



**RESEARCH**

# Structure Fires in Educational Properties

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## **Abstract**

In 2011-2015, U.S. fire departments responded to an estimated average of 4,980 structure fires in educational properties, annually. These fires caused an annual average of one civilian death, 70 civilian fire injuries and \$70 million in direct property damage.

Fires in educational properties accounted for 1% of all reported structure fires in 2011-2015. The educational properties included in this report include day-care centers; nursery, elementary, middle, junior, and high schools; and college classroom buildings and adult education centers. Cooking equipment (38% of fires) and intentionally set fires (36%) were the leading cause of fires in educational properties. Fires that were intentionally set accounted for the highest shares of civilian injuries (37%) and direct property damage (31%). More than two of five fires (44%) in educational properties occurred between 9 a.m. and 2 p.m.

Keywords: fire statistics, schools, educational properties, day care centers, nursery schools, college classrooms.

## **Acknowledgements**

The National Fire Protection Association thanks all the fire departments and state fire authorities who participate in the National Fire Incident Reporting System (NFIRS) and the annual NFPA fire experience survey. These firefighters are the original sources of the detailed data that make this analysis possible. Their contributions allow us to estimate the size of the fire problem.

We are also grateful to the U.S. Fire Administration for its work in developing, coordinating, and maintaining NFIRS.

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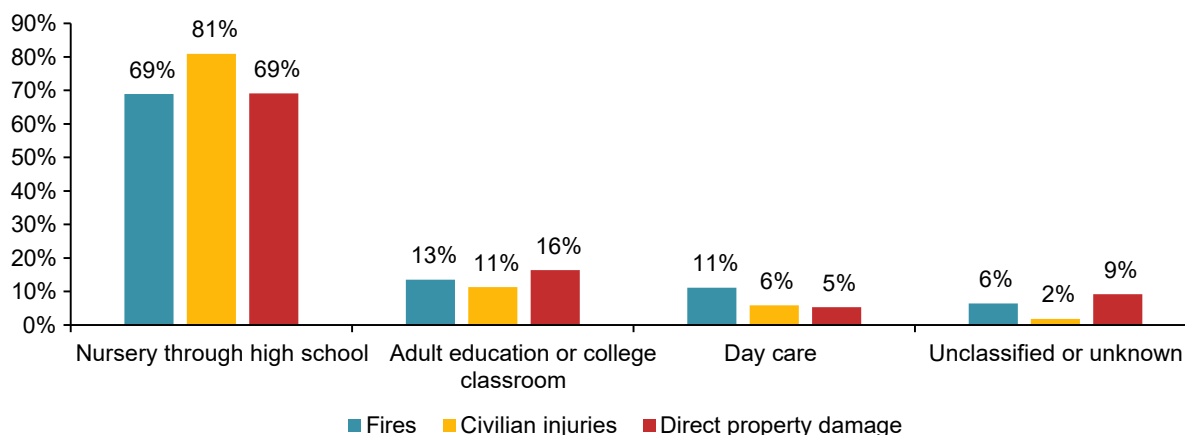
# FACT SHEET » RESEARCH

## Structure Fires in Educational Properties

U.S. fire departments responded to an estimated average of 4,980 structure fires in educational properties in 2011–2015, annually. These fires caused annual averages of one civilian death, 70 civilian injuries, and \$70 million in direct property damage.

Nearly seven in ten of the fires in educational properties (69%) occurred in nursery, elementary, middle, or high schools. The remaining educational property fires were reported in college classrooms and adult education centers (13%), day care centers (11%), or unclassified or unknown education properties (6%).

**Structure Fires in Educational Property Type  
2011–2015 Annual Averages**



- ▶ In 2011–2015, 38% of structure fires in educational properties involved cooking equipment. These fires resulted in 14% of civilian injuries and 3% of direct property damage.
- ▶ Fires that were set intentionally accounted for 36% of educational property fires. These fires caused 37% of civilian injuries and 31% of direct property damage.
- ▶ Playing with a heat source was responsible for 15% of educational property fires and caused 15% of civilian injuries and 20% of direct property damage.

*These estimates are derived from the U.S. Fire Administration National Fire Incident Reporting System (NFIRS) Version 5.0 and NFPA's annual fire department experience survey. Educational properties include preschools through high schools, adult education centers, and day care centers.*

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## Structure Fires in Educational Properties

In 2011-2015, U.S. fire departments responded to an estimated average of 4,980 structure fires in educational properties, annually. These fires caused an annual average of one civilian death, 70 civilian fire injuries and \$70 million in direct property damage.

Fires in educational properties accounted for 1% of all reported structure fires in 2011-2015. The educational properties included in this report include day care centers; nursery, elementary, middle, junior, and high schools; and college classroom buildings and adult education centers. Tables 1 through 12 at the end of this report provide a complete set of data elements for structure fires in educational properties. Fires in dormitories, fraternity or sororities houses are not included in this analysis, but are discussed in [Structure fires in dormitories, fraternities, sororities, and barracks](#).

**Most fires in educational properties occurred in nursery, elementary, middle, or high schools, with an estimated average of 3,430 structure fires per year reported in these properties (69% of the educational property total) in 2011-2015.** An estimated 670 structure fires per year were reported in college classrooms and adult education centers (13% of total), while an average of 560 structure fires (11%) were reported annually in day care centers. Another 6% of fires were in unclassified or unknown education properties. Figure 1 shows the percent distribution of fires by property type for 2011-2015.

**Figure 1. Reported Structure Fires in Educational Properties by Property Type, 2011-2015**

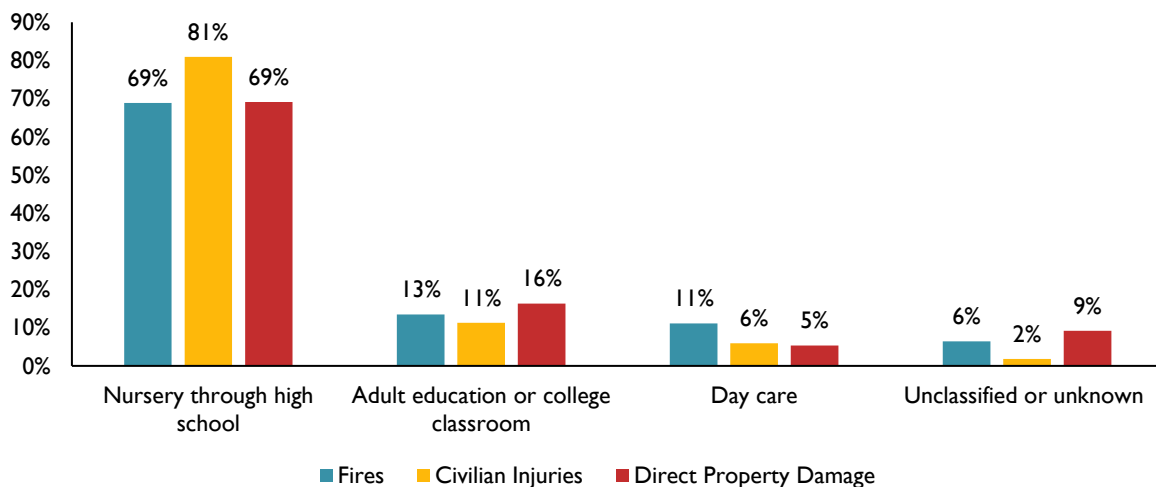
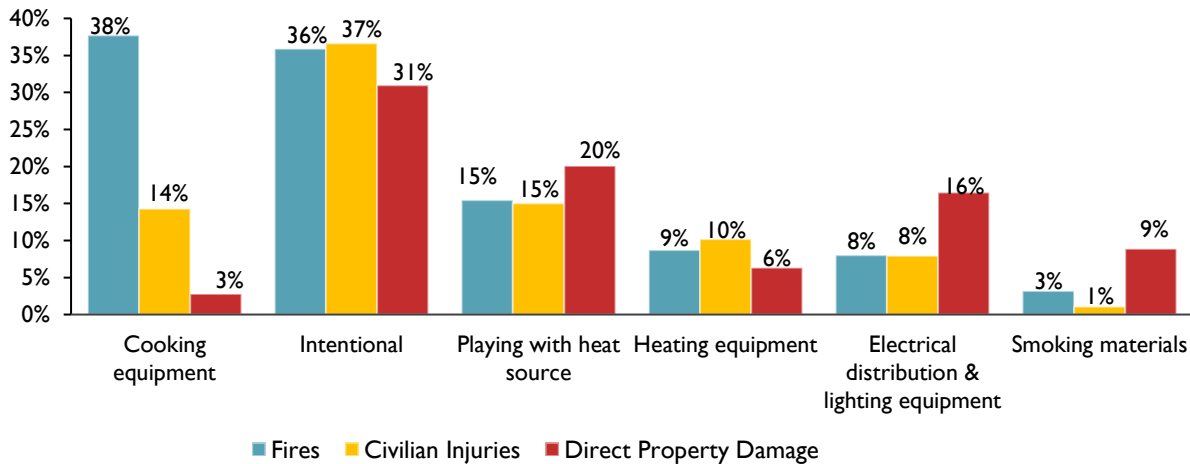


Figure 1 also shows that fires in nursery through high schools also accounted for the vast majority of injuries to civilians (81%) and direct property damage (69%). Day care properties accounted for 6% of civilian injuries and 5% of direct property damage, while 11% of civilian injuries and 16% of direct property damage were associated with fires in adult education or college classroom buildings.

**Fires involving cooking equipment were the leading cause of fires in educational properties taken as a whole, accounting for nearly two of five of fires in these properties (38%).** As shown in [Figure 2](#) and [Table 5](#), these fires also caused 14% of civilian injuries and 3% of direct property damages associated with these fires. Intentionally set fires were responsible for almost the same percentage of fires (36%), but accounted for higher shares of civilian injuries (37%) and direct property damages (31%). Playing with a heat source was a factor in 15% of fires, 15% of injuries, and 20% of direct property damages. Fires that were caused by electrical distribution and lighting equipment represented 8% of the educational property total, but caused 16% of direct property damage.

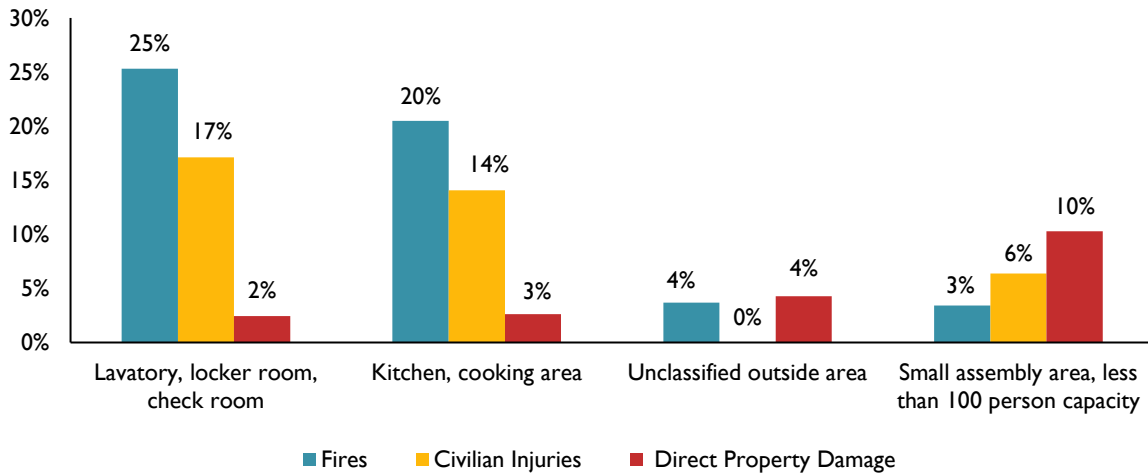
**Figure 2. Leading Causes of Fires in Educational Properties, 2011-2015**



**One-quarter (25%) of the fires in educational properties began in a lavatory or locker room, accounting for 17% of civilian injuries and 2% of direct property damage.** One-fifth (20%) of fires began in a kitchen or cooking area, with these fires causing 14% of injuries to civilians and 3% of direct property damage, as shown in [Figure 3](#) and [Table 10](#). Fires that began in a laboratory caused 2% of fires, but 21% of civilian injuries (and 3% of direct property damage).

