Washington Fire Service Coalition

HOME FIRE SPRINKLER EDUCATION

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ABOUT THE WASHINGTON FIRE SERVICE COALITION

WHO ARE WE?

The Washington Fire Service Coalition was formed in 2018 as an informal committee. Today, we are a nonpartisan consensus group made up of key fire service organizations:

- Washington Fire Commissioners
- Washington Fire Chiefs
- Washington State Council of Fire Fighters
- Washington State Fire Fighters' Association
- Washington State Association of Fire Marshals

WHAT IS OUR MISSION?

"....to educate Members of the Washington State Senate and House, their staff and appointed policy makers about fire, EMS and community risk reduction issues."

We are dedicated to sharing information that promotes our mutual interests. We develop internal and external education materials, serve as a resource to our members and elected and appointed officials, and advocate for continuous improvement within the fire industry here in Washington by speaking with one voice.

WHY RESIDENTIAL FIRE SPRINKLERS?

This issue impacts all the coalition members every day. Clearing the way for state and municipal policymakers to adopt residential fire sprinklers helps our partner associations provide for the safety of our citizens.

The rules of fire have changed. Fires burn faster, hotter and have more cancer-causing chemicals than ever before. The safest fire to fight is one that never requires firefighters to risk their lives.

FIRES IN WASHINGTON

2018 WASHINGTON FIRE LOSS DATA

- Fires took the lives of **67 people.**
- Fires resulted in more than **$283 million of property and content loss**.
- There were more than **24,900 fire incidents**.
- There were **759,680 total incidents.**
- There were more than **544,000 rescue and emergency medical service incidents.**

(Source: 2018 Fire in Washington Report)

During 2010-2014, fires at residential properties were associated with the largest share of firefighter injuries, with nearly three-quarters of the total (73%).

(Source: National Fire Protection Association, NFPA®)

THE FIRE PROBLEM IN WASHINGTON

According to the Washington State Fire Marshal's Office report, "2018 Fire In Washington," there is:

- One fire agency response **every 42 seconds**
- **One fire** reported in Washington **every 21 minutes**
- **One structure fire** reported **every 1.3 hours**
- **One intentionally set fire** reported in Washington **every 3.4 hours**

FIRES AT RESIDENTIAL PROPERTIES

Fires at residential properties are a significant problem in terms of the impact on lives and property. Over the past five years, **67% of the fire fatalities in Washington occurred in residential properties**.

HOME FIRES IN PERSPECTIVE

Residential Property Uses		2014	2015	2016	2017	2018	Grand Total
1 or 2 family dwelling	# of Inc	5,399	6,191	5,271	5,793	6,735	29,389
	Dollar Loss	$63,152,359	$75,177,474	$74,885,893	$84,626,418	$100,141,076	$397,983,220
Multifamily dwellings	# of Inc	1,484	1,808	1,526	1,701	2,030	8,549
	Dollar Loss	$29,107,547	$20,976,113	$16,617,651	$53,526,566	$26,332,469	$146,560,346
Other Residential Uses	# of Inc	534	580	504	604	657	2,879
	Dollar Loss	$1,650,237	$3,873,384	$1,206,324	$2,439,697	$29,957,839	$39,127,481
Total # of Inc		**7,417**	**8,579**	**7,301**	**8,098**	**9,422**	**40,817**
Total Dollar Loss		**$93,910,143**	**$100,026,971**	**$92,709,868**	**$140,592,681**	**$156,431,384**	**$583,671,047**

