provide a \$5k sponsorship to the FFAM convention. Norden pledged that Missouri 811 will continue to sponsor the convention each year with no less than \$5k.

### **CORRESPONDENCE**

No report was given.

### **UNFINISHED BUSINESS**

Kurt Ploch asked for the status of the traveling Phil Sayer lifetime achievement award that was approved at the 2022 convention. Discussion followed. The Awards Committee will be handling this.

Sergeant-at-Arms Rex Reynolds conducted a roll call of the delegates.

### **NEW BUSINESS**

President Jennings reminded the directors to review their assistant directors and committee chairs to review their committees and make changes if needed. Everyone should be participating.

RB Brown reported that there was vandalism and some items stolen from the dispatch center at the Missouri State Fair Fire Department. A police report and insurance claim have been filed and they are working on getting replacement costs. The Board advised President Jennings that he has the authority to approve any necessary costs to replace the equipment.

President Jennings advised that as of now, there is no host department for the 2024 convention. Discussion followed on changes that could be made or other suggestions to get more attendees and interest in the convention. It was suggested that a survey be sent to all member departments for feedback on what they would like to see. RB Brown moved to waive the bylaw requirement to determine the host and the format of the 2024 convention and to allow the Executive Committee and Convention Committee the authority to proceed as necessary. Terry Wynne seconded the motion and all approved.

### **ELECTION**

Sergeant-at-Arms Reynolds advised there are 44 delegates of which 17 are officers/directors.

Keith Smith advised that the following positions were slated for election with no opponents challenging them.

- 1st Vice President – Charlie Peel
- Secretary/Treasurer – Jaime Miller
- Sergeant-at-Arms – Rex Reynolds
- District 1 Director – Terry Wynne
- District 3 Director – Rob Erdel
- District 7 Director – RB Brown
- District 11 Director – Billy Smith
- District 14 Director – Rick Dozier

Andrew Caldwell moved to approve all by acclamation. Gary Berendzen seconded the motion and all approved.

### **COMMITTEE REPORTS**

#### **AWARDS COMMITTEE**

Joe Vaughn thanked those who applied. 11 nominations were received, and 7 awards were presented. The department grant application deadline is July 1.

#### **BUDGET COMMITTEE**

No report was given.

#### **BYLAWS COMMITTEE**

No report was given.

#### **CHAPLAIN COMMITTEE**

Secretary Miller reported on behalf of David Hedrick that FFC Regional Director Floyd Ferguson attended the SEMA Missouri Mortuary Operations Response Team training and exercise in May in Chillicothe, MO.

The Missouri Fire Chaplains Corp Annual Training Session and Meeting are scheduled for Sept. 11 & 12, 2023, at the Green County EOC, Springfield, MO. The two classes scheduled will be Pastoral Crisis Intervention and Chaplains' Tool Box. If you have any questions, please contact MFCC Secretary/Treasurer Ed Hatcher at edhat@earthlink.net. The MFCC has a new website, please visit: <https://www.missouri-firechaplaincorps.org/>

#### **CONTEST COMMITTEE**

Gary Berendzen thanked the teams who participated and the directors and assistant directors who helped. Contact him if you have any suggestions for next year.

## CONVENTION COMMITTEE

Charlie Peel reported that everything went well with no major issues. We did receive several sponsorships.

## EDUCATION COMMITTEE

Gail Hagans-Reynolds reported that they contacted four departments to award summer fire school scholarships. Only one department responded. Discussion was held on new ways to distribute winter fire school and summer fire school scholarships. 31 people attended the board class on Friday.

## FIRE PREVENTION COMMITTEE

Andrew Caldwell thanked the Auxiliary for judging the posters.

## LEGISLATIVE COMMITTEE

Greg Brown reported that \$500k more was allocated for firefighter training in next year's budget. We need to spend those funds so we can show there is a need for the funding to continue.

SB 24 relating to firefighter behavioral health passed. This added to the firefighter critical illness pool to expand what the group can do and to include EMS and 911 dispatchers as first responders. 2300 people in the state are now members of the critical illness pool for cancer-related issues and some are receiving assistance. MFFCIP.org has more information on prevention and detection as well as more information about the critical illness pool. Please share the information. We need to change the culture in the fire service and try to prevent cancer. They are working with a company that can identify cancer through a blood test. More information to come. August 3-5 the National Firefighter Cancer Alliance will have training opportunities available. More information to come.

