**U.S. EXPERIENCE WITH SPRINKLERS FACT SHEET**

**Sprinklers save lives and protect property from fires.**

Compared to properties without automatic extinguishing equipment and specifying wet-pipe sprinklers

* The death rate per fire in sprinklered homes is lower by 82%.
* Direct property damage per fire in sprinklered homes is lower by 68%.

**Damage per Fire with Wet Pipe Sprinklers versus**

**Without Automatic Extinguishing Equipment, 2007-2011**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Eating or |  |  |  |  |  |  |  |  |  | $53,000 |
| drinking |  | $13,000 |  |  |  |  |  |  |  |
|  |  |  | $21,000 |  |  |  |  |  |  |  |
| Educational |  |  |  |  |  |  |  |  |
|  | $8,000 |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | $14,000 |  | Without automatic |  |  |  |
| Health care\* |  |  |  |  |  |
|  |  |  |  |  |
|  | $5,000 |  |  |  |  |  |  |
|  |  |  |  |  |  | extinguishing equipment |
|  |  |  |  |  |  |  | With wet pipe sprinklers |
| Home including |  | $20,000 |  |
|  |  |
|  |  |
|  |  |  |  |  |  |  |  |
| apartment |  | $7,000 |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  | $55,000 |
| Store or office |  |  |  |  |  |  |  |  |
|  |  |  |  | $38,000 |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| $0 | $20,000 | $40,000 | $60,000 |



\*Health care includes hospitals, nursing homes, clinics, and doctor’s offices.

Sprinklers are reliable and effective.

In reported structure fires large enough to activate them, sprinklers operated in 91% of fires in sprinklered properties.

Wet-pipe sprinklers operated in 92% of these fires vs. 81% for dry-pipe sprinklers.

In reported structure fires large enough to activate them, sprinklers operated and were effective in 87% of fires in sprinklered properties.

Wet-pipe sprinklers operated and were effective in 89% of fires vs. 76% for dry-pipe sprinklers.



NFPA’s Fire Sprinkler Initiative: Bringing Safety Home seeks to encourage the use of home fire sprinklers and the adoption of fire sprinkler requirements for new construction.

In 2007-2011 fires large enough to activate them, sprinklers operated in 91% of fires in sprinklered properties. The graph below is based on the other 9% in which sprinklers should have operated but did not.

**Reasons When Sprinklers Fail to Operate, 2007-2011**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| System shut off before fire |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 64% |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Manual intervention defeated system |  |  |  |  | 17% |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Damaged component |  | 7% |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lack of maintenance |  | 6% |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Inappropriate system for fire |  | 5% |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% |



In 2007-2011 fires where sprinklers operated, they were effective in 96% of the cases. The graph below is based on the other 4% in which the sprinkler was ineffective.

**Reasons When Sprinklers Are Ineffective, 2007-2011**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Water did not reach fire |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 44% |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Not enough water released |  |  |  |  |  |  |  | 30% |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Damaged component |  | 8% |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Manual intervention defeated |  | 7% |  |  |  |  |  |  |  |  |  |  |  |  |
| system |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lack of maintenance |  | 7% |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Inappropriate system for fire |  | 5% |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0% | 10% | 20% | 30% | 40% | 50% |

Usually only 1 or 2 sprinklers are required to control the fire.

When wet-pipe sprinklers operated, 88% of reported fires involved only 1 or sprinklers.

For dry-pipe sprinklers, 73% involved only 1 or 2 sprinklers.