Fire Incident Type Category (Residential Property Only)		2014	2015	2016	2017	2018	Grand Total
Structure Fires (including Confined Fires)	# of Inc	4,310	4,816	4,443	4,751	5,325	23,645
	Dollar Loss	$90,762,768	$93,015,371	$89,306,143	$136,127,736	$149,874,258	$559,086,276
Fire, Other	# of Inc	543	590	538	573	640	2,884
	Dollar Loss	$371,449	$267,825	$345,268	$1,703,926	$728,422	$3,416,890
Fixed Mobile Property Fires	# of Inc	138	143	113	145	180	719
	Dollar Loss	$1,183,820	$3,416,359	$1,014,218	$1,217,787	$1,896,005	$8,728,189
Vehicle Fires (Mobile Properties)	# of Inc	283	275	297	317	388	1,560
	Dollar Loss	$1,186,383	$858,453	$1,094,461	$1,294,214	$2,339,263	$6,772,774
Outside Storage & Equipment Fires	# of Inc	197	279	155	224	250	1,105
	Dollar Loss	$94,327	$2,191,924	$93,635	$96,865	$195,995	$2,672,746
Natural Vegetation Fires	# of Inc	855	1,289	814	1,011	1,329	5,298
	Dollar Loss	$278,479	$196,825	$774,077	$116,649	$1,303,206	$2,669,236
Outside Rubbish Fires	# of Inc	1,077	1,170	928	1,068	1,284	5,527
	Dollar Loss	$31,157	$40,139	$81,864	$32,904	$56,235	$242,299
Cultivated Vegetation Fires	# of Inc	14	17	13	9	22	75
	Dollar Loss	$1,760	$40,075	$202	$2,600	$26,000	$70,637
Total # of Inc		**7,417**	**8,579**	**7,301**	**8,098**	**9,418**	**40,813**
Total Dollar Loss		**$93,910,143**	**$100,026,971**	**$92,709,868**	**$140,592,681**	**$156,419,384**	**$583,659,047**

(Source: Washington State Fire Marshal's Office, 2018 Report)

Fires in homes pose one of the biggest threats to people.

*In 2018, in Washington there were more than **6,853 structure fires** in residential properties, resulting in **45 fire fatalities** and **property loss in excess of $214 million**.*

UNDERSTANDING THE PROBLEM

Lightweight construction is favored by residential builders for its cost-saving and other benefits. However, in a fire it fails sooner and burns faster than dimensional construction material, putting civilians and responders at grave risk.

Popular open floor plans and modern interior contents such as polyurethane cause faster flashover when fire occurs, leading to structural failure. *(Source: NFPA)*

RESIDENTIAL FIRE SPRINKLERS ARE THE SOLUTION

The installation of residential fire sprinklers in all new construction is the solution to Washington's fire problem. Providing education to our elected officials on the benefits of fire sprinklers is the coalition's main goal.

WHY RESIDENTIAL FIRE SPRINKLERS?

A complete system of fire safety for homes includes working smoke alarms, a practiced home fire escape plan, and installed fire sprinklers. Fire sprinklers work automatically. They contain or even extinguish a fire, often before the fire department arrives.

Residential fire sprinklers are a proven way to protect lives and property against fires at home. Residential fire sprinklers respond quickly to reduce heat, flames, and smoke from a fire, giving families valuable time to get to safety. Each individual sprinkler is designed to activate when it senses a significant heat change. **Only the sprinkler closest to the fire will activate,** spraying water directly on the fire.

QUICK FACTS

*Of the 67 fire fatalities reported during 2018, **none occurred in a building that was equipped with fire sprinklers**.*

*Installing residential fire sprinklers in Washington can also **reduce property loss** in the event of a fire and **cut homeowner insurance premiums**.*

Fire is dangerous for everybody, but some are at greater risk...