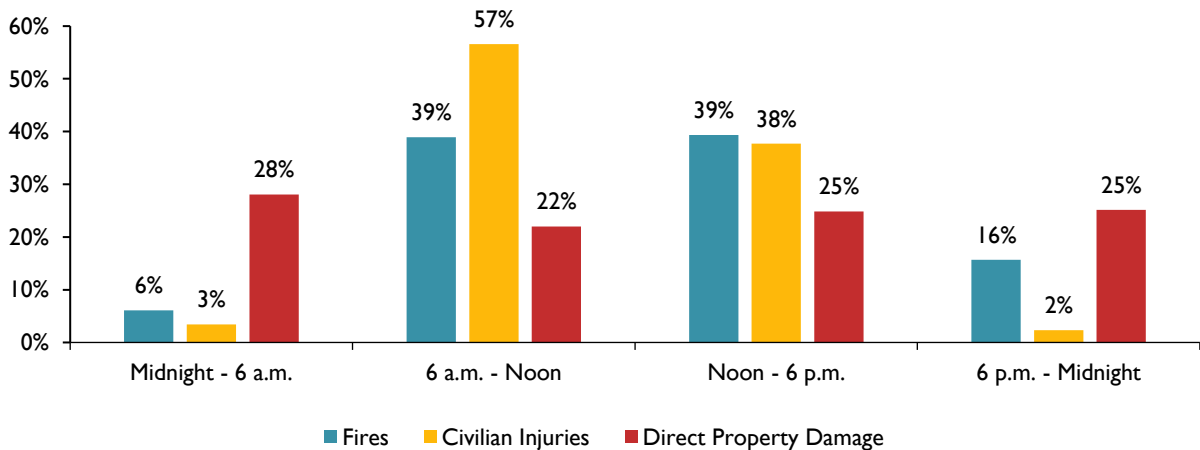


**Figure 3. Fires in Educational Properties by Leading Area of Origin, 2011-2015**



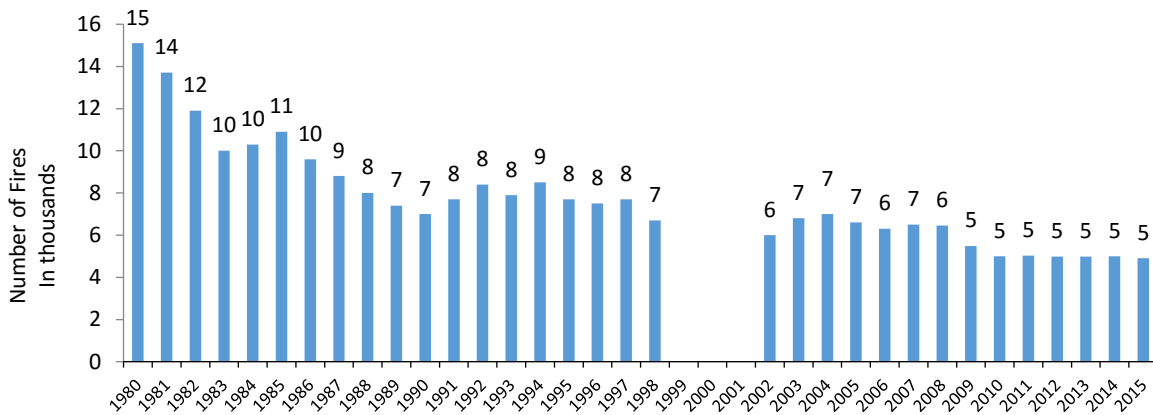
Nearly four of five fires in educational properties (3,910 fires, 78% of total) occurred between the hours of 6 a.m. and 6 p.m. Figure 4 shows that these fires accounted for 94% of civilian injuries (66 of 70 injuries) and 47% of direct property damage. Only 6% of fires occurred between midnight and 6 a.m., but these fires accounted for 28% of direct property damage. Fires in the evening and night-time hours from 6:00 to midnight also caused a disproportionate share of property damage, accounting for 16% of fires, but 25% of direct property damage. See Table 4 for details.

**Figure 4. Structure Fires in Educational Properties by Time of Day, 2011-2015**



**Structure fires in educational properties have fallen by 67% since 1980.** As shown in Figure 5 below, the estimated number of structure fires in educational properties has fallen dramatically from 1980 to 2015, from 15,060 to 4,940, a 67% decrease. However, as the graph indicates, decreases over the past decade have slowed substantially. See also Table 1.

**Figure 5. Structure Fires in Educational Properties by Year, 1980-2015**

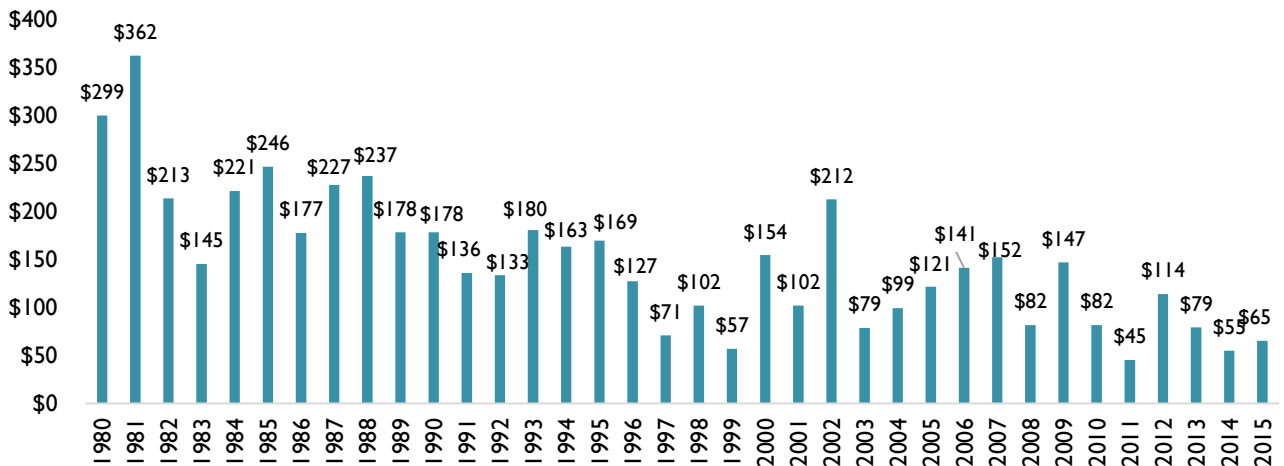


Note: Because of low participation in NFIRS Version 5.0 during 1999-2001, data for these years is not reported in this figure.

There has also been a substantial reduction in civilian injuries over this time period. During the most recent five-year period covered in this report (2011-2015), an estimated average of 70 civilians were injured each year as a result of structure fires in educational properties, a 70% decrease from the five-year period between 1980 and 1984, when there were an annual estimated average of 233 civilian injuries.

Finally, the reduction in fires in educational properties over the past three decades has also been accompanied by substantial reductions in the financial costs of fire, when adjustments are made for inflation. As shown in Figure 6, the estimated average property loss has fallen from \$299 million (in 2015 dollars) to \$65 million in 2015, a 78% decrease. When the comparison is made by 5-year averages to provide more stability, the average direct property loss of \$72 million per year from 2011 to 2015 also represented a sizeable decrease from the estimated annual average of \$248 from 1980 to 1984.

**Figure 6. Inflation-Adjusted Direct Property Damage in Educational Properties (In Millions of Dollars) by Year, 1980-2015**



### **Automatic suppressions systems limit fire impact in educational properties.**

In the most recent NFPA report on the [\*U.S. Experience with Sprinklers\*](#), Marty Ahrens estimated that sprinklers were present in 39% of the fires reported in educational properties (2010-2014). The report found that 97% of fires in educational properties with sprinkler systems were confined to the room of origin, compared to 88% of fires in educational properties with no sprinkler system.

## Structure Fires in Schools

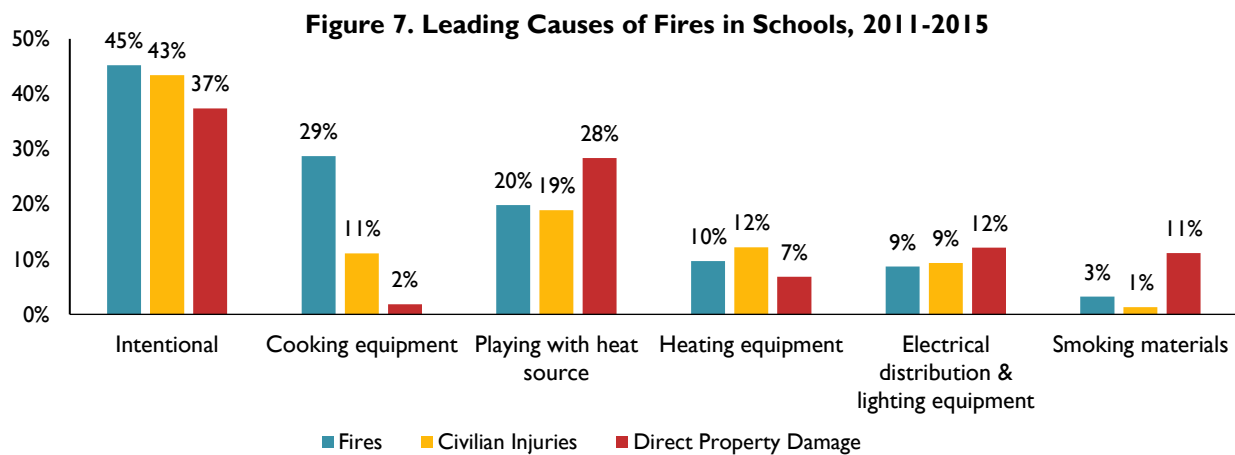
As indicated in [Figure 1](#) earlier in the report, nearly 70% of structure fires in educational properties occurred in nursery, elementary, middle, or high schools. [Table A](#) shows the estimated number of fires in school properties and associated losses by type of school. The table shows that U.S. fire departments responded to an estimated annual average of 3,430 structure fires in these school properties in 2011-2015, with associated annual averages of 57 civilian fire injuries and \$48 million in direct property damage. Detailed data for structure fires in schools can be found in [Tables 13](#) through [23](#) at the back of this report.

