

TSR VIRTUAL COFFEE BREAK

WELCOME!



- **Questions?** Type them in the chat or Q&A window at anytime. We'll have time at the end. For everything else, contact Sales@TriStateRestores.com.
- **We are recording!** Links to view the video & PDF presentation will be shared with you tomorrow morning. Visit TriStateRestores.com/VCB for a complete archive.
- **Starbucks Gift Cards:** Stay till the end, 10 attendees will win a \$5 Gift Card!
- **After the VCB:** Please complete the post-event survey, see you February 28!
- **Liked this Presentation?** Share a review of TSR on Google for a \$25 Amazon Gift Card*
(*Subject to Google Review/Approval)
- **Stay till the end** – ONE lucky attendee will **win a Crumbl Prize Pack** (worth \$50!)



WHO WE ARE



FAMILY OWNED - LOCALLY OPERATED - ESTABLISHED FIRM

Tri State Restorations LLC® is an independent commercial and residential disaster recovery firm based in the Washington D.C. Metropolitan area (MD/DC/VA). We specialize in the mitigation, remediation, removal, cleanup and restoration efforts of large and small water, fire, mold, biohazard, lead & odor caused damages.

Our company's mission is *Turning Disaster Into Peace of Mind®* because we're committed to easing the burden of handling your property disaster by providing you with the best customer experience and services available.





SUITE OF SERVICES

We're Your Local DMV Area Commercial & Residential Disaster Recovery Experts.



Water Mitigation &
Restoration



Mold Remediation
& Lead Abatement



Fire/Smoke
Restoration & Odor
Control



Biohazard &
Trauma
Disinfection &
Cleanup



Sewage Mitigation
Cleanup &
Restoration



LICENSED + INSURED + RELIABLE

- IICRC Certified Firm
- EPA Lead Safe Certified Firm
- IAQA SMART Mold Firm
- 5-Star Rated
- TSR Employees are Infectious Disease & Bloodborne Pathogen Certified & IICRC Water Restoration Technician Certified
- EPA Licensed Asbestos Inspector



AVAILABLE 24-7





Fire Sprinkler System Safety

Preventing property damage through education.

A dramatic night scene of a building fire. A firefighter in full gear, including a red helmet and a tan jacket with "IDEV" and "TWO 11" on the back, is seen from behind, spraying a powerful stream of water from a hose onto a structure that is heavily on fire. The building's wooden frame is exposed, and thick black smoke billows into the dark sky. In the background, another building with a lit-up tower is visible. The ground is covered in debris and charred wood. The overall atmosphere is one of intense emergency response.

Before This Happens

A blue-tinted background image of a microscope, showing the eyepiece, objective lenses, stage, and base.

**Lets Learn How to Use
This.**

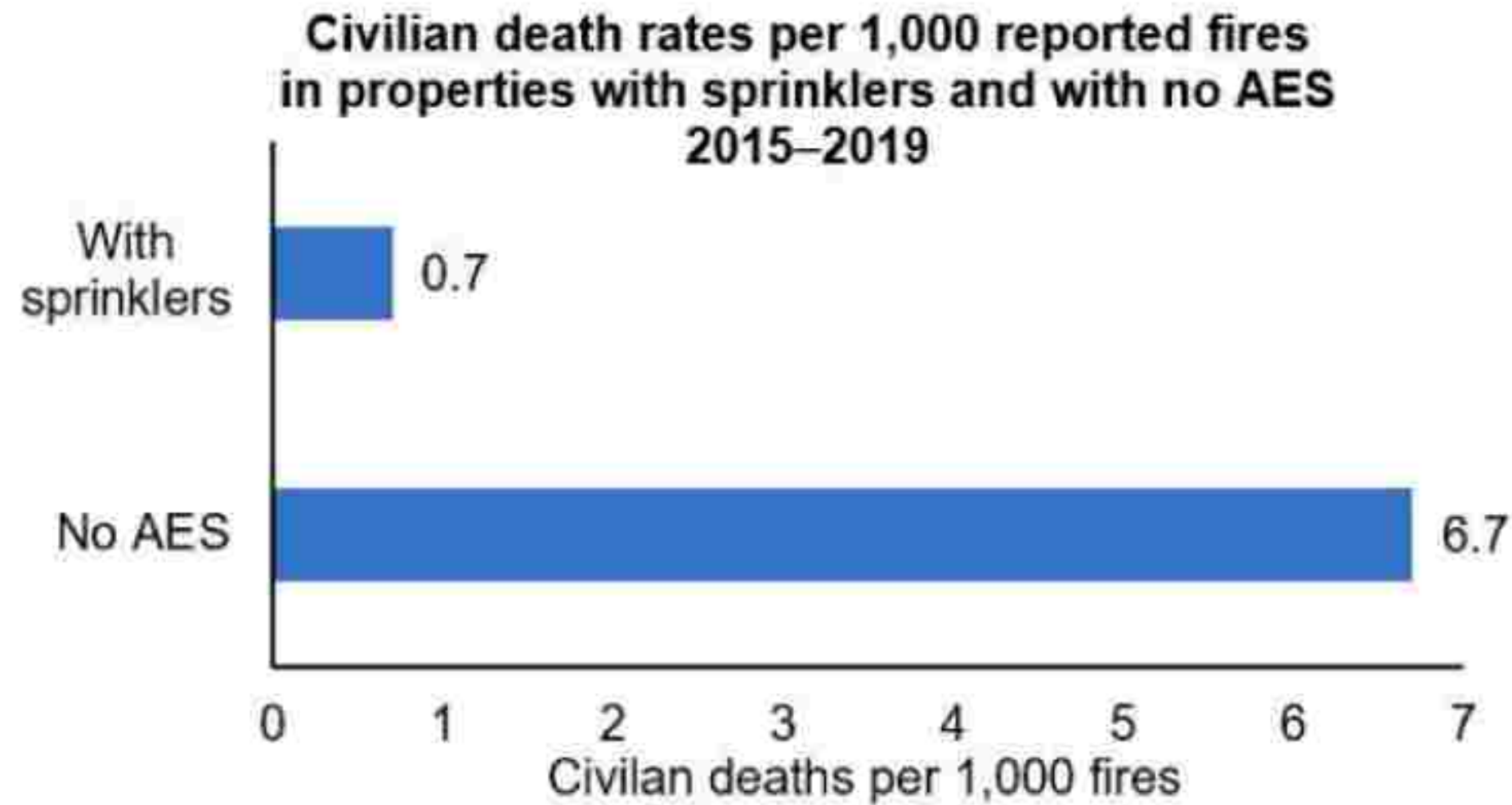


TODAY WE'LL COVER:

- 1. What is a Fire Sprinkler System**
- 2. What are the Types and Which are Most Common**
- 3. Fire Sprinkler System Fails**
- 4. Inspections**
- 5. What is the Life Expectancy of a Fire Sprinkler System?**
- 6. Fire Safety**



**A SINGLE SPRINKLER CONTROLS A
HOME FIRE 90% OF THE TIME
(NFPA)**



The civilian death rate per 1,000 reported home fires was 89% lower in homes with sprinklers than in homes with no (automatic extinguishing systems) AES.