Babies and children

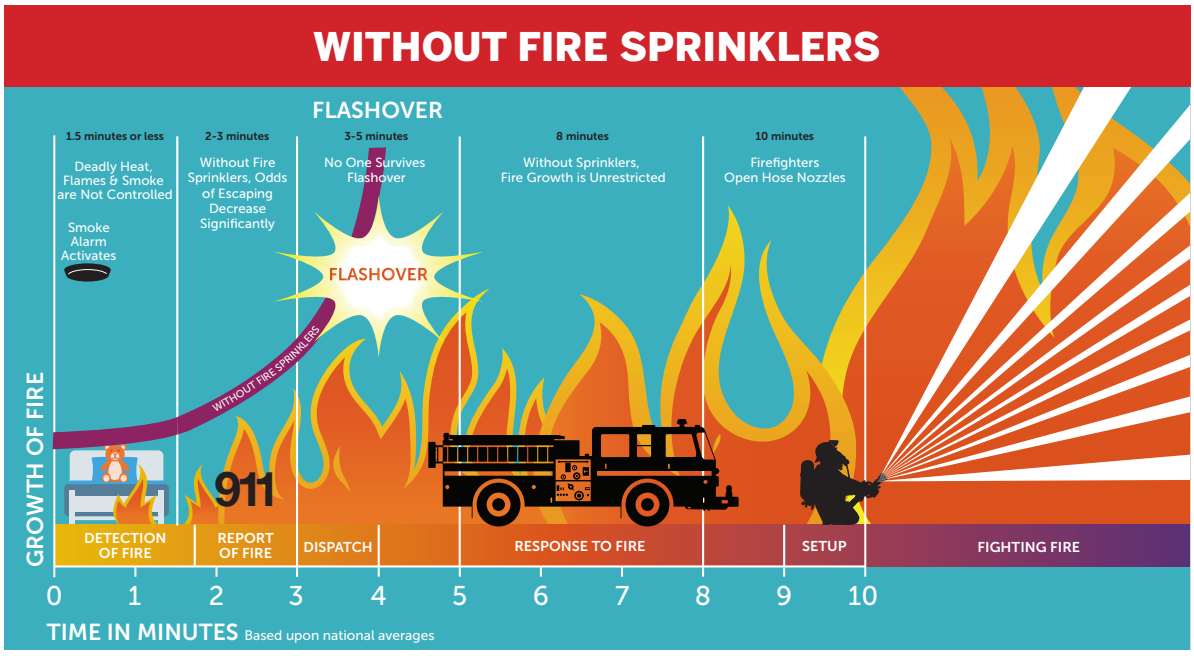
Older adults

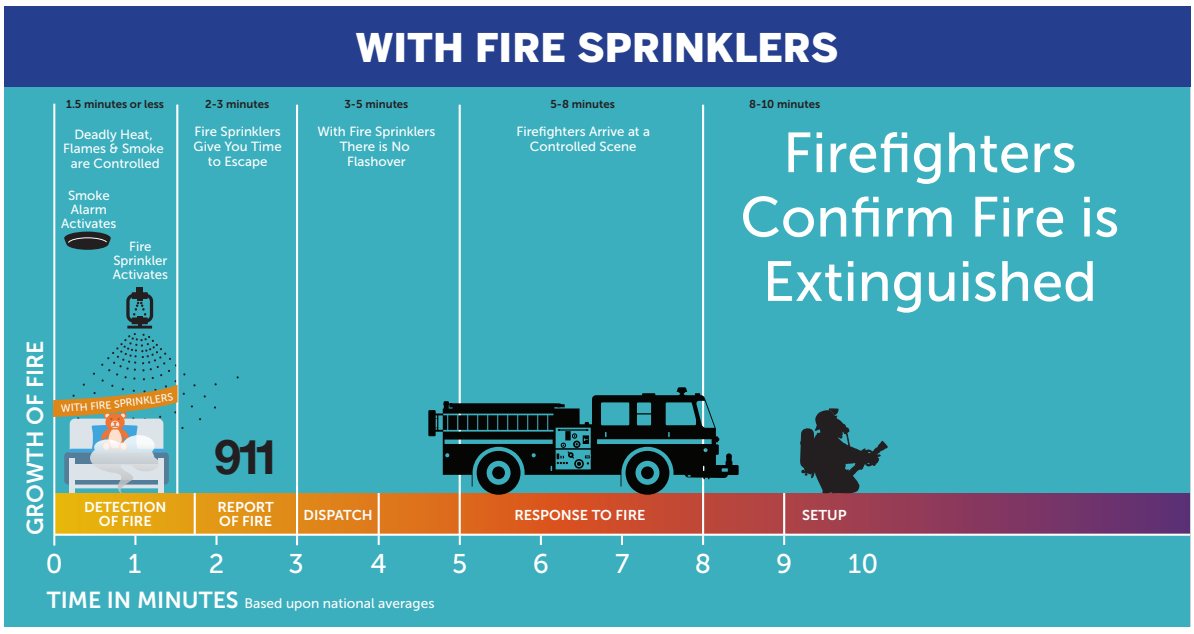
People with disabilities

Pets

WHY RESIDENTIAL FIRE SPRINKLERS?