**Table A. Structure Fires in School Properties, 2011-2015 Annual Averages**

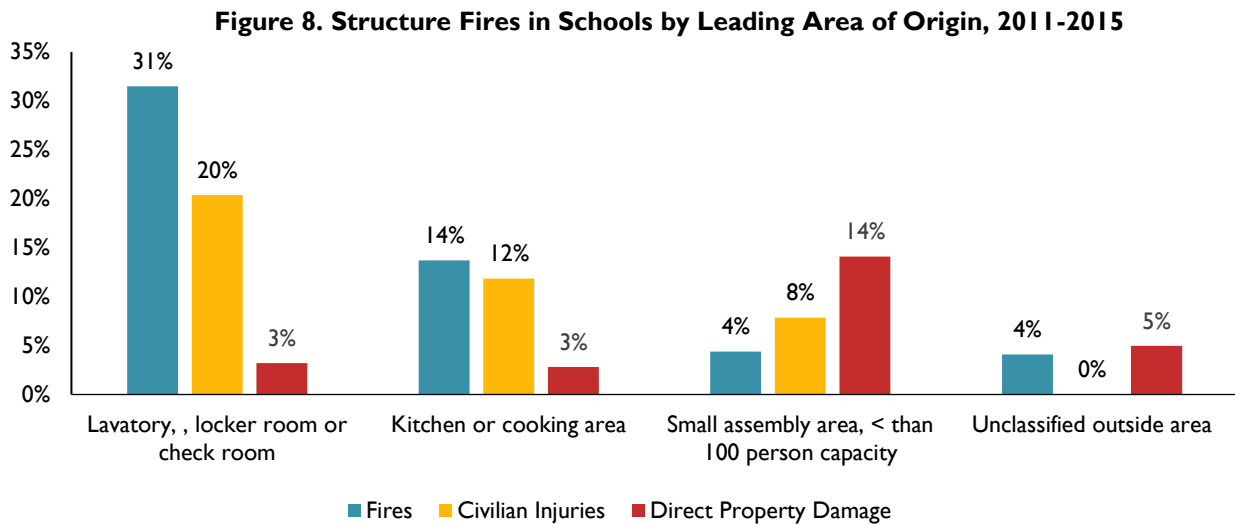
Occupancy Type	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Middle school and high school	1,670	(49%)	43	(76%)	\$20	(41%)
Elementary school	1,120	(33%)	11	(19%)	\$20	(41%)
Unclassified non-adult schools	440	(13%)	2	(4%)	\$7	(15%)
Preschool	200	(6%)	0	(1%)	\$1	(2%)
Total	3,430	(100%)	57	(100%)	\$48	(100%)

Three-quarters (76%) of the civilian injuries and 49% of the fires occurred in middle and high schools, as did 41% of direct property damage, while 33% of the fires occurred in elementary schools. The latter accounted for 41% of direct property damage and 19% of civilian injuries.

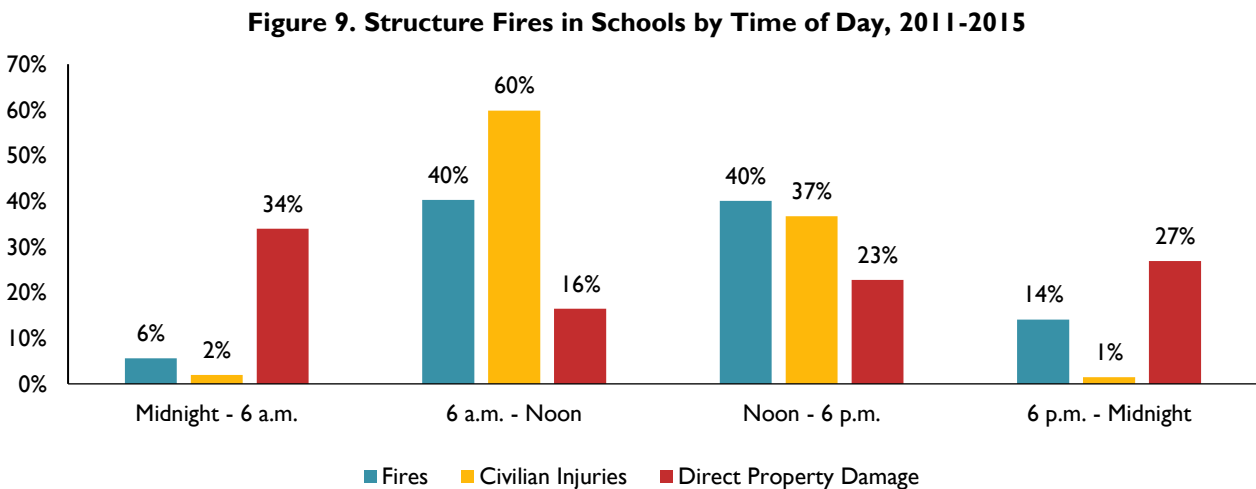
**In 2011-2015, 45% of structure fires in school properties were intentionally set.** [Figure 7](#) shows that these fires resulted in 43% of the civilian injuries and 37% of direct property damage associated with school fires. Cooking equipment was the second leading cause of school fires, accounting for 29% of fires, 11% of civilian injuries, and 2% of the direct property damage. Playing with a heat source was responsible for 20% of fires, 19% of civilian injuries, and 28% of direct property damage. Other leading causes of school fires were heating equipment, electrical distribution and lighting equipment, and smoking materials. Also see [Table 16](#).



**Three in 10 (31%) of the fires in schools began in a lavatory or locker room, accounting for 20% of civilian injuries and 3% of direct property damage.** Another 14% of fires began in a kitchen or cooking area, with these fires causing 12% of injuries to civilians and 3% of direct property damage. Fires that began in a small assembly area caused 4% of fires, but 14% of direct property damage and 8% of civilian injuries. Fires originating in an unclassified outdoor area also accounted for 4% of fires, as well as 5% of direct property damage. See [Figure 8](#) and [Table 21](#).



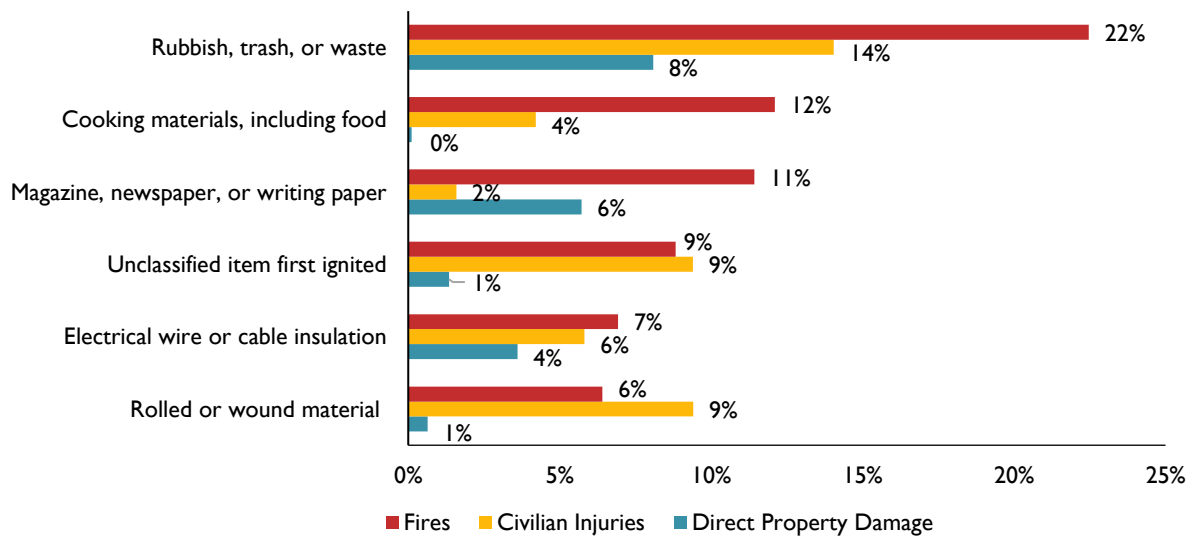
**Four of five fires in schools (80% of total) occurred between the hours of 6 a.m. and 6 p.m.** These fires accounted for 97% of civilian injuries and 39% of direct property damage. Only 6% of fires occurred between midnight and 6 a.m., but these fires accounted for 27% of direct property damage. Fires in the evening and night-time hours from 6:00 to midnight also caused a disproportionate share of property damage, accounting for 16% of fires, but 34% of direct property damage. See [Table 15](#) for more information.



**A lighter served as the heat source in one-quarter (24%) of fires in schools.** These fires accounted for 30% of civilian injuries and 15% of direct property damage. Other leading heat sources included unclassified heat from powered equipment (15% of fires), radiated or conducted heat from operating equipment (13%), matches (9%), and arcing (8%). Fires started by smoking materials accounted for 3% of fires, but 11% of direct property damage. See [Table 20](#) for more information.

**Rubbish, trash or waste was the item first ignited in one-fifth (22%) of school structure fires.** Other leading items first ignited included cooking materials (12% of fires), magazines, newspapers, or writing paper (11%), electrical wire or cable insulation (7%), and rolled or wound material (6%), as shown in [Figure 10](#). Flammable or combustible liquids or gases, piping or filter were the item first ignited in just 3% of fires, but these fires caused 25% of civilian injuries and 10% of direct property damage, as shown in [Table 22](#).

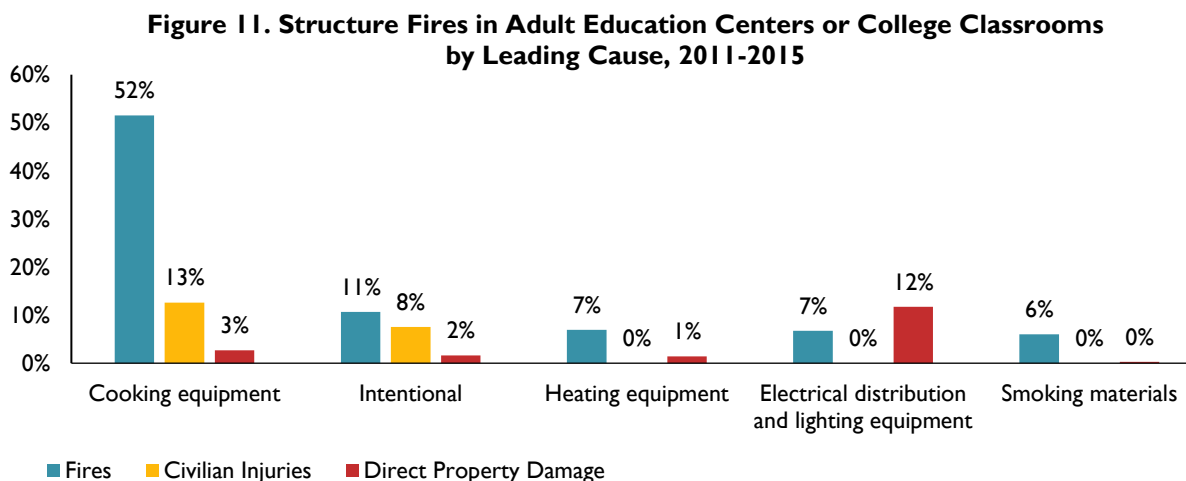
**Figure 10. Structure Fires in Schools by Item First Ignited, 2011-2015**



## Structure Fires in Adult Education Centers or College Classrooms

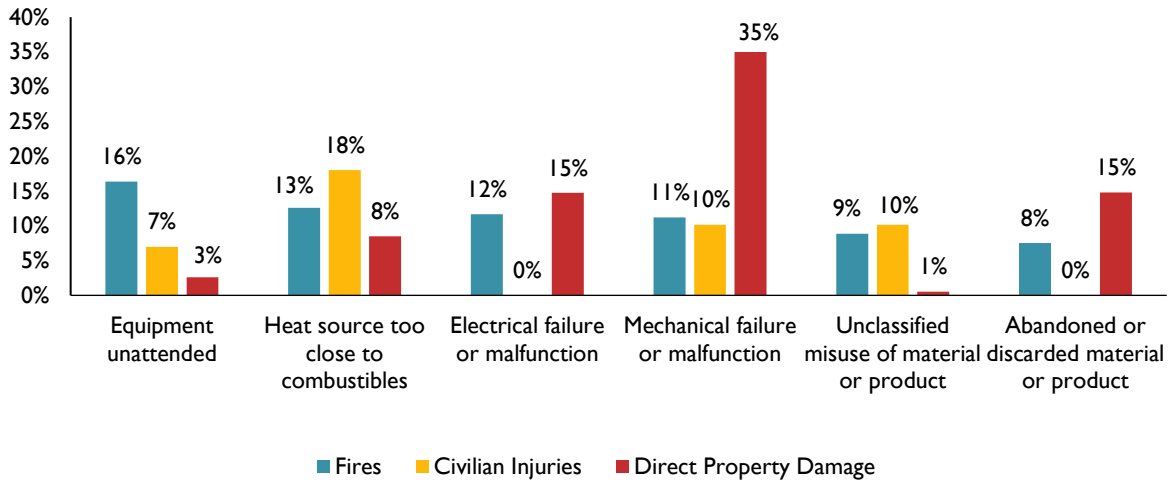
An estimated 670 structure fires per year in 2011-2015 were reported in adult education or college classrooms, representing 13% of the educational property total. These fires resulted in annual averages of 8 civilian injuries and \$11 million in direct property damage.