WHAT IS A FIRE SPRINKLER SYSTEM:

A fire sprinkler system is a type of automatic extinguishing system (AES) that prevents fire growth and spread by releasing water through a series of sprinkler heads connected to a distribution piping system. Water is released through the sprinkler heads once the surrounding air reaches 165 degrees Fahrenheit.

Fire departments responded to an average of 51,000 structure fires per year from 2015-2019.¹ Only 10% of those structures had fire sprinkler systems. Only 7% of all home fires had sprinklers. –*NIOSH*





SPRINKLER SYSTEM BENEFITS:

- **Life safety:** The most important reason for installing fire sprinkler systems is to protect lives. Water that suppresses the fire and prevents it from spreading, giving occupants more time to evacuate safely.
- **Property protection:** Fire sprinkler systems can significantly reduce the spread and intensity of the fire, minimizing property damage.
- **Quick response:** Fire sprinkler systems respond to fires very quickly. It will activate as soon as the system detects heat from a fire.
- **Environmentally friendly:** a sprinklered home can reduce water usage to fight a fire by upwards of 90% (NFPA)



DOES A FIRE SPRINKLER SYSTEM INCREASE PROPERTY VALUE?

Definitely! Your property's value will be higher for two reasons:

First, home buyers find great value when it comes to home safety and having sprinklers definitely adds a safety net for when you decide to sell someday.

Second, your insurance carrier will deem the property less risky.