Sprinklers reduce fire service personnel responses and minimize fire and contaminant exposure for responders. **Nationally, the risk of dying in a reported home fire is 85% lower if sprinklers are present.**



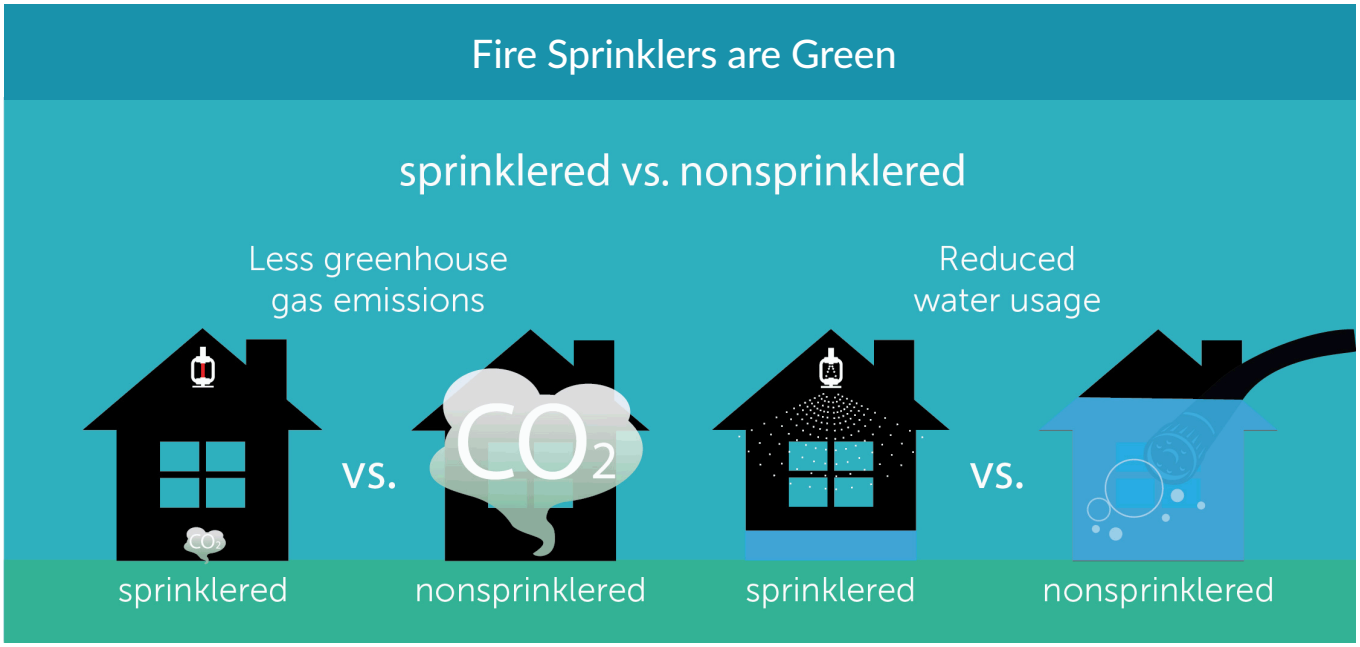


(Source: Home Fire Sprinkler Coalition)

ENVIRONMENTAL BENEFITS OF SPRINKLERS

A 2009 study conducted by FM Global for HFSC proved that fire sprinklers are good for the environment. **The tests showed that in the event of a home fire, with sprinklers:**

- ***Greenhouse gas emissions were cut by 97.8%.***
- ***Water usage was reduced between 50% and 91%.***
- ***Fewer persistent pollutants, such as heavy metals, were found in sprinkler wastewater versus fire hose water. The high pH level and pollutant load of non-sprinkler wastewater are an environmental concern.***



(Source: Home Fire Sprinkler Coalition)

HOME FIRE SPRINKLERS IN WASHINGTON

WASHINGTON DATA ON COST

Working smoke alarms alert occupants to the presence of danger, but do nothing to extinguish the fire. In a fire, sprinklers can control and may even extinguish a fire in less time than it would take the fire department to arrive.

- The average cost to install home fire sprinklers in Washington is **$2.00 per square foot**. That's less than the cost of an upgrade for kitchen counters or in-floor heating.
- Up-charging for a water meter that serves these systems creates an unnecessary barrier to installation. Progressive states have outlawed this type of action.
- Working with builders and developers can greatly reduce the costs.
- Working with builders and developers to install sprinklers before plan approval can result in a win for public safety and for the developer.