**In 2011-2015, over half (52%) of structure fires in adult education centers or college classrooms were related to cooking.** The majority of these fires were confined fires that did not extend beyond their object of origin. As shown in [Figure 11](#), these fires resulted in 13% of the civilian injuries and 3% of the direct property damage associated with adult education or college classroom fires. Another 11% of fires had an intentional cause and accounted for 8% of civilian injuries and 2% of direct property damage. Heating equipment and electrical distribution and lighting equipment each caused 7% of fires, with electrical distribution and lighting equipment also causing 12% of direct property damage. Smoking materials were a cause of 6% of fires, but no civilian injuries or direct property damage. Also see [Table 27](#).



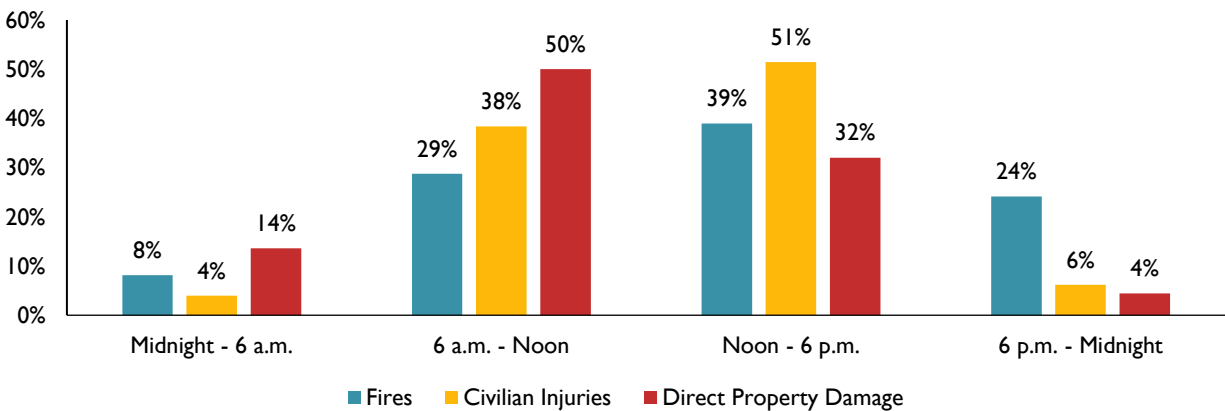
**Equipment that was left unattended was a factor in 16% of fires in adult education centers or college classrooms.** [Figure 12](#) shows that these fires caused 7% of civilian injuries and 3% of direct property damage. A heat source too close to combustibles was a factor in 13% of the fires, accounting for 18% of civilian injuries and 8% of direct property damage. An electrical failure or malfunction was a factor in 12% of fires (15% of direct property damage), while a mechanical failure or malfunction was a factor in 11% of fires, but over one-third (35%) of direct property damage, as well as 10% of civilian injuries. Other leading factors included unclassified misuse of material or product (9% of fires) and abandoned or discarded material or product (8% of fires, 15% of direct property damage.) Additional information is available in [Table 30](#).

**Figure 12. Structure Fires in Adult Education Centers or College Classrooms by Leading Factors Contributing to Ignition 2011-2015**



**Approximately two in five fires (39%) in adult education centers or college classrooms occurred between noon and 6 p.m.** Fires between noon and 6 p.m. accounted for 51% of civilian injuries and 32% of direct property damage. Another 29% of fires occurred between 6 a.m. and noon, and these fires accounted for the largest share of direct property damage (50%), as well as 38% of civilian injuries. One-quarter of the fires (24%) occurred between 6 p.m. and midnight, and just 6% of civilian injuries and 4% of direct property damage were associated with these fires. The smallest share of fires (8%) occurred between midnight and 6 a.m. and these fires also claimed the smallest share of civilian injuries (4%), but 14% of direct property damage. See [Figure 13](#) and [Table 26](#).

**Figure 13. Structure Fires in Adult Education Centers or College Classrooms by Time of Day, 2011-2015**



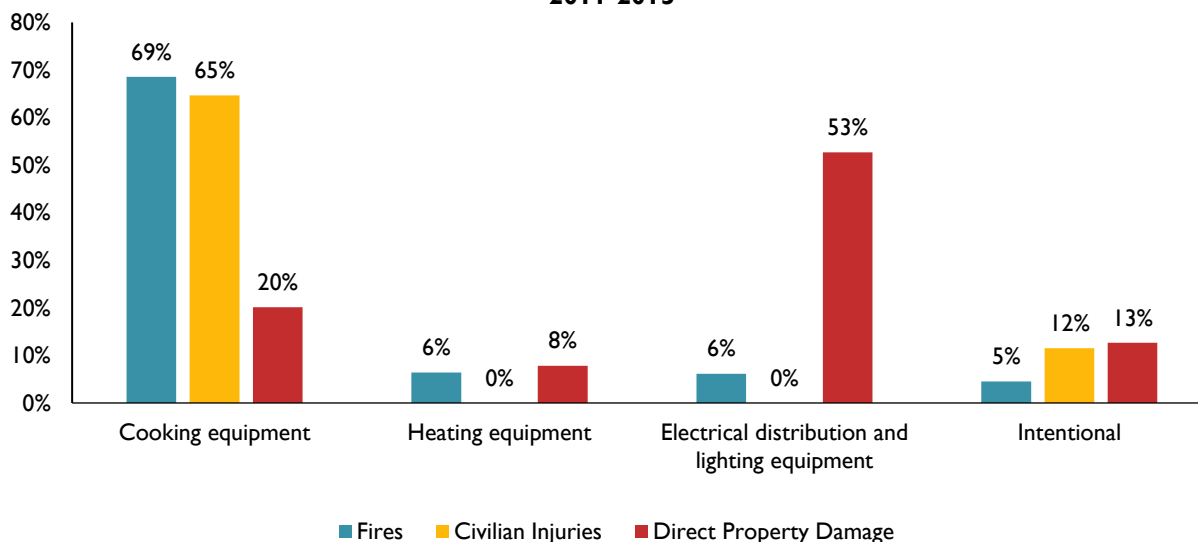


## Structure Fires in Day Care Properties

**Approximately one in ten (11%) structure fires in educational properties in 2011-2015 occurred in day care properties.** In 2011-2015, there were an estimated average of 560 fires in day care properties each year. These fires were associated with annual averages of one civilian death, 4 civilian injuries, and \$4 million in direct property damage. Due to the small numbers, caution is needed in interpreting the results for deaths and injuries.

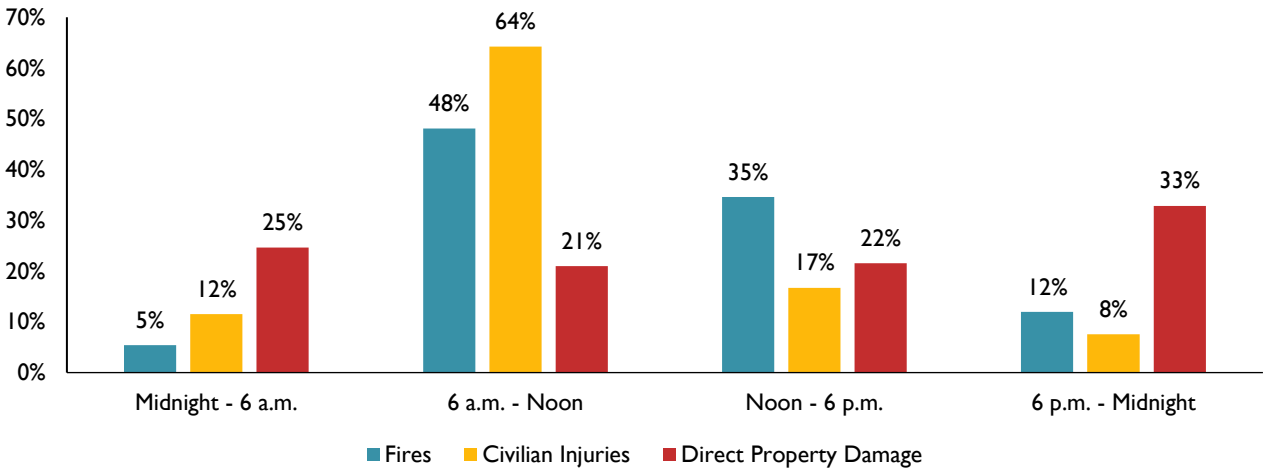
**The vast majority of the structure fires in day care properties involved cooking equipment.** Figure 14 shows that 69% of the day care property fires involved cooking equipment and accounted for 65% of civilian injuries and 20% of direct property damage. Other leading causes included either heating equipment (6%) or electrical distribution and lighting equipment (6%), or had an intentional cause. Fires involving electrical distribution and lighting equipment had the largest share of direct property damage (53%). The 5% of fires with an intentional cause were associated with 12% of civilian injuries and 13% of direct property damage. Also see Table 38.