There were several issues that failed relating to code enforcement and personal property taxes.

## MEMBERSHIP COMMITTEE

Grant Oetting reported the following membership numbers: 343 departments; 6429 active; 15 associate; 12 sustaining; 434 retired; 126 juniors; 487 directors; 4 Ems departments; 160 Ems individuals; 1 educational institution; 5 educational individuals, 22 corporate.

## NOMINATION COMMITTEE

No report was given.

## NVFC COMMITTEE

Keith Smith reported that NVFC is coming to Kansas City in 2024. There will be another meeting in August to see how Missouri can help. They are still working on logistics.

The cancer registry is now in play. 3000 have signed up so far.

Another goal NVFC is working on is to get "firefighter" listed on death certificates for volunteer firefighters. This will help with tracking purposes.

William Dunham, the FEMA section chief, did meet with them to get feedback on the SAFER grants.

The SAM system continues to get worse. This is a federal system set up as a requirement to get any federal funding.

It is unclear if any changes will be made.

NFIRS will be changing in 2024. More to come.

A big component of NVFC is training. Smith advised he will be meeting with President Jennings to see if there are any benefits that could be beneficial to FFAM.

They are trying to boost individual membership in Missouri. So far, there are only 99.

## SCHOLARSHIP COMMITTEE

Larry Eggen reported that five high school scholarships were awarded, and two families attended the banquet.

## STATE FAIR COMMITTEE

RB Brown reported that the application period has closed, and letters will be mailed soon.

## WEBSITE COMMITTEE

No report was given.

## NEWSLETTER

The deadline for the next newsletter will be June 19.

## HISTORIAN REPORT

Contact Theresa Cox if you have items to donate.

## FIRE FUNERAL TEAM REPORT

Brian Zinanni reported that the team assisted in 14 responses so far this year. All the trailers now have new portable radios.

# FROM THE PEN OF THE CHIEF

By Fire Chief Robert Brown,  
MO State Fair Volunteer FD

Can you believe how fast time is going by? The convention is in the history books and when this article comes out we had one work detail completed. For the work details the station will need TLC to get it ready for the fair. For the new members which we have attended, we are going to incorporate training, a tour of the fairgrounds, and a meet and greet and the returning members will be attending the training sessions as well. This year's training will be outstanding with the burn trailer, trash dumpster prop, car fire prop, sprinkler trailer, and the electric coop prop, as well as the EMS training. It's going to be very educational.

When this article is published, we may be at the fair with a work detail. The July details are 7-8 and 21-23 and the last will be August 4-6 so I hope that we have an excellent turnout. I want to say thank you to all that will be volunteering their time. Without you, the Missouri State Fair Fire Department could not function. Thank you to all the departments and districts that allow us to use their equipment and to the vendors that loan us their goods to use. I hope all the new members have an awesome time and will come back year after year. Until we meet again, be safe see you at the fair.

## EMS FUNERAL TEAM REPORT

Greg Wright reported the team has had 1 call out since the last meeting. The 2023 EMS convention will be held October 13-15, 2023, at Lake of the Ozarks. The national conference will be held in July. One member from Missouri will be recognized.

## FOUNDATION REPORT

Keith Smith reported they will recognize 120-130 at the services in October.

The Foundation has signed a contract to complete the utilities and restrooms which should be completed in July. It will take \$1.1 million to finish the project.

The Springfield Fire Department Honor Guard retired the colors.

President Jennings adjourned the meeting at 11:20 a.m.

## SENTINEL WELCOMES A NEW APPARATUS SPECIALIST IN NW MO

**St. Louis:** Sentinel Emergency Solutions has officially welcomed their newest Apparatus Sales Specialist, Austin Unrein, to Team Sentinel. Austin will be a Rosenbauer Apparatus Specialist in Northwest Missouri. Austin previously worked in law enforcement and has now joined Sentinel as a full-time truck specialist.