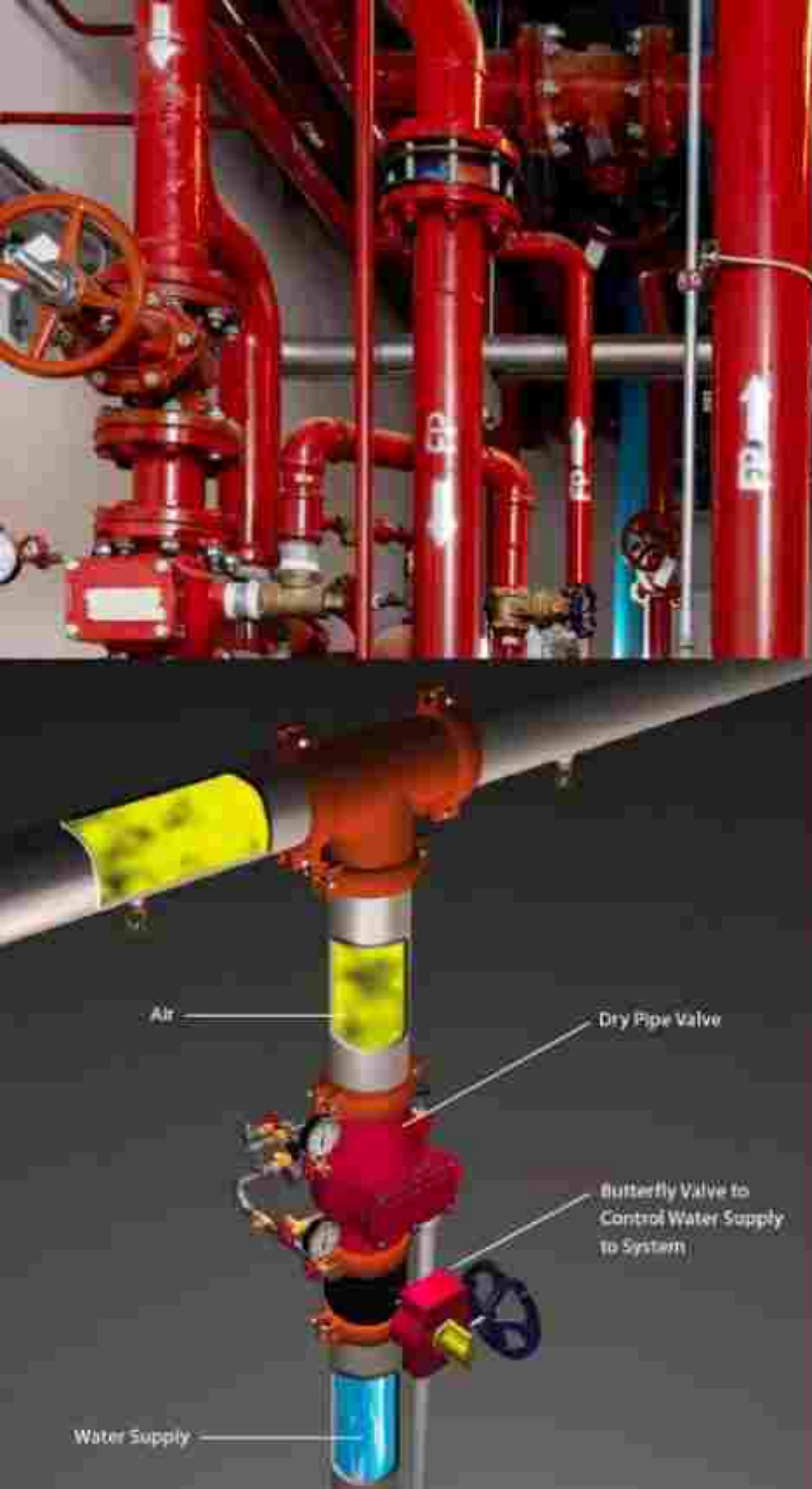
Fire Sprinkler System Types & Uses



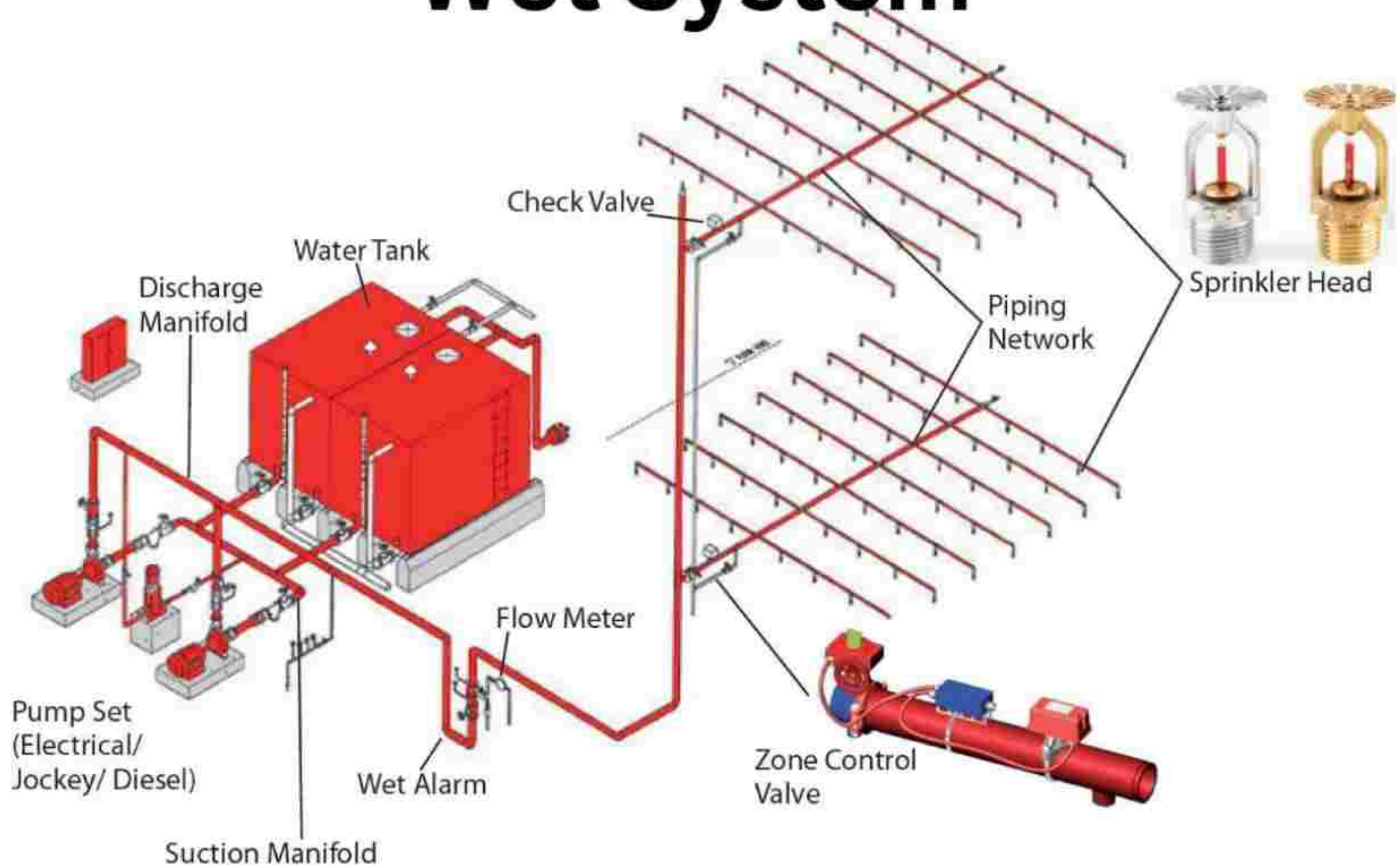
THE DIFFERENT TYPES

1. **Wet Pipe:** These fire sprinkler's pipes contain water. Since water is present in the system, facilities must maintain a temperature of at least 40 degrees. This prevents the water in the pipes from freezing. Water is released through the sprinkler heads once the surrounding air reaches 165 degrees Fahrenheit.

2. **Dry Pipe:** These fire sprinklers are filled with nitrogen or pressurized air. The air pressure keeps the valve closed and prevents water from entering the system. When a fire sprinkler detects temperatures at 165 degrees Fahrenheit, the system activates and the valve is opened allowing the air pressure to drop in the system and water to flow into the pipes so that the water can discharge. These systems are perfect for structures without temperature controls.



Wet System





THE DIFFERENT TYPES CONT.