WASHINGTON CODES

- Fire sprinklers are required in all of the national building codes.
- National codes were amended to make installation of fire sprinklers voluntary in our state.
- Several local governments have enacted fire sprinklers in their respective jurisdictions.

Home Fire Sprinklers Protect What You Value Most

Washington Cities With Single-Family Residential Fire Sprinkler Ordinances

City	Year Adopted
Dupont	1993
Redmond	2007
Tukwila	2007
Bonney Lake	2010
Kenmore	2012
Olympia	2014
Camas	2016
Mercer Island	2017
Washougal	2018

MYTHS: BE READY WITH THE FACTS

MYTH: ***A smoke alarm provides enough protection.***

FACT: Smoke alarms alert occupant to the presence of danger, but do nothing to extinguish the fire. In a fire, sprinklers can control and may even extinguish a fire in less time than it would take the fire department to arrive.

MYTH: ***They leak or activate accidentally.***

FACT: Leaks are rare, and are no more likely than leaks from a home's plumbing system. A sprinkler is calibrated to activate when it senses a significant heat change.

MYTH: ***They all go off all at once.***

FACT: Typically, only the sprinkler closest to the fire will activate, spraying water directly on the fire and leaving the rest of the home dry and secure. A 2017 report from the NFPA found that in nine of ten home fires with sprinklers just one sprinkler activates.

MYTH: ***Smoke from burnt toast sets them off.***

FACT: Home fire sprinklers don't operate in response to smoke, burned toast, cooking vapors, steam, or an activating smoke alarm. They activate in response to high heat from the fire.

MYTH: ***The water damage caused by sprinklers is more extensive than fire damage.***

FACT: Sprinklers control a fire while it's still small. That limits the damage. Sprinklers use about 1/10th the amount of water that fire hoses use, and with a lot less pressure.

MYTH: ***They require a lot of maintenance.***

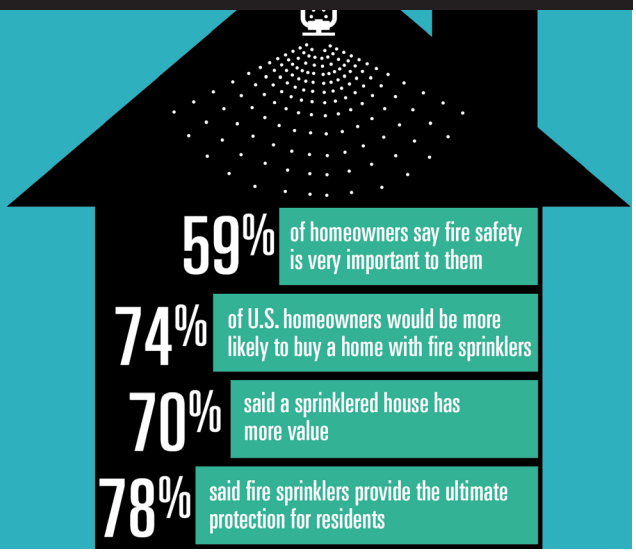
FACT: It's easy to care for home fire sprinklers. A flow test should be done a couple of time a year. (This can be done by the homeowner or a sprinkler contractor.)
(Source: NFPA Fire Sprinkler Initiative)

MYTH: ***Homeowners do not want them.***

FACT:

74% of homeowners would be more likely to buy a home with fire sprinklers

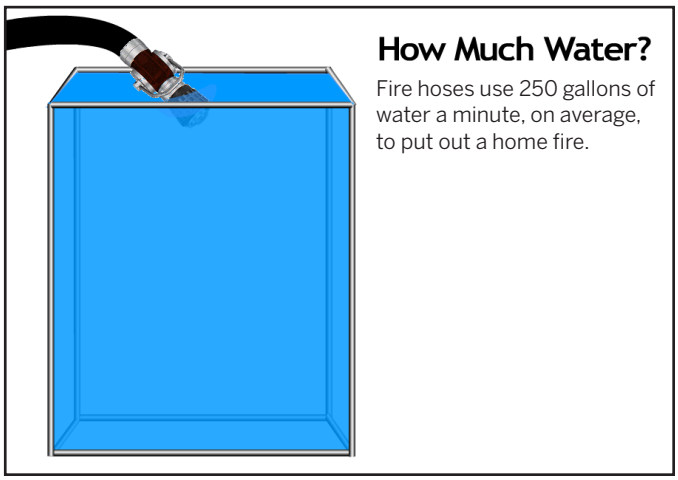
(Source: Harris Interactive Survey)