**Figure 14. Leading Causes of Structure Fires in Day Care Properties, 2011-2015**



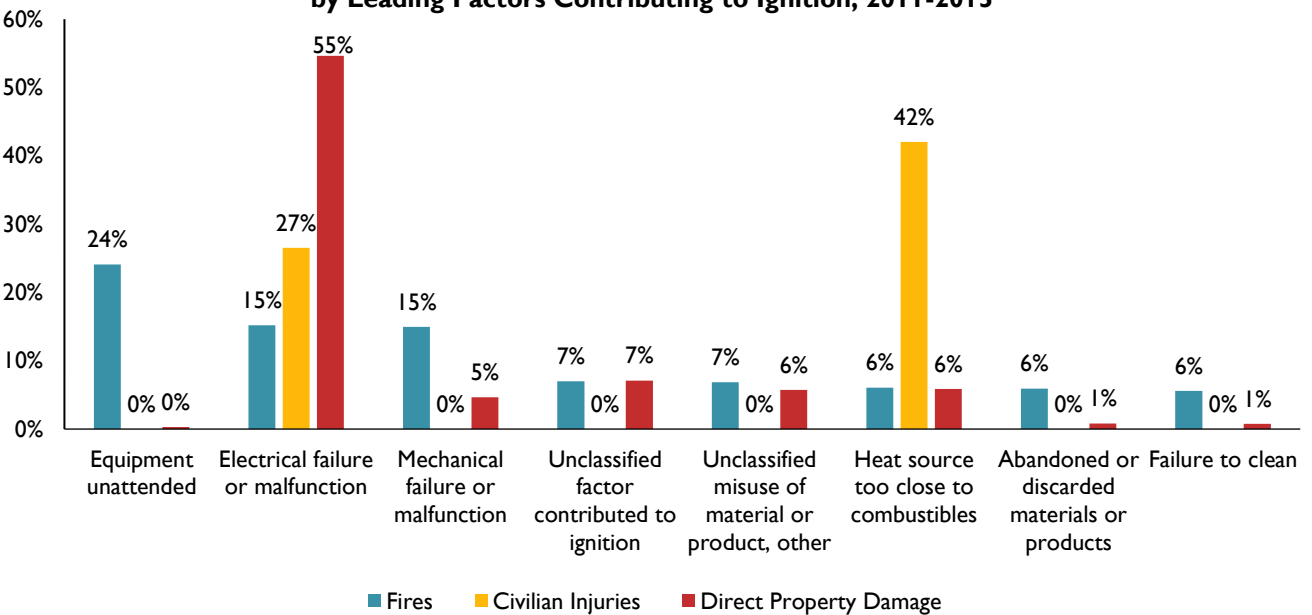
**Fires in day care properties most frequently occurred between 6 a.m. and noon.** The morning hours between 6 a.m. and noon accounted for 48% of fires, as well as 64% of civilian injuries and 21% of direct property damage. Approximately one-third (35%) of fires occurred between noon and 6 p.m. Just 17% of fires occurred between 6 p.m. and 6 a.m., but these fires accounted for 57% of direct property damage. More information is available in Table 37.

**Figure 15. Structure Fires in Day Care Properties by Time of Day, 2011-2015**



**Unattended equipment was a factor in 24% of structure fires in day care centers.** Other leading factors contributing to the ignition of day care fires included electrical failure or malfunction (15%), mechanical failure or malfunction (15%), unclassified factors (7%), unclassified misuse of material or product (7%), heat source too close to combustibles (6%), abandoned or discarded materials or product (6%), and failure to clean (6%). Fires involving electrical failure or malfunction were associated with 55% of the direct property damage. See Figure 16 and Table 41.

**Figure 16. Structure Fires in Day Care Properties by Leading Factors Contributing to Ignition, 2011-2015**



**Additional information resources**

An NFPA fire investigation report was compiled for a 1997 school fire in Pangnirtung, Canada. This report can be found on our [website](#). Section 20, Chapter 12 (“Educational Occupancies”) and Chapter 13 (“Day-Care Occupancies”) by Catherine Stashak in the 20<sup>th</sup> edition of the NFPA Fire Prevention Handbook describes some of the special fire safety concerns for these properties. The Fire Analysis and Research Division offers a report on fires in dormitories and sorority houses, available at: [www.nfpa.org/osds](http://www.nfpa.org/osds). For more information about fire and life safety, please visit our [NFPA.Org](#). [Life Safety Code®](#) [School Fire Safety Tips](#)

**Table 1. Structure Fires in Educational Properties, 1980 – 2015**

Year	Fires	Civilian Injuries	Direct Property Damage (in Millions)	
			As Reported	In 2015 Dollars
1980	15,060	173	\$104	\$299
1981	13,720	362	\$139	\$362
1982	11,930	287	\$87	\$213
1983	10,000	170	\$61	\$145
1984	10,280	171	\$97	\$221
1985	10,920	168	\$112	\$246
1986	9,570	333	\$82	\$177
1987	8,810	149	\$109	\$227
1988	7,970	85	\$118	\$237
1989	7,410	226	\$93	\$178
1990	7,010	138	\$98	\$178
1991	7,690	200	\$78	\$136
1992	8,440	153	\$79	\$133
1993	7,940	192	\$110	\$180
1994	8,490	188	\$102	\$163
1995	7,720	187	\$109	\$169
1996	7,510	209	\$84	\$127
1997	7,700	174	\$48	\$71
1998	6,680	122	\$70	\$102
1999	6,240	169	\$40	\$57
2000	5,790	111	\$112	\$154
2001	6,180	68	\$76	\$102
2002	5,990	107	\$161	\$212
2003	6,770	121	\$61	\$79
2004	6,990	67	\$79	\$99
2005	6,570	85	\$100	\$121
2006	6,280	77	\$120	\$141
2007	6,500	43	\$133	\$152
2008	6,460	119	\$74	\$82
2009	5,480	100	\$133	\$147
2010	5,000	54	\$75	\$82
2011	5,030	109	\$43	\$45
2012	4,980	55	\$110	\$114
2013	4,990	76	\$78	\$79
2014	4,980	51	\$55	\$55
2015	4,940	60	\$65	\$65

Note: These are national estimates of fires reported to U.S. municipal fire departments and so exclude fires reported only to Federal or state agencies or industrial fire brigades. Fires are rounded to the nearest ten, civilian injuries are rounded to the nearest one, and direct property damage is rounded to the nearest million dollars. Inflation adjustments were based on the consumer price index found in the U.S. Census Bureau’s Statistical Abstract of the United States: 2014, “Table 724, Purchasing Power of the Dollar.”

Source: NFIRS and NFPA survey.

**Table 2. Structure Fires in Educational Properties, by Month  
2011-2015 Annual Averages**

<b>Month</b>	<b>Fires</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
January	460	(9%)	4	(6%)	\$8	(11%)
February	460	(9%)	5	(7%)	\$5	(7%)
March	510	(10%)	7	(10%)	\$3	(5%)
April	470	(9%)	7	(9%)	\$6	(8%)
May	470	(9%)	3	(4%)	\$7	(10%)
June	320	(6%)	3	(5%)	\$6	(9%)
July	280	(6%)	1	(2%)	\$5	(7%)
August	300	(6%)	6	(9%)	\$10	(14%)
September	390	(8%)	6	(9%)	\$8	(11%)
October	470	(10%)	3	(4%)	\$4	(6%)
November	450	(9%)	10	(14%)	\$5	(7%)
December	380	(8%)	16	(22%)	\$3	(5%)
<b>Total</b>	<b>4,980</b>	<b>(100%)</b>	<b>70</b>	<b>(100%)</b>	<b>\$70</b>	<b>(100%)</b>

Sums may not equal totals due to rounding.

Source: NFIRS and NFPA Fire Experience survey.

**Table 3. Structure Fires in Educational Properties, by Day of Week  
2011-2015 Annual Averages**

<b>Day of Week</b>	<b>Fires</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
Sunday	320	(6%)	1	(1%)	\$9	(12%)
Monday	820	(17%)	14	(19%)	\$10	(14%)
Tuesday	880	(18%)	13	(18%)	\$11	(16%)
Wednesday	870	(17%)	11	(15%)	\$9	(13%)
Thursday	910	(18%)	19	(27%)	\$7	(10%)
Friday	830	(17%)	12	(16%)	\$11	(16%)
Saturday	360	(7%)	2	(3%)	\$14	(19%)
<b>Total</b>	<b>4,980</b>	<b>(100%)</b>	<b>70</b>	<b>(100%)</b>	<b>\$70</b>	<b>(100%)</b>

Sums may not equal totals due to rounding.

Source: NFIRS and NFPA Fire Experience survey.

**Table 4. Structure Fires in Educational Properties, by Time of Day  
2011-2015 Annual Averages**

<b>Time of Day</b>	<b>Fires</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
Midnight-12:59 a.m.	70	(1%)	0	(0%)	\$1	(2%)
1:00-1:59 a.m.	50	(1%)	0	(0%)	\$5	(7%)
2:00-2:59 a.m.	40	(1%)	0	(0%)	\$4	(6%)
3:00-3:59 a.m.	40	(1%)	0	(0%)	\$4	(5%)
4:00-4:59 a.m.	40	(1%)	1	(2%)	\$1	(2%)
5:00-5:59 a.m.	50	(1%)	1	(1%)	\$4	(6%)
6:00-6:59 a.m.	100	(2%)	0	(1%)	\$2	(3%)
7:00-7:59 a.m.	190	(4%)	6	(9%)	\$2	(3%)
8:00-8:59 a.m.	320	(6%)	3	(4%)	\$2	(2%)
9:00-9:59 a.m.	390	(8%)	4	(6%)	\$3	(4%)
10:00-10:59 a.m.	460	(9%)	16	(23%)	\$4	(6%)
11:00-11:59 a.m.	490	(10%)	10	(14%)	\$2	(3%)
12:00-12:59 p.m.	460	(9%)	7	(10%)	\$4	(5%)
1:00-1:59 p.m.	400	(8%)	7	(11%)	\$5	(7%)
2:00-2:59 p.m.	360	(7%)	3	(4%)	\$2	(2%)
3:00-3:59 p.m.	290	(6%)	6	(9%)	\$3	(5%)
4:00-4:59 p.m.	240	(5%)	1	(2%)	\$2	(3%)
5:00-5:59 p.m.	210	(4%)	1	(2%)	\$2	(3%)
6:00-6:59 p.m.	190	(4%)	1	(2%)	\$3	(4%)
7:00-7:59 p.m.	160	(3%)	0	(1%)	\$4	(5%)
8:00-8:59 p.m.	140	(3%)	0	(0%)	\$4	(6%)
9:00-9:59 p.m.	110	(2%)	0	(0%)	\$3	(5%)
10:00-10:59 p.m.	90	(2%)	0	(0%)	\$1	(2%)
11:00-11:59 p.m.	80	(2%)	0	(0%)	\$2	(3%)
<b>Total</b>	<b>4,980</b>	<b>(100%)</b>	<b>70</b>	<b>(100%)</b>	<b>\$70</b>	<b>(100%)</b>

Sums may not equal totals due to rounding.

Source: NFIRS and NFPA Fire Experience survey.

**Table 5. Structure Fires in Educational Properties, by Leading Cause  
2011-2015 Annual Averages**

<b>Leading Cause</b>	<b>Fires</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
Cooking equipment	1,880	(38%)	10	(14%)	\$2	(3%)
Intentional	1,790	(36%)	26	(37%)	\$22	(31%)
Playing with heat source	770	(15%)	11	(15%)	\$14	(20%)
Heating equipment	430	(9%)	7	(10%)	\$4	(6%)
Electrical distribution & lighting equipment	400	(8%)	6	(8%)	\$12	(16%)
Smoking materials	160	(3%)	1	(1%)	\$6	(9%)

The causes in this table are drawn from multiple fields. The methodology used is described in [Appendix B](#).

Source: NFIRS and NFPA Fire Experience survey.