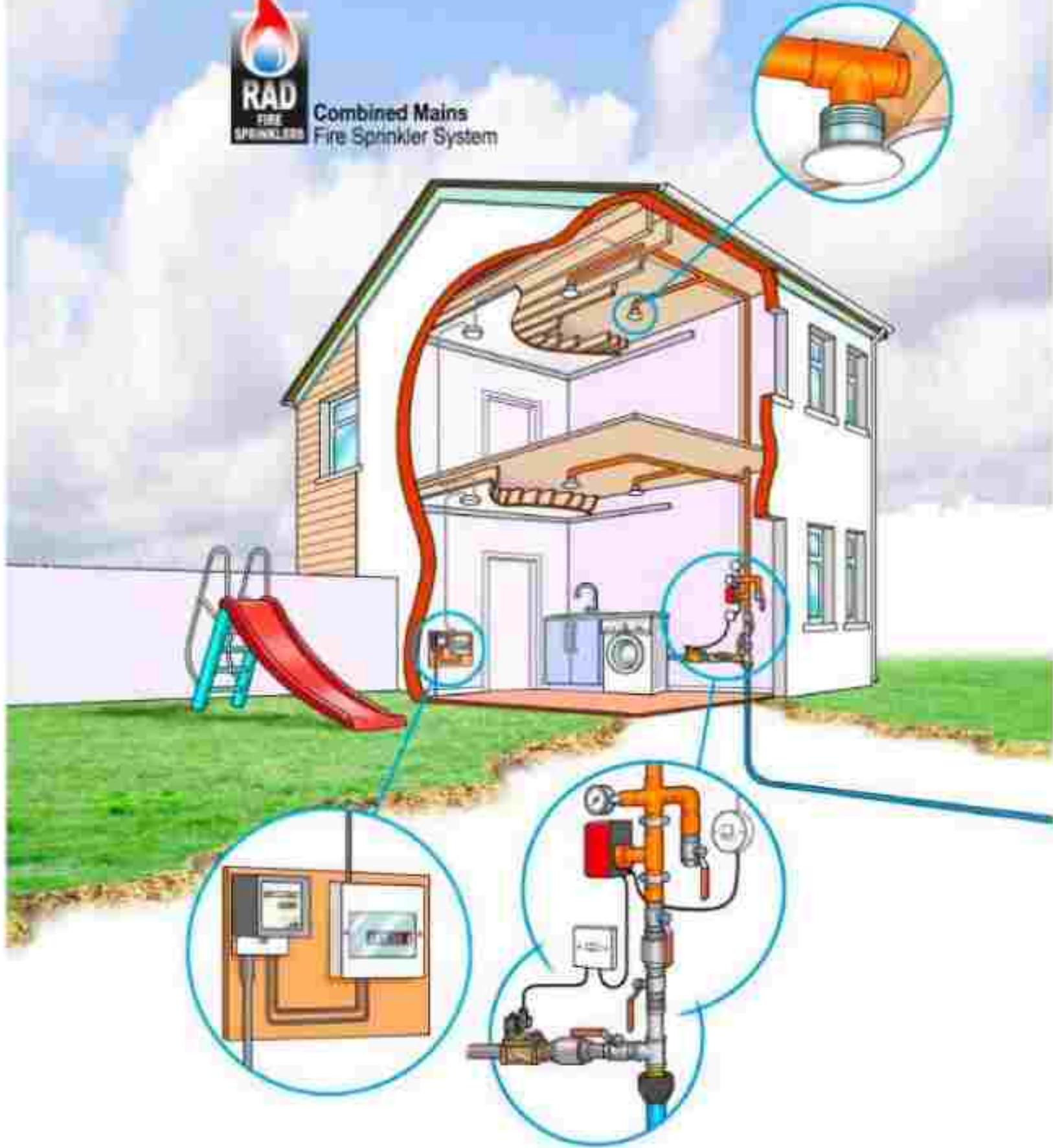


3. Pre-Action: These fire sprinkler systems contain pressurized air or nitrogen instead of water. Activating a pre-action system is a two-step process. First, a heat or smoke detector must detect a fire which then sends a signal to open the pre-action valve (Just like the dry pipe system). This fills the system with water. Next, a fire sprinkler head must detect an increased temperature to indicate a fire to open the sprinklers and allow water to flow out. Because this is a two-step process, it helps to prevent accidental activations. Ideal for museums, data centers, libraries.

4. Deluge: (Shown Left) Unlike the other types of fire sprinkler systems, this system is all about acting quickly. The deluge system sprinkler heads are always open and once active, will activate all at once. The goal is to put out the fire as quickly and effectively as possible. These systems are used in industrial facilities with highly flammable materials like aircraft hangers and manufacturing plants.



Combined Mains
Fire Sprinkler System





SPRINKLER HEADS

Sprinkler heads are the working end of the sprinkler system, responsible for applying water to the fire, and often responsible for activating the system altogether.

- **Fusible-Link Sprinkler Head** - A metal alloy melts when it reaches a pre-rated temperature, breaking a link and releasing the cap that retains the water/air pressure in the system
- **Frangible-Bulb Sprinkler Head** - A glass bulb filled with alcohol or glycerin and air breaks when heated to a pre-rated temperature, releasing the cap that retains the water/air pressure in the system
- **Chemical-Pellet Sprinkler Head** - a chemical pellet holds a cap in place using a plunger mechanism. The pellet liquefies when heated to a specific temperature, releasing the cap that retains the water/air pressure in the system
- **Early-Suppression Fast-Response Sprinkler Head** - Larger orifices meant for discharging larger amounts of water
- **Deluge Sprinkler Heads** - No cap or releasing mechanism



Pendent Sprinkler



Concealed Sprinkler



Sidewall Sprinkler



Concealed Sidewall Sprinkler

TYPES OF SPRINKLER HEADS

Conventional



Upright



Pendent



Horizontal Sidewall



Vertical Sidewall



Recessed Pendent



Recessed Pendent



Concealed Pendent



Concealed Pendent

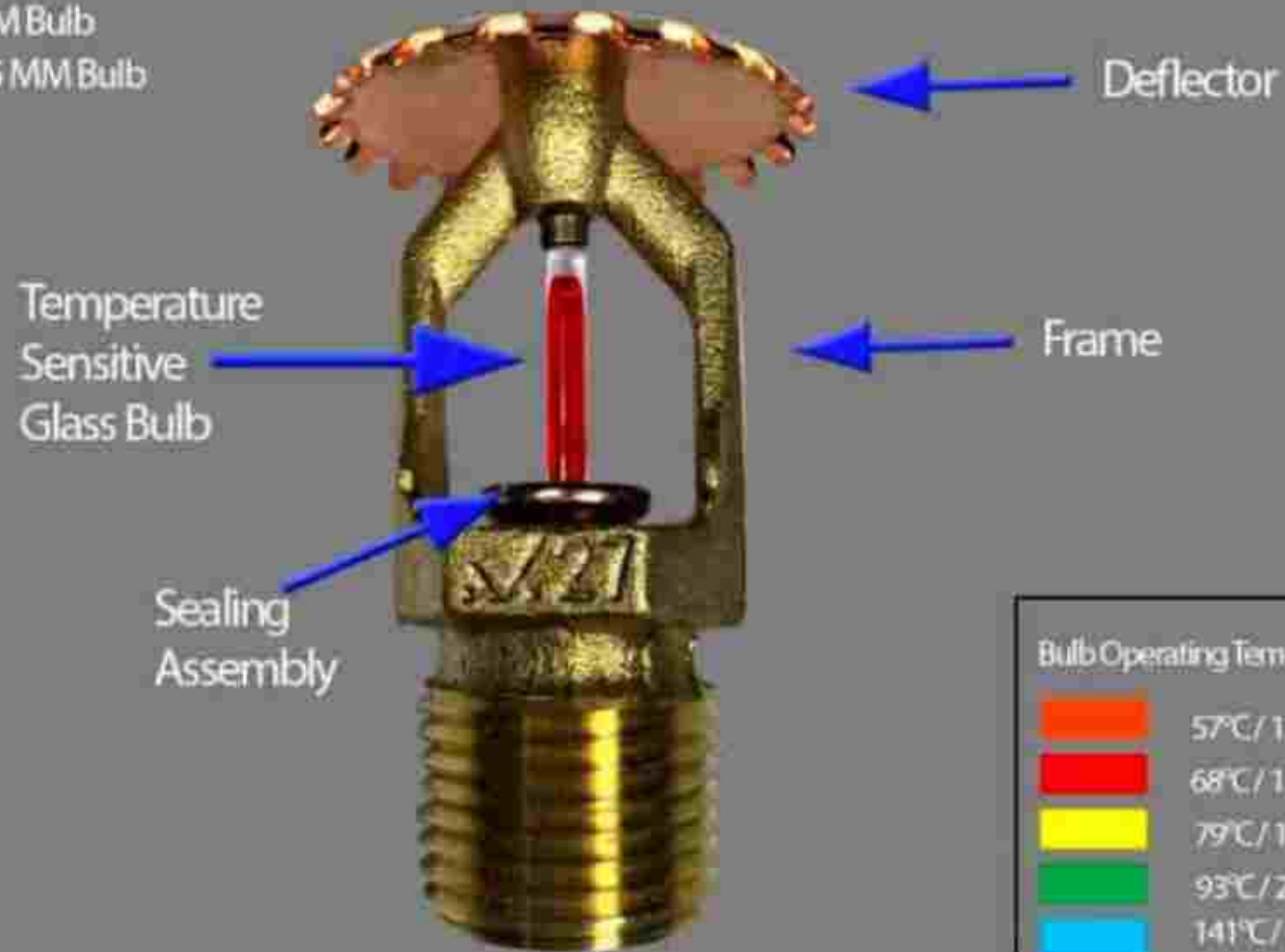


Wet System Sprinkler Head

Size of Glass Bulb:

Quick Response - 3 MM Bulb

Standard Response - 5 MM Bulb



Bulb Operating Temperature:

	57°C / 135°F
	68°C / 155°F
	79°C / 175°F
	93°C / 200°F
	141°C / 286°F
	182°C / 360°F



VALVES

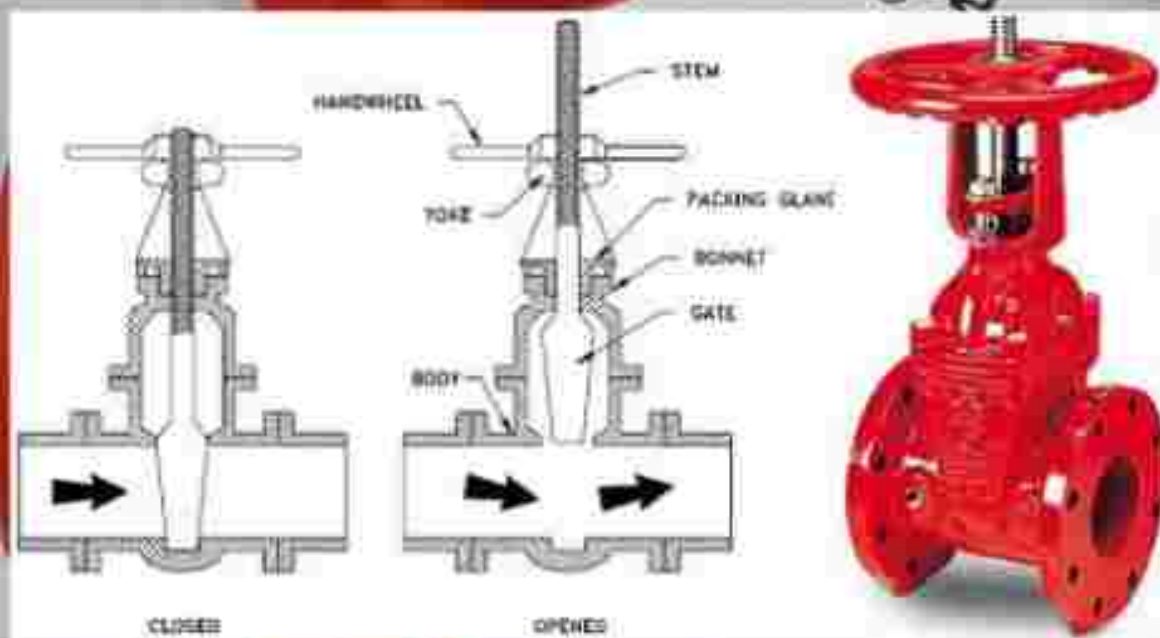
Valves in a sprinkler system allow for the system to be controlled and water to be shut-off or redirected. Valves can be classified by function and by type.

- **Function**

- Water supply valve/Shut-Off valve - Main control valve responsible for controlling water flowing into the system
- Alarm valve - Activates alarm when sprinkler system is activated
- Testing/service valves

- **Type**

- Outside Stem & Yoke (OS&Y) - Stem moves in as valve is closed, stem is exposed if valve is open
- Post-Indicator Valve (PIV) - Reads OPEN or SHUT if valve is open or shut
- Wall PIV - Same as PIV, mounted to the wall of a building
- Indicating Butterfly Valve - Open valve will show the yellow bar in line (parallel) with piping when open