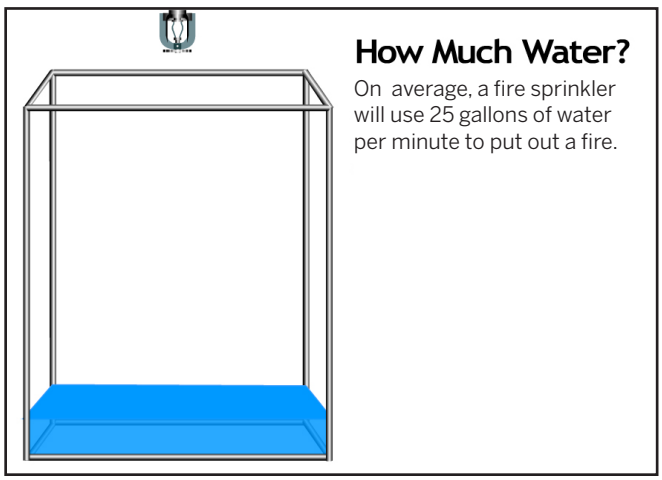


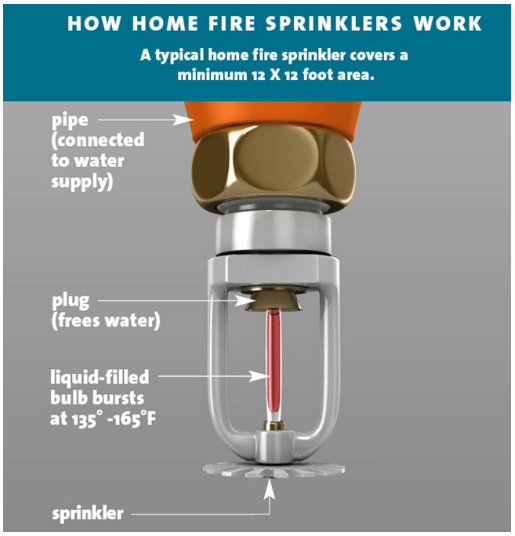
WORKING WITH WATER OFFICIALS

Local water suppliers and officials need the facts

- Water supply for home fire sprinklers is different from commercial systems.
- **There is no need for a separate water main.** Home fire sprinklers operate off of the household water supply. In some cases a tank and pump are used to provide adequate pressure.
- Systems compliant with **NFPA 13D**, the national installation standard for one- and two-family dwellings and manufactured homes, are designed to supply water to sprinklers.
- Sprinklers control a home fire with **a fraction of the water needed by fire departments** when sprinklers aren't installed.

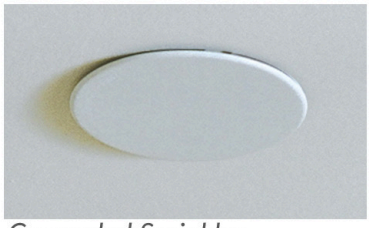






(Source: Home Fire Sprinkler Coalition)

Pendent Sprinkler



Concealed Sprinkler

Sidewall Sprinkler

Concealed Sidewall Sprinkler

SUCCESS STORIES

FIRE SPRINKLER ACTIVATION SUCCESS STORIES

Redmond's Mandatory Residential Sprinklers Requirement Saves Home Thousands In Fire Damages

REDMOND, Wash. – One household in Redmond saved over $100,000 in fire damages. With the help of the home's sprinkler system, fire personnel quickly extinguished the fire coming from the garage and burning car inside. "With the automatic activation of the residential fire sprinkler system, this fire event was quickly and successfully contained to the garage," said Fire Marshal Todd Short. "This is a great example of the benefits of residential fire sprinklers and the reason that Redmond adopted a requirement for fire sprinklers in all newly built homes since 2007."