**Table 6. Structure Fires in Educational Properties, by Equipment Involved in Ignition  
2011-2015 Annual Averages**

<b>Equipment Involved in Ignition</b>	<b>Fires</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
<b>Cooking equipment</b>	<b>1,880</b>	<b>(36%)</b>	<b>10</b>	<b>(14%)</b>	<b>\$2</b>	<b>(3%)</b>
Confined cooking fire	1,720	(35%)	8	(11%)	\$0	(0%)
Range with or without oven, cooking surface	70	(1%)	1	(2%)	\$1	(1%)
Portable cooking or warming equipment	30	(1%)	1	(2%)	\$0	(0%)
Other known cooking equipment	60	(1%)	0	(2%)	\$1	(1%)
<b>Contained trash or rubbish fire</b>	<b>1,030</b>	<b>(21%)</b>	<b>6</b>	<b>(9%)</b>	<b>\$0</b>	<b>(0%)</b>
<b>Heating equipment</b>	<b>430</b>	<b>(9%)</b>	<b>7</b>	<b>(10%)</b>	<b>\$4</b>	<b>(6%)</b>
Confined fuel burner or boiler fire	240	(5%)	0	(0%)	\$1	(1%)
Fixed or portable space heater	80	(2%)	0	(0%)	\$1	(1%)
Central heat	40	(1%)	0	(0%)	\$1	(1%)
Water heater	30	(1%)	0	(0%)	\$1	(1%)
Other known heating equipment	40	(1%)	0	(0%)	\$0	(0%)
<b>No equipment involved in ignition</b>	<b>420</b>	<b>(9%)</b>	<b>27</b>	<b>(38%)</b>	<b>\$34</b>	<b>(49%)</b>
<b>Electrical distribution and lighting equipment</b>	<b>400</b>	<b>(8%)</b>	<b>6</b>	<b>(8%)</b>	<b>\$12</b>	<b>(16%)</b>
Wiring and related equipment	190	(4%)	3	(5%)	\$6	(9%)
Lamp, bulb or lighting	150	(3%)	1	(2%)	\$4	(5%)
Transformers and power supplies	40	(0%)	1	(2%)	\$1	(2%)
<b>Fan</b>	<b>140</b>	<b>(3%)</b>	<b>1</b>	<b>(1%)</b>	<b>\$2</b>	<b>(3%)</b>
<b>Air conditioner</b>	<b>120</b>	<b>(2%)</b>	<b>1</b>	<b>(1%)</b>	<b>\$2</b>	<b>(3%)</b>
<b>Clothes dryer</b>	<b>90</b>	<b>(2%)</b>	<b>2</b>	<b>(3%)</b>	<b>\$0</b>	<b>(1%)</b>
<b>Torcher, burner or soldering iron</b>	<b>60</b>	<b>(1%)</b>	<b>4</b>	<b>(5%)</b>	<b>\$5</b>	<b>(7%)</b>
<b>Refrigerator, refrigerator/freezer</b>	<b>30</b>	<b>(1%)</b>	<b>1</b>	<b>(1%)</b>	<b>1</b>	<b>(1%)</b>
<b>Other known equipment involved in ignition</b>	<b>320</b>	<b>(6%)</b>	<b>4</b>	<b>(6%)</b>	<b>\$7</b>	<b>(9%)</b>
<b>Total</b>	<b>4,980</b>	<b>(100%)</b>	<b>70</b>	<b>(100%)</b>	<b>\$70</b>	<b>(100%)</b>

Note: NFPA treats fires in which EII=NNN and heat source is not in the range of 40-99 as an additional unknown. Totals may not equal sums due to rounding errors.

Source: NFIRS and NFPA Fire Experience survey.

**Table 7. Structure Fires in Educational Properties, by Cause of Ignition  
2011-2015 Annual Averages**

<b>Cause of Ignition</b>	<b>Fires</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
Unintentional	2,300	(46%)	34	(49%)	\$30	(43%)
Non-Confined	720	(14%)	24	(34%)	\$29	(42%)
Confined	1,580	(32%)	10	(15%)	\$1	(1%)
Intentional	1,790	(36%)	26	(37%)	\$22	(31%)
Non-Confined	670	(13%)	23	(33%)	\$22	(31%)
Confined	1,120	(22%)	3	(4%)	\$0	(0%)
Failure of equipment or heat source	760	(15%)	9	(13%)	\$10	(15%)
Non-Confined	480	(10%)	8	(11%)	\$10	(15%)
Confined	280	(6%)	1	(2%)	\$0	(0%)
Unclassified cause	100	(2%)	1	(2%)	\$0	(0%)
Non-Confined	30	(1%)	0	(0%)	\$0	(0%)
Confined	70	(1%)	1	(2%)	\$0	(0%)
Other Known Cause	40	(1%)	0	(0%)	\$7	(11%)
Non-Confined	30	(1%)	0	(0%)	\$7	(11%)
Confined	10	(0%)	0	(0%)	\$0	(0%)
<b>Total</b>	<b>4,980</b>	<b>(100%)</b>	<b>70</b>	<b>(100%)</b>	<b>\$70</b>	<b>(100%)</b>
Non-Confined	1,930	(39%)	55	(78%)	\$69	(99%)
Confined	3,050	(61%)	15	(22%)	\$1	(1%)

Sums may not equal totals due to rounding.

Source: NFIRS and NFPA Fire Experience survey.

**Table 8. Structure Fires in Educational Properties, by Factor Contributing to Ignition  
2011-2015 Annual Averages**

Factor Contributing to Ignition	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Playing with heat source	770	(15%)	11	(15%)	\$14	(20%)
Non-Confined	260	(5%)	11	(15%)	\$14	(20%)
Confined	510	(10%)	0	(0%)	\$0	(0%)
Unclassified misuse of material or product	670	(13%)	6	(8%)	\$3	(4%)
Non-Confined	190	(4%)	4	(6%)	\$3	(4%)
Confined	480	(10%)	1	(2%)	\$0	(0%)
Electrical failure or malfunction	600	(12%)	10	(15%)	\$15	(22%)
Non-Confined	480	(10%)	10	(15%)	\$15	(22%)
Confined	120	(3%)	0	(0%)	\$0	(0%)
Unclassified factor contributed to ignition	500	(10%)	6	(9%)	\$3	(4%)
Non-Confined	190	(4%)	3	(5%)	\$3	(4%)
Confined	310	(6%)	3	(4%)	\$0	(0%)
Mechanical failure or malfunction	490	(10%)	9	(12%)	\$7	(8%)
Non-Confined	250	(5%)	9	(12%)	\$7	(8%)
Confined	240	(5%)	0	(0%)	\$0	(0%)
Equipment unattended	460	(9%)	1	(1%)	\$0	(1%)
Non-Confined	40	(1%)	1	(1%)	\$0	(1%)
Confined	430	(9%)	0	(0%)	\$0	(0%)
Abandoned or discarded material or product	420	(8%)	4	(6%)	\$2	(3%)
Non-Confined	90	(2%)	3	(4%)	\$2	(3%)
Confined	340	(7%)	1	(2%)	\$0	(0%)
Heat source too close to combustibles	380	(8%)	10	(14%)	\$3	(4%)
Non-Confined	160	(3%)	5	(8%)	\$3	(4%)
Confined	210	(4%)	4	(6%)	\$0	(0%)
Failure to clean	140	(3%)	2	(3%)	\$0	(0%)
Non-Confined	30	(1%)	1	(1%)	\$0	(0%)
Confined	110	(2%)	2	(2%)	\$0	(0%)
Accidentally turned on, not turned off	110	(2%)	2	(3%)	\$1	(2%)
Non-Confined	30	(1%)	1	(1%)	\$1	(2%)
Confined	90	(2%)	1	(1%)	\$0	(0%)

**Table 8. Structure Fires in Educational Properties, by Factor Contributing to Ignition  
2011-2015 Annual Averages (Continued)**

Factor Contributing to Ignition	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
	Count	(%)	Count	(%)	Count	(%)
Equipment not being operated properly	100	(2%)	0	(0%)	\$0	(0%)
Non-Confined	20	(0%)	0	(0%)	\$0	(0%)
Confined	80	(2%)	0	(0%)	\$0	(0%)
Unclassified operational deficiency	80	(2%)	0	(0%)	\$4	(6%)
Non-Confined	20	(0%)	0	(0%)	\$4	(6%)
Confined	60	(1%)	0	(0%)	\$0	(0%)
Other known factor contributing to ignition	450	(9%)	20	(28%)	\$21	(30%)
Non-Confined	270	(5%)	20	(25%)	\$20	(29%)
Confined	190	(4%)	0	(2%)	\$1	(1%)
<b>Total fires</b>	<b>4,980</b>	<b>(100%)</b>	<b>70</b>	<b>(100%)</b>	<b>\$70</b>	<b>(100%)</b>
Non-Confined	1,930	(39%)	55	(78%)	\$69	(99%)
Confined	3,050	(61%)	15	(22%)	\$1	(1%)
<b>Total factors</b>	<b>5,190</b>	<b>(104%)</b>	<b>80</b>	<b>(114%)</b>	<b>\$74</b>	<b>(105%)</b>
Non-Confined	2,010	(40%)	65	(92%)	\$73	(104%)
Confined	3,180	(64%)	15	(22%)	\$1	(1%)

Sums may not equal totals due to rounding, fires in which the factor contributing to ignition was coded as none, unknown, or not reported were allocated proportionally among fires with known factor(s) contributing to ignition.

Source: NFIRS and NFPA Fire Experience survey.

**Table 9. Structure Fires in Educational Properties, by Heat Source  
2011-2015 Annual Averages**

Heat Source	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
	Count	(%)	Count	(%)	Count	(%)
Lighter	910	(18%)	18	(25%)	\$9	(13%)
Non-Confined	340	(7%)	18	(25%)	\$9	(13%)
Confined	570	(11%)	0	(0%)	\$0	(0%)
Unclassified heat from powered equipment	880	(18%)	6	(9%)	\$8	(11%)
Non-Confined	340	(7%)	5	(7%)	\$8	(11%)
Confined	540	(11%)	1	(2%)	\$0	(0%)
Radiated or conducted heat from operating equipment	780	(16%)	11	(16%)	\$3	(4%)
Non-Confined	200	(4%)	5	(7%)	\$3	(4%)
Confined	580	(12%)	7	(10%)	\$0	(0%)
Arcing	390	(8%)	7	(10%)	\$8	(11%)
Non-Confined	310	(6%)	7	(10%)	\$8	(11%)
Confined	80	(2%)	0	(0%)	\$0	(0%)
Match	380	(8%)	6	(8%)	\$2	(3%)
Non-Confined	90	(2%)	6	(8%)	\$2	(3%)
Confined	290	(6%)	0	(0%)	\$0	(0%)
Unclassified heat source	320	(6%)	3	(5%)	\$3	(4%)
Non-Confined	90	(2%)	1	(2%)	\$3	(4%)
Confined	230	(5%)	2	(3%)	\$0	(0%)
Unclassified hot or smoldering object	290	(6%)	1	(2%)	\$7	(10%)
Non-Confined	110	(2%)	1	(2%)	\$7	(10%)
Confined	190	(4%)	0	(0%)	\$0	(0%)
Spark, ember or flame from operating equipment	270	(5%)	6	(9%)	\$5	(7%)
Non-Confined	100	(2%)	4	(6%)	\$5	(7%)
Confined	170	(3%)	2	(3%)	\$0	(0%)
Smoking materials	160	(3%)	1	(1%)	\$6	(9%)
Non-Confined	50	(1%)	1	(1%)	\$6	(9%)
Confined	110	(2%)	0	(0%)	\$0	(0%)

**Table 9. Structure Fires in Educational Properties, by Heat Source  
2011-2015 Annual Averages (Continued)**

<b>Heat Source</b>	<b>Fires</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
Heat from direct flame or convection currents	100	(2%)	5	(6%)	\$0	(1%)
Non-Confined	30	(1%)	1	(2%)	\$0	(0%)
Confined	70	(1%)	3	(5%)	\$0	(0%)
Flame or torch used for lighting	80	(2%)	0	(0%)	\$0	(0%)
Non-Confined	40	(1%)	0	(0%)	\$0	(0%)
Confined	40	(1%)	0	(0%)	\$0	(0%)
Hot ember or ash	80	(2%)	1	(1%)	\$0	(0%)
Non-Confined	30	(1%)	1	(1%)	\$0	(0%)
Confined	50	(1%)	0	(0%)	\$0	(0%)
Other known heat source	330	(7%)	6	(9%)	\$19	(26%)
Non-Confined	200	(4%)	6	(9%)	\$18	(26%)
Confined	130	(3%)	0	(0%)	\$1	(1%)
<b>Total</b>	<b>4,980</b>	<b>(100%)</b>	<b>70</b>	<b>(100%)</b>	<b>\$70</b>	<b>(100%)</b>
Non-Confined	1,930	(39%)	55	(78%)	\$69	(99%)
Confined	3,050	(61%)	15	(22%)	\$1	(1%)

Sums may not equal totals due to rounding. Estimates of matches, lighters, smoking materials, and candles included a proportional share of fires in which the heat source was heat from an unclassified open flame or smoking material.