Residential Sprinkler Demonstration



Watch on  YouTube

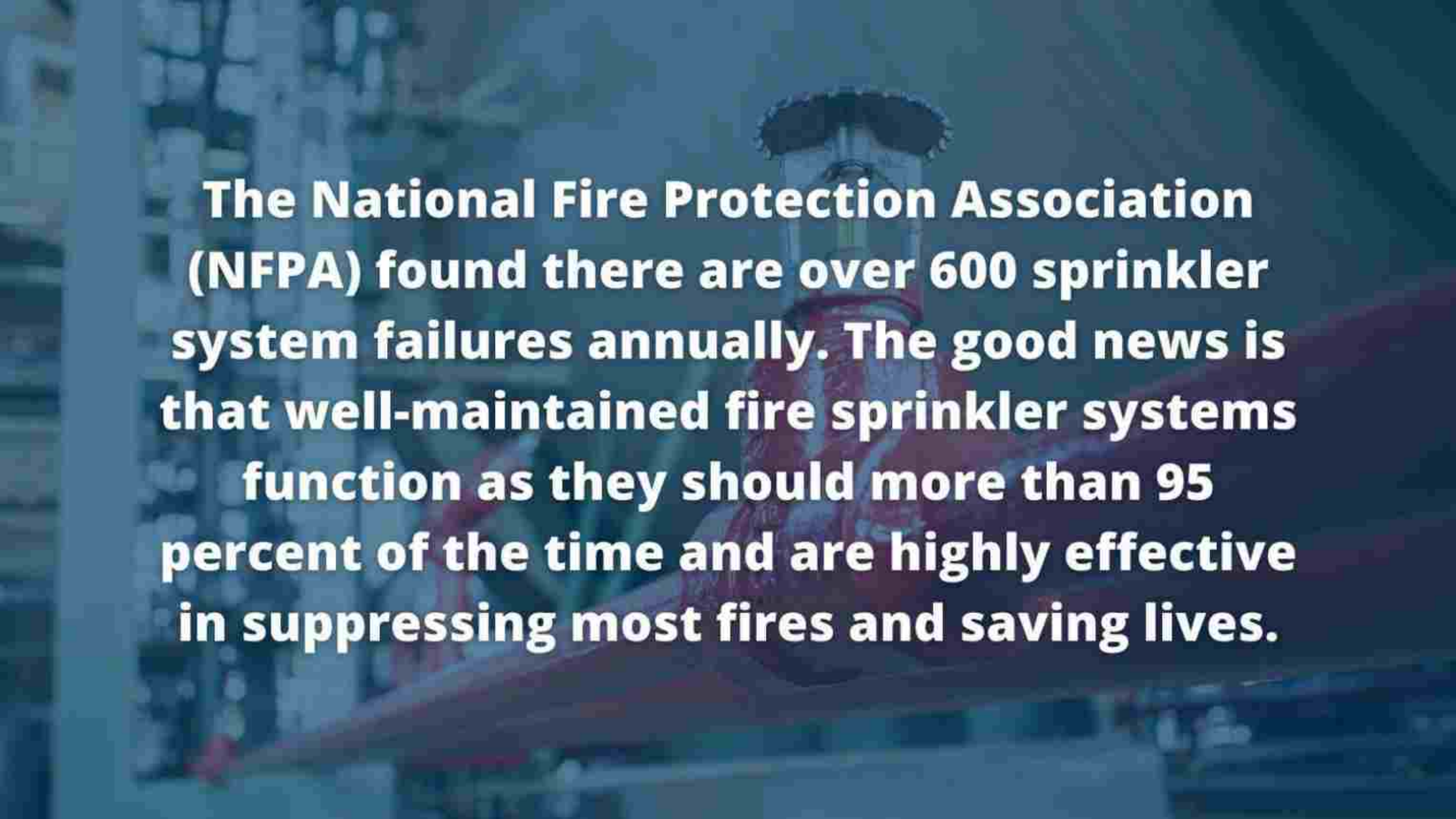


FEATURE VIDEO

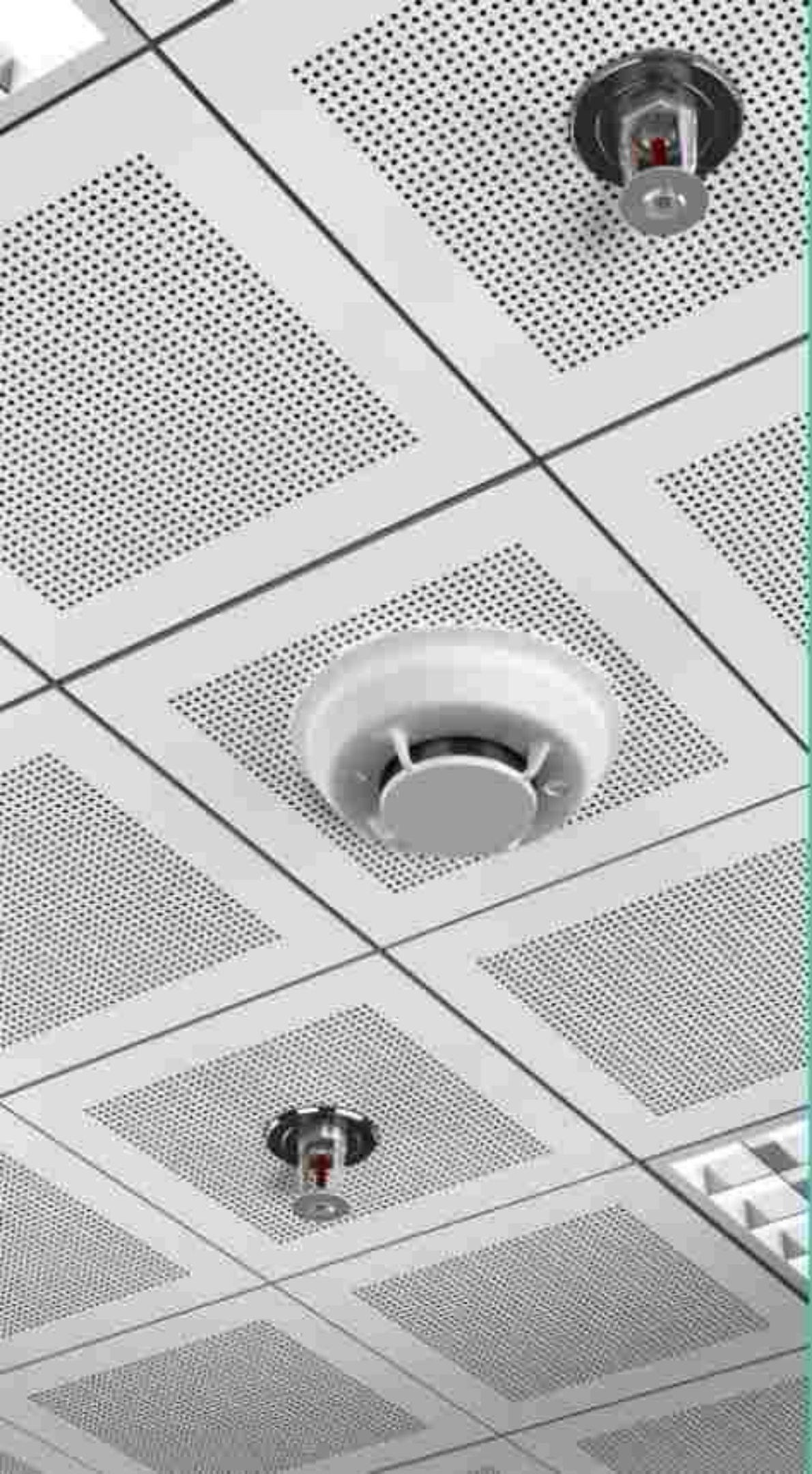


A close-up photograph of a red fire sprinkler head mounted on a red pipe. The sprinkler head has a glass bulb and a metal cap. The background is a blurred image of a building with many windows, tinted with a blue color. The text "Sprinkler System Fails" is overlaid in white.

Sprinkler System Fails



The National Fire Protection Association (NFPA) found there are over 600 sprinkler system failures annually. The good news is that well-maintained fire sprinkler systems function as they should more than 95 percent of the time and are highly effective in suppressing most fires and saving lives.



WHY DO FIRE SPRINKLER SYSTEMS FAIL?



Fire sprinkler systems can fail at any time. The main causes of failure are corrosion, freezing, improper installation, and poorly maintained systems.

Outside of system failure: another reason for a building's fire sprinkler system to fail to activate is that the water valve was turned off. *(Pro Tip: Inspect your shut off valves and make sure they are labeled)*

When shut-offs and plumbing are located outside or in a non-insulated area, they are more prone to freezing.

Now that we know about the different types of systems, which one do you think would be best for this situation?



DO FIRE SPRINKLERS EVER LEAK?

Routine wear and tear can cause sprinkler systems to leak if not regularly maintained.