Sprinkler Helps Limit Damage In Fraternity House Kitchen Fire

PULLMAN, Wash. – Recently, members living in the Delta Tau Delta house on the Washington State University campus were woken up by a fire alarm. Someone had left the stove on after cooking an early morning snack. Pullman Fire Department officials said that grease buildup fueled the flames. The grease flames activated the stove's hood extinguisher and a nearby sprinkler. "That kept it from moving into the exhaust system and out and possibly maybe even up the side of the house," said Richard Dragoo, Fire Marshal, Pullman Fire Department.

Resident Sleeps Through Home Fire And Smoke Alarms, But Saved By Fire Sprinklers

LACEY, Wash. – The sound of smoke alarms did not wake a resident who fell asleep while leaving food cooking on a stove. A fire soon erupted, immediately activating the home's fire sprinklers. The resident also wasn't stirred from slumber during the sprinkler activation or the sound of firefighters entering the home. A tweet by Lacey Fire District 3, sums up the incident: "...on scene of a fire alarm at local apartments. Cooking fire on stovetop. Occupant asleep. Fire extinguished by sprinkler head. Resident slept through the fire, the alarm, the sprinkler activation & our crew forcing entry! #ThankYouFireCodes because #SprinklersSave Lives."

SUCCESS STORIES

Sprinkler System Extinguishes Fire in Seattle High Rise

SEATTLE, Wash. – A fire broke out in the kitchen of a residential unit in a 40-story apartment building when an enthusiastic dog accidentally nudged a cardboard box onto a lit stovetop burner, igniting the box. The resulting fire was hot enough to activate both nearby pendant and sidewall sprinklers. As a result of the sprinkler activation, the fire was out by the time the fire department responded, and no injuries — to dogs or humans — were reported.

Fire Sprinklers Save Two Redmond Area Buildings

REDMOND, Wash. – Fire sprinklers activated in two separate Redmond area buildings to protect lives and property. Both incidents were promptly reported to the NORCOM fire dispatch center by alarm monitoring companies. In both instances the activation of a single fire sprinkler controlled the fire until firefighters arrived. In the first case, the activation of the fire sprinkler provided time for two employees onsite to evacuate. In the second case, the presence of the sprinklers protected a dog home alone until it could be evacuated by firefighters.

Apartment Fire Suppressed by a Single Fire Sprinkler

OLYMPIA, Wash. – Olympia firefighters responded to fire alarm activation caused by an electrical fire in a kitchen. The first engine arrived to find that a single fire sprinkler had activated and extinguished the fire. Firefighters secured the sprinkler system, and assisted in removing smoke from the residence. Water damage was kept to a minimum and there was no significant fire damage. There were no reported firefighter injuries; one resident sustained cuts to the hand after breaking the glass door to obtain a fire extinguisher.

Home Under Construction Saved By Two Fire Sprinklers

CAMAS, Wash. – A building contractor arrived at a house under construction and noted there had been a fire in the laundry room that spread to the entryway and into the attic. The fire had been extinguished by the activation of two sprinklers. The contractor activated 911. The fire that had begun to burn in the attic was actually extinguished by the steam conversion from the activated sprinkler hitting active fire to prevent what should have been a fully involved attic structure fire. This is the 4th home in Camas to be saved by residential fire sprinklers.

This packet was created by the National Fire Protection Association Fire Sprinkler Initiative and the Home Fire Sprinkler Coalition for the Washington Fire Service Coalition.

Home Fire Sprinkler® COALITION
Protect What You Value Most™

The Home Fire Sprinkler Coalition (HFSC) is a 501(c)(3) charitable organization and the leading resource for independent, noncommercial information about home fire sprinklers. HFSC offers educational material with details about installed home fire sprinklers, how they work, why they provide affordable protection and answers to common myths and misconceptions about their operation. These materials are available upon request.

HomeFireSprinkler.org

NFPA® | FIRE SPRINKLER INITIATIVE® Bringing Safety Home™

The Fire Sprinkler Initiative® (FSI), a project of the National Fire Protection Association®, aims to increase the number of new, one- and two-family homes protected by sprinklers. The FSI website offers free research and resources to help advocates promote the fact that sprinklers are necessary in new construction.

Firesprinklerinitiative.org

Washington Fire Service Coalition

Ask the Washington Fire Service Coalition for more information.

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