Austin joins Dave Urevich who has been Sentinel's Western Missouri Equipment Sales Specialist for the past six years. Dave has done a fantastic job providing excellent customer service to our customers, and now Austin will be able to continue that with Rosenbauer fire trucks.

Austin's employment comes ten months after Sentinel Emergency Solutions was awarded the Western Missouri Territory for Rosenbauer America. He joins Apparatus Sales Specialist, John Mecey, who covers Southwest Missouri. With this dual representation in Western Missouri, we can expose more customers to Sentinel and Rosenbauer's brand as well as promote Sentinel's service capabilities.

Of the company's recent employment, Sentinel Emergency Solutions Owner/President Brian Franz said, "Sentinel is thrilled to add another Rosenbauer Apparatus Specialist to our team. With Austin's employment, we can put forth a great effort to reach more customers and spread the word about Rosenbauer products. Providing up front customer service and service after the sale are our primary goals."

Austin Unrein can be reached at [austinunrein@sentineles.com](mailto:austinunrein@sentineles.com) or at 913-360-0414.



Sentinel Emergency Solutions is a St. Louis based authorized Rosenbauer dealer with territories in Missouri, Illinois, and Indiana. Founded in 2014, Sentinel Emergency Solutions is an authorized Rosenbauer dealership and service center and has sold over 430 firetrucks. They are also a distributor for many fire equipment vendors such as MSA, Task Force Tips, Lion and Hurst Jaws of Life.



## Director's Comments



**Harry Ward**  
Director

### 91 YEARS OF FIRE TRAINING AT MIZZOU

The University of Missouri Fire and Rescue Training Institute (MU FRTI) traces its roots back to 1933 when the Missouri Fire Service came together to conduct the first Missouri Central Fire School held in conjunction with the University of Missouri at Columbia. Over the years there have been a lot of changes. In 1946 the University of Missouri formed the Firemanship Training Program. In 1982 the University of Missouri officially granted the program Institute status. We are very proud of our heritage here at the University of Missouri and we continue to develop and deliver high-quality training for the Missouri fire service.

This June we held our 91st Annual Summer Fire School on campus and around Columbia. MU FRTI offered 11 classes ranging from Fire Officer I to heavy vehicle rescue and everything in between. This year we had students from 43 counties from all corners of Missouri and parts of Kansas.

MU FRTI has some very talented instructors that taught Fire Officer I & III certification training, Rope Rescue, Live Fire Instructor, Heavy Vehicle, and Search and Rescue. We also had several instructors from other parts of the country Pennsylvania, Illinois, Maryland, and the District of Columbia.

MU FRTI is known for "bringing training to the student." Which includes the transport of specialized fire training props and equipment to training locations throughout Missouri, as well as to other states. This training that we provide around the State of Missouri for volunteers and career departments as well as other first responders allows them to better protect their communities in an emergency.

When I started my fire service career in La Plata Volunteer Fire Department, now known as the La Plata Community Fire Protection District, it allowed me to become a member of the FFAM. Later when I worked for Kirksville Fire Department, I was able to be a part of a convention in Kirksville sponsored by the Adair County Chiefs Association. With that, it was great to attend my first FFAM convention in a very long time. I am grateful to meet so many of you at the convention during the vendor day and throughout the weekend. The event was well planned, and I congratulate the convention committee. I also want to congratulate all the award winners and especially the life-saving awards, and the medal of valor award. This is what the fire service is all about - saving lives and property. Thank you again for allowing MU FRTI to be a part of the FFAM Convention 2023.

I am grateful for the partnerships we have with organizations around the State of Missouri and the country. I want to thank the Division of Fire Safety and our State Fire Marshal and the Education Commission to make *Introduction to the Fire Service* a priority. This will make a huge impact on the fire service, especially for volunteer service. This course was redesigned by our instructors to meet the needs of small rural volunteer fire departments that may not be able to put together a Firefighter I course. This allows the departments to train their new volunteers so that they can be helpful on the fire ground.

MU FRTI's mission remains focused on providing the very best and safest training for the Missouri fire service and emergency first responders. If we can be of any assistance, please contact us at 800-869-3476 or 573-882-4735 or go to our website at [www.mufrti.org](http://www.mufrti.org).

Find Out More Online:

**MUFRTI.ORG**



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