Source: NFIRS and NFPA Fire Experience survey.

**Table 10. Structure Fires in Educational Properties, by Area of Origin  
2011-2015 Annual Averages**

Area of Origin	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
	Count	(%)	Count	(%)	Count	(%)
Lavatory, locker room or check room	1,260	(25%)	12	(17%)	\$2	(2%)
Non-Confined	390	(8%)	8	(11%)	\$2	(2%)
Confined	860	(17%)	4	(6%)	\$0	(0%)
Kitchen or cooking area	1,020	(20%)	10	(14%)	\$2	(3%)
Non-Confined	110	(2%)	2	(3%)	\$2	(3%)
Confined	910	(18%)	8	(11%)	\$0	(0%)
Unclassified outside area	190	(4%)	0	(0%)	\$3	(4%)
Non-Confined	40	(1%)	0	(0%)	\$3	(4%)
Confined	150	(3%)	0	(0%)	\$0	(0%)
Small assembly area, less than 100 person capacity	170	(3%)	4	(6%)	\$7	(10%)
Non-Confined	100	(2%)	4	(6%)	\$7	(10%)
Confined	70	(1%)	0	(0%)	\$0	(0%)
Unclassified area of origin	160	(3%)	1	(1%)	\$1	(1%)
Non-Confined	60	(1%)	1	(1%)	\$1	(1%)
Confined	90	(2%)	0	(0%)	\$0	(0%)
Trash or rubbish chute	150	(3%)	3	(4%)	\$1	(1%)
Non-Confined	10	(0%)	2	(3%)	\$1	(1%)
Confined	150	(3%)	1	(2%)	\$0	(0%)
Heating equipment room	140	(3%)	1	(2%)	\$1	(2%)
Non-Confined	40	(1%)	0	(1%)	\$1	(2%)
Confined	100	(2%)	1	(2%)	\$0	(0%)
Unclassified function area	120	(2%)	1	(1%)	\$2	(3%)
Non-Confined	60	(1%)	1	(1%)	\$2	(3%)
Confined	60	(1%)	0	(0%)	\$0	(0%)
Hallway, corridor, or mall	110	(2%)	1	(2%)	\$1	(1%)
Non-Confined	50	(1%)	1	(2%)	\$1	(1%)
Confined	60	(1%)	0	(0%)	\$0	(0%)
Office	100	(2%)	2	(3%)	\$3	(4%)
Non-Confined	60	(1%)	2	(3%)	\$3	(4%)
Confined	50	(1%)	0	(0%)	\$0	(0%)

**Table 10. Structure Fires in Educational Properties, by Area of Origin  
2011-2015 Annual Averages (Continued)**

<b>Area of Origin</b>	<b>Fires</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
Laboratory	90	(2%)	16	(23%)	\$2	(3%)
Non-Confined	40	(1%)	16	(23%)	\$1	(2%)
Confined	50	(1%)	0	(0%)	\$1	(1%)
Exterior roof surface	90	(2%)	1	(2%)	\$6	(8%)
Non-Confined	80	(2%)	1	(2%)	\$6	(8%)
Confined	10	(0%)	0	(0%)	\$0	(0%)
Other known area of origin	1,360	(27%)	17	(24%)	\$41	(58%)
Non-Confined	890	(18%)	16	(23%)	\$41	(58%)
Confined	480	(10%)	1	(2%)	\$0	(0%)
Confined chimney or flue fire	20	(0%)	0	(0%)	\$0	(0%)
<b>Total</b>	<b>4,980</b>	<b>(100%)</b>	<b>70</b>	<b>(100%)</b>	<b>\$70</b>	<b>(100%)</b>
Non-Confined	1,930	(39%)	55	(78%)	\$69	(99%)
Confined	3,050	(61%)	15	(22%)	\$1	(1%)

Note: Totals may not equal sums due to rounding errors. Property damage has not been adjusted for inflation. Confined fires, incident type 113-118 are analyzed separately and included in the table. Non-confined and non-contained structure fires in which the area of origin was unknown or not reported have been allocated proportionally among fires with known area of origin.

Source: NFIRS and NFPA Fire Experience survey.



**Table 11. Structure Fires in Educational Properties, by Item First Ignited  
2011-2015 Annual Averages**

<b>Item First Ignited</b>	<b>Fires</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
Rubbish, trash, or waste	960	(19%)	9	(12%)	\$5	(7%)
Non-confined	140	(3%)	2	(3%)	\$5	(7%)
Confined	820	(16%)	6	(9%)	\$0	(0%)
Cooking materials, including food	890	(18%)	5	(7%)	\$0	(0%)
Non-confined	30	(1%)	1	(1%)	\$0	(0%)
Confined	860	(17%)	4	(6%)	\$0	(0%)
Magazine, newspaper, or writing paper	460	(9%)	1	(1%)	\$3	(5%)
Non-confined	140	(3%)	1	(1%)	\$3	(5%)
Confined	320	(6%)	0	(0%)	\$0	(0%)
Unclassified item first ignited	420	(8%)	6	(9%)	\$2	(2%)
Non-confined	210	(4%)	5	(7%)	\$2	(2%)
Confined	210	(4%)	1	(2%)	\$0	(0%)
Electrical wire or cable insulation	350	(7%)	4	(6%)	\$4	(6%)
Non-confined	290	(6%)	4	(6%)	\$4	(6%)
Confined	60	(1%)	0	(0%)	\$0	(0%)
Rolled or wound material	250	(5%)	5	(8%)	\$0	(1%)
Non-confined	130	(3%)	5	(8%)	\$0	(1%)
Confined	130	(3%)	0	(0%)	\$0	(0%)
Flammable or combustible liquids or gases, piping or filter	190	(4%)	19	(27%)	\$6	(9%)
Non-confined	90	(2%)	19	(27%)	\$6	(9%)
Confined	90	(2%)	0	(0%)	\$0	(0%)
Appliance housing or casing	150	(3%)	1	(1%)	\$2	(3%)
Non-confined	70	(1%)	1	(1%)	\$1	(2%)
Confined	80	(2%)	0	(0%)	\$1	(1%)
Box, carton, bag, basket, or barrel	140	(3%)	3	(4%)	\$1	(1%)
Non-confined	50	(1%)	0	(1%)	\$1	(1%)
Confined	80	(2%)	3	(4%)	\$0	(0%)
Multiple items first ignited	110	(2%)	1	(1%)	\$2	(3%)
Non-confined	60	(1%)	1	(1%)	\$2	(3%)
Confined	50	(1%)	0	(0%)	\$0	(0%)

**Table 11. Structure Fires in Educational Properties, by Item First Ignited  
2011-2015 Annual Averages (Continued)**

<b>Item First Ignited</b>	<b>Fires</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
Other known item first ignited	1,070	(22%)	17	(24%)	\$44	(63%)
Non-confined	720	(15%)	16	(23%)	\$44	(63%)
Confined	350	(7%)	1	(1%)	\$0	(0%)
<b>Total</b>	<b>4,980</b>	<b>(100%)</b>	<b>70</b>	<b>(100%)</b>	<b>\$70</b>	<b>(100%)</b>
Non-confined	1,930	(39%)	55	(78%)	\$69	(99%)
Confined	3,050	(61%)	15	(22%)	\$1	(1%)

Sums may not equal totals due to rounding.

Source: NFIRS and NFPA Fire Experience survey.

**Table 12. Structure Fires in Educational Properties, by Extent of Flame Damage  
2011-2015 Annual Averages**

<b>Extent of Flame Damage</b>	<b>Fires</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
Confined fire identified by incident type	3,050	(61%)	15	(22%)	\$1	(1%)
Confined to object of origin	680	(14%)	12	(18%)	\$8	(11%)
Confined to room of origin	840	(17%)	35	(50%)	\$14	(20%)
Confined to floor of origin	100	(2%)	2	(2%)	\$4	(6%)
Confined to building of origin	280	(6%)	3	(5%)	\$38	(54%)
Beyond building of origin	30	(1%)	2	(3%)	\$5	(8%)
<b>Total</b>	<b>4,980</b>	<b>(100%)</b>	<b>70</b>	<b>(100%)</b>	<b>\$70</b>	<b>(100%)</b>

Sums may not equal totals due to rounding.

Source: NFIRS and NFPA Fire Experience survey.

**Table 13. Structure Fires in Schools, by Month  
2011-2015 Annual Averages**

<b>Month</b>	<b>Fires</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
January	340	(10%)	4	(7%)	\$7	(14%)
February	320	(9%)	4	(7%)	\$3	(7%)
March	360	(11%)	5	(9%)	\$2	(4%)
April	320	(9%)	5	(9%)	\$5	(10%)
May	340	(10%)	3	(5%)	\$5	(10%)
June	210	(6%)	2	(4%)	\$2	(5%)
July	170	(5%)	1	(2%)	\$4	(8%)
August	200	(6%)	4	(6%)	\$5	(11%)
September	250	(7%)	5	(9%)	\$7	(15%)
October	320	(9%)	2	(4%)	\$3	(6%)
November	320	(9%)	7	(13%)	\$4	(8%)
December	270	(8%)	15	(26%)	\$1	(2%)
<b>Total</b>	<b>3,430</b>	<b>(100%)</b>	<b>57</b>	<b>(100%)</b>	<b>\$48</b>	<b>(100%)</b>

Sums may not equal totals due to rounding.

Source: NFIRS and NFPA Fire Experience survey.

**Table 14. Structure Fires in Schools, by Day of Week  
2011-2015 Annual Averages**

<b>Day of Week</b>	<b>Fires</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
Sunday	190	(6%)	0	(1%)	\$7	(14%)
Monday	570	(17%)	10	(17%)	\$6	(12%)
Tuesday	620	(18%)	10	(18%)	\$7	(15%)
Wednesday	600	(18%)	9	(15%)	\$7	(14%)
Thursday	640	(19%)	18	(31%)	\$5	(10%)
Friday	590	(17%)	8	(15%)	\$8	(17%)
Saturday	230	(7%)	2	(3%)	\$9	(18%)
<b>Total</b>	<b>3,430</b>	<b>(100%)</b>	<b>57</b>	<b>(100%)</b>	<b>\$48</b>	<b>(100%)</b>

Sums may not equal totals due to rounding.