Another common malfunction that causes fire sprinkler systems to leak involves o-ring seals and contaminants in the water, causing them to corrode and leak. Improper fitting sprinkler heads or fittings can also cause leaks.





WATER DAMAGE & FROZEN PIPES



One of the most common issues with wet sprinkler systems is cold weather. When you loose power, or the heat is accidentally turned off at a property, you risk your system freezing.

Areas that pose the highest risk for freezing are entryways, stairwells, attics, skylights, and under floors.

Pro Tip: Inspect vacant units and make sure the heat is on during colder weather.



HOW DO YOU PREVENT FAILURE IN YOUR SYSTEM?

We recommend having regular sprinkler inspections, repair, and maintenance performed by a local and certified professional.

Pro Tip for Commercial Properties: Conduct your sprinkler system test at the same time as your fire alarm test. Alarm activation should take no longer than 1 minute.





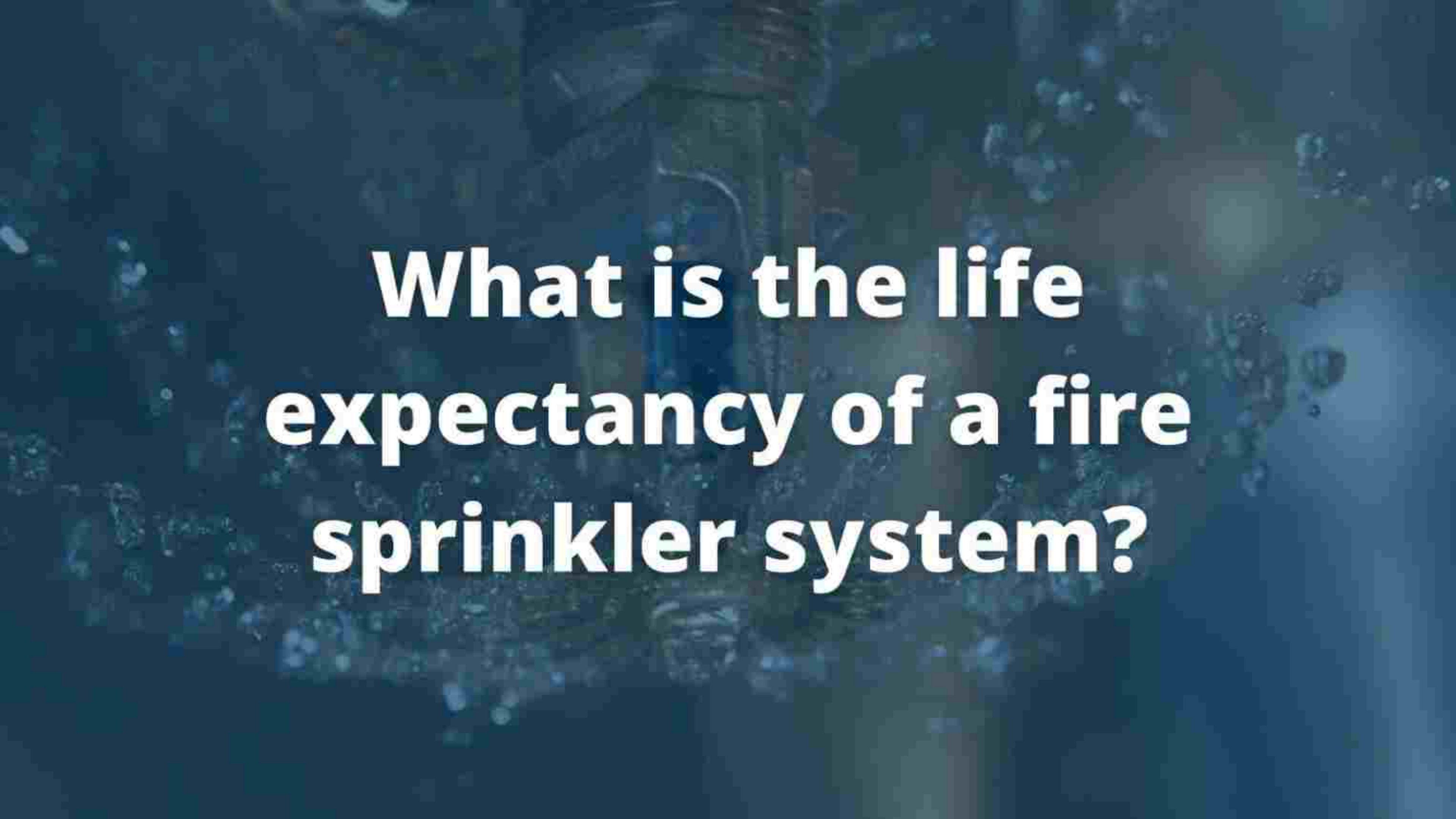
INSPECTIONS

Annually.

Every year, fire sprinkler systems need a complete test. The main drain, water flow, the fire pump, antifreeze solutions and alarm devices are tested annually.

Trip tests for dry, pre-action and deluge valves are performed every day. (NFPA)



The background of the image is a dark, textured surface, possibly a wall or ceiling, with a fire sprinkler head visible in the upper left quadrant. The sprinkler head is a complex, metallic structure with multiple nozzles. The overall lighting is dim, with some highlights on the sprinkler's components and the surrounding surface, creating a moody and industrial atmosphere.

**What is the life
expectancy of a fire
sprinkler system?**



LIFE EXPECTENCY

The typical lifespan is 40-50 years.

Without proper maintenance, wet systems can start failing after 15 years - this is due to the presence of oxygen, water, metal that can cause corrosion issues.

Dry water systems last 8-12 years.



A firefighter in full protective gear, including a helmet and a jacket with reflective yellow stripes, stands in front of a red fire truck. The truck has emergency lights on its roof and is parked on a street. The background is a brick wall. The entire image has a blue tint.

Fire Safety



NFPA Public Service Announcement Escape Plan



Copy link



Watch on  YouTube



FIRE DRILLS

3 P's of Fire Safety: Prevent, Plan & Practice

A home fire drill is a time for a family to practice their home fire escape plan. This is a plan to get out of the home quickly in case there is a fire. Every room in the home needs two ways out. Every home fire escape plan needs an outside meeting place.

A meeting place is a permanent location in front of the home that is a safe distance from the home. Everyone in the family should go to the meeting place so everyone will be together and adults will know that everyone is safe.

Tip: Install smoke detectors in each room of your property, and don't forget to change your batteries during daylight savings!



ARE ANNUAL FIRE DRILLS REQUIRED BY OSHA?



No. But, if this is for your workplace, you must establish an educational program to familiarize your workers with the general principles of fire extinguishers.



**FIRE
WARDEN**

FIRE DRILLS



Community Managers: Make sure fire escape plans are posted and legible. Practice community fire drills with your residents twice annually to ensure all residents are familiar with routes and meeting spots. Designate a community Fire Warden to assist with drills.

How do you approach fire safety with your residents? There are TONS of free resources at [NFPA.org](https://www.nfpa.org) and [usfa.fema.gov/prevention/](https://www.usfa.fema.gov/prevention/).

Encourage residents to purchase and maintain extinguishers for their property to protect themselves, other residents, and your community!



SAVE LIVES!

**TEST YOUR SMOKE AND CO2 ALARMS
TWICE A YEAR**

**IF YOU DO NOT HAVE THESE, THERE
IS NO BETTER TIME THAN NOW TO
INSTALL THEM.**

The background image shows a white truck on the left and a red car on the right, both partially visible. A semi-transparent blue overlay covers the entire image. In the center, the text "Our Standard Practices" is written in a large, white, bold, sans-serif font.

Our Standard Practices



OUR STANDARD OPERATING PROCEDURES

The BSR/IICRC S700 Standard for Professional Fire and Smoke Damage Restoration This standard provides principles, processes, and procedures for determining the presence of combustion particles affecting a building and the extent of impact following a fire or smoke event. This fire or smoke event will be either internal to the building, fire from an adjoining building, or buildings that sustain direct exposure to an external fire. This standard also provides practical principles, methods, and processes including equipment, tools, and materials, for the remediation of buildings impacted by a fire or smoke event. In addition, including emergency work (mitigation), temporary repairs, engineering controls, removal of fire residues, and associated odors, as allowed. This standard also addresses contractor qualifications, administrative requirements, procedures, development of the scope of work, and documentation of project-related events.

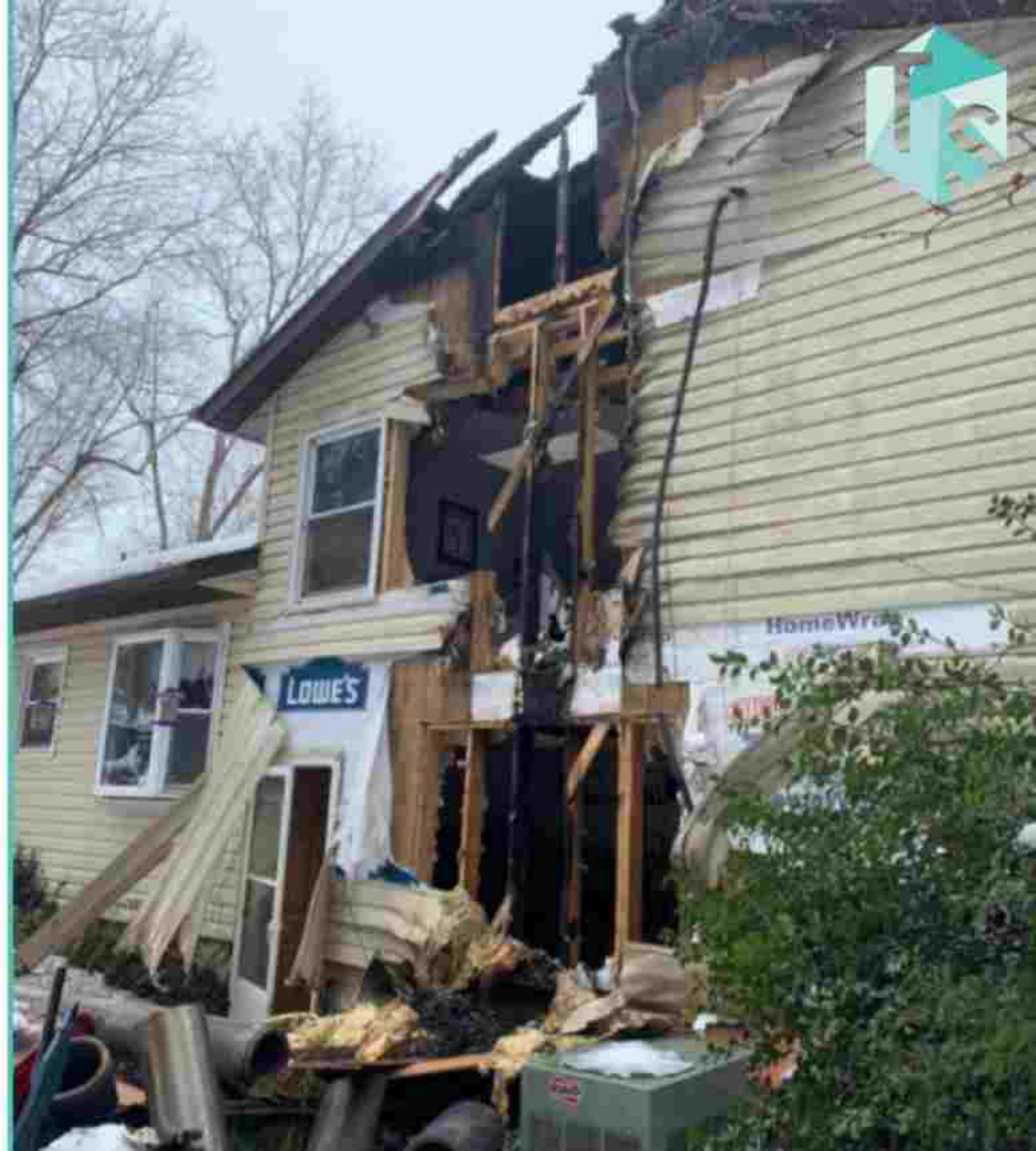


Tri State Restorations is an IICRC Certified Firm and our Technicians all hold individual IICRC certifications

IN CLOSING...

If the unfortunate does happen, and you experience a property loss as a result of fire or smoke damage, give us a call! We're available 24/7 to help with your disaster:

866-818-1949





QUESTIONS?

Enter them into the Q&A or chat box now!

GRAND PRIZE DRAWING TIME!

Crumbl Prize Pack! (\$50)




crumbl
cookies

SECOND PRIZE DRAWING TIME!

\$5 Starbucks Gift Cards!

**Chat us one thing you learned in this presentation to win!
The first 10 responses get a digital gift card.**





HELP US PLAN FUTURE COFFEE BREAKS!

What would you like for us to feature in 2024? Let us know by completing the post-event survey! *As always, today's recording and past VCBs can be found at TriStateRestores.com/vcb*



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