Source: NFIRS and NFPA Fire Experience survey.

**Table 15. Structure Fires in Schools, by Time of Day  
2011-2015 Annual Averages**

<b>Time of Day</b>	<b>Fires</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
Midnight-12:59 a.m.	40	(1%)	0	(0%)	\$0	(1%)
1:00-1:59 a.m.	30	(1%)	0	(0%)	\$5	(9%)
2:00-2:59 a.m.	30	(1%)	0	(0%)	\$4	(9%)
3:00-3:59 a.m.	30	(1%)	0	(0%)	\$3	(6%)
4:00-4:59 a.m.	30	(1%)	1	(1%)	\$1	(2%)
5:00-5:59 a.m.	40	(1%)	0	(1%)	\$3	(6%)
6:00-6:59 a.m.	60	(2%)	0	(0%)	\$2	(4%)
7:00-7:59 a.m.	140	(4%)	5	(9%)	\$1	(3%)
8:00-8:59 a.m.	220	(6%)	2	(4%)	\$0	(1%)
9:00-9:59 a.m.	290	(8%)	3	(6%)	\$2	(5%)
10:00-10:59 a.m.	330	(9%)	14	(25%)	\$1	(2%)
11:00-11:59 a.m.	350	(10%)	9	(15%)	\$0	(1%)
12:00-12:59 p.m.	340	(10%)	7	(12%)	\$1	(2%)
1:00-1:59 p.m.	300	(9%)	6	(11%)	\$3	(5%)
2:00-2:59 p.m.	270	(8%)	2	(3%)	\$1	(3%)
3:00-3:59 p.m.	190	(6%)	4	(8%)	\$3	(6%)
4:00-4:59 p.m.	160	(5%)	0	(1%)	\$2	(3%)
5:00-5:59 p.m.	130	(4%)	1	(3%)	\$1	(3%)
6:00-6:59 p.m.	120	(3%)	0	(1%)	\$2	(5%)
7:00-7:59 p.m.	100	(3%)	0	(1%)	\$3	(7%)
8:00-8:59 p.m.	80	(2%)	0	(0%)	\$1	(2%)
9:00-9:59 p.m.	70	(2%)	0	(0%)	\$3	(6%)
10:00-10:59 p.m.	60	(2%)	0	(0%)	\$1	(2%)
11:00-11:59 p.m.	50	(1%)	0	(0%)	\$2	(4%)
<b>Total</b>	<b>3,430</b>	<b>(100%)</b>	<b>57</b>	<b>(100%)</b>	<b>\$48</b>	<b>(100%)</b>

Sums may not equal totals due to rounding.

Source: NFIRS and NFPA Fire Experience survey.

**Table 16. Structure Fires in Schools, by Leading Cause  
2011-2015 Annual Averages**

<b>Leading Cause</b>	<b>Fires</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
Intentional	1,550	(45%)	25	(43%)	\$18	(37%)
Cooking equipment	990	(29%)	6	(11%)	\$1	(2%)
Playing with heat source	680	(20%)	11	(19%)	\$14	(28%)
Heating equipment	330	(10%)	7	(12%)	\$3	(7%)
Electrical distribution and lighting equipment	300	(9%)	5	(9%)	\$6	(12%)
Smoking materials	110	(3%)	1	(1%)	\$5	(11%)

The causes in this table are drawn from multiple fields. The methodology used is described in [Appendix B](#).

Source: NFIRS and NFPA Fire Experience survey.

**Table 17. Structure Fires in Schools, by Equipment Involved in Ignition  
2011-2015 Annual Averages**

Equipment Involved in Ignition	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
<b>Cooking equipment</b>	<b>990</b>	<b>(29%)</b>	<b>6</b>	<b>(11%)</b>	<b>\$1</b>	<b>(2%)</b>
Confined cooking fire	890	(26%)	5	(9%)	\$0	(0%)
Range with or without oven, cooking surface	40	(1%)	1	(1%)	\$0	(1%)
Portable cooking or warming equipment	20	(1%)	1	(1%)	\$0	(0%)
Other known cooking equipment	40	(1%)	0	(0%)	\$0	(1%)
<b>Contained trash or rubbish fire</b>	<b>890</b>	<b>(26%)</b>	<b>6</b>	<b>(11%)</b>	<b>\$0</b>	<b>(0%)</b>
<b>Heating equipment</b>	<b>330</b>	<b>(10%)</b>	<b>7</b>	<b>(12%)</b>	<b>\$3</b>	<b>(7%)</b>
Confined fuel burner or boiler fire	190	(5%)	1	(2%)	\$0	(0%)
Fixed or portable space heater	70	(2%)	0	(0%)	\$0	(1%)
Central heat	30	(1%)	2	(4%)	\$2	(5%)
Water heater	20	(1%)	3	(6%)	\$0	(1%)
Other known heating equipment	30	(1%)	0	(0%)	\$0	(0%)
<b>No equipment involved in ignition</b>	<b>360</b>	<b>(10%)</b>	<b>24</b>	<b>(42%)</b>	<b>\$31</b>	<b>(63%)</b>
<b>Electrical distribution and lighting equipment</b>	<b>300</b>	<b>(9%)</b>	<b>5</b>	<b>(9%)</b>	<b>\$6</b>	<b>(12%)</b>
Wiring and related equipment	130	(4%)	3	(5%)	\$2	(5%)
Lamp, bulb or lighting	120	(4%)	1	(2%)	\$3	(6%)
Transformers and power supplies	40	(1%)	1	(2%)	\$1	(2%)
<b>Air conditioner</b>	<b>100</b>	<b>(3%)</b>	<b>1</b>	<b>(1%)</b>	<b>\$2</b>	<b>(4%)</b>
<b>Fan</b>	<b>80</b>	<b>(2%)</b>	<b>0</b>	<b>(0%)</b>	<b>\$1</b>	<b>(3%)</b>
<b>Clothes dryer</b>	<b>60</b>	<b>(2%)</b>	<b>2</b>	<b>(3%)</b>	<b>\$0</b>	<b>(0%)</b>
<b>Torch, burner or soldering iron</b>	<b>40</b>	<b>(1%)</b>	<b>1</b>	<b>(2%)</b>	<b>\$0</b>	<b>(1%)</b>
<b>Refrigerator, refrigerator/freezer</b>	<b>20</b>	<b>(1%)</b>	<b>1</b>	<b>(1%)</b>	<b>\$1</b>	<b>(2%)</b>
<b>Other known equipment involved in ignition</b>	<b>170</b>	<b>(5%)</b>	<b>2</b>	<b>(4%)</b>	<b>\$2</b>	<b>(3%)</b>
<b>Total</b>	<b>3,430</b>	<b>(100%)</b>	<b>57</b>	<b>(100%)</b>	<b>\$48</b>	<b>(100%)</b>

Note: NFPA treats fires in which EII=NNN and heat source is not in the range of 40-99 as an additional unknown. Totals may not equal sums due to rounding errors.

Source: NFIRS and NFPA Fire Experience survey.



**Table 18. Structure Fires in Schools, by Cause of Ignition  
2011-2015 Annual Averages**

<b>Cause of Ignition</b>	<b>Fires</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
Intentional	1,550	(45%)	25	(43%)	\$18	(37%)
Non-Confined	610	(18%)	22	(39%)	\$18	(37%)
Confined	950	(28%)	3	(5%)	\$0	(0%)
Unintentional	1,320	(38%)	25	(43%)	\$18	(37%)
Non-Confined	450	(13%)	16	(27%)	\$18	(37%)
Confined	870	(25%)	9	(16%)	\$0	(0%)
Failure of equipment or heat source	490	(14%)	8	(13%)	\$6	(12%)
Non-Confined	330	(10%)	6	(11%)	\$6	(12%)
Confined	160	(5%)	1	(2%)	\$0	(0%)
Act of Nature	30	(1%)	0	(0%)	\$6	(13%)
Non-Confined	20	(1%)	0	(0%)	\$6	(13%)
Confined	0	(0%)	0	(0%)	\$0	(0%)
Unclassified cause	50	(1%)	0	(0%)	\$0	(0%)
Non-Confined	20	(1%)	0	(0%)	\$0	(0%)
Confined	30	(1%)	0	(0%)	\$0	(0%)
<b>Total</b>	<b>3,430</b>	<b>(100%)</b>	<b>57</b>	<b>(100%)</b>	<b>\$48</b>	<b>(100%)</b>
Non-Confined	1,430	(42%)	44	(78%)	\$48	(99%)
Confined	2,000	(58%)	13	(22%)	\$0	(1%)

Sums may not equal totals due to rounding.

Source: NFIRS and NFPA Fire Experience survey.

**Table 19. Structure Fires in Schools, by Factor Contributing to Ignition  
2011-2015 Annual Averages**

Factor Contributing to Ignition	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
	Count	(%)	Count	(%)	Count	(%)
Playing with heat source	680	(20%)	11	(19%)	\$14	(28%)
Non-Confined	250	(7%)	11	(19%)	\$14	(28%)
Confined	430	(13%)	0	(0%)	\$0	(0%)
Unclassified misuse of material or product	510	(15%)	4	(7%)	\$3	(5%)
Non-Confined	160	(5%)	3	(5%)	\$3	(5%)
Confined	350	(10%)	2	(3%)	\$0	(0%)
Electrical failure or malfunction	410	(12%)	10	(17%)	\$9	(18%)
Non-Confined	330	(10%)	10	(17%)	\$9	(18%)
Confined	70	(2%)	0	(0%)	\$0	(0%)
Unclassified factor contributed to ignition	380	(11%)	6	(11%)	\$2	(4%)
Non-Confined	150	(4%)	3	(6%)	\$2	(4%)
Confined	230	(7%)	3	(5%)	\$0	(0%)
Mechanical failure or malfunction	310	(9%)	9	(15%)	\$4	(7%)
Non-Confined	160	(5%)	7	(13%)	\$3	(7%)
Confined	140	(4%)	1	(3%)	\$0	(0%)
Abandoned or discarded material or product	290	(9%)	3	(5%)	\$1	(1%)
Non-Confined	60	(2%)	2	(3%)	\$1	(1%)
Confined	230	(7%)	1	(2%)	\$0	(0%)
Heat source too close to combustibles	240	(7%)	5	(10%)	\$2	(4%)
Non-Confined	110	(3%)	2	(4%)	\$2	(4%)
Confined	130	(4%)	3	(5%)	\$0	(0%)
Equipment unattended	220	(7%)	0	(0%)	\$0	(0%)
Non-Confined	20	(0%)	0	(0%)	\$0	(0%)
Confined	210	(6%)	0	(0%)	\$0	(0%)
Failure to clean	70	(2%)	1	(1%)	\$0	(0%)
Non-Confined	20	(1%)	1	(1%)	\$0	(0%)
Confined	50	(1%)	0	(0%)	\$0	(0%)
Accidentally turned on, not turned off	70	(2%)	1	(2%)	\$1	(2%)
Non-Confined	20	(0%)	0	(0%)	\$1	(2%)
Confined	60	(2%)	1	(2%)	\$0	(0%)

**Table 19. Structure Fires in Schools, by Factor Contributing to Ignition  
2011-2015 Annual Averages (Continued)**

Factor Contributing to Ignition	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
	Count	(%)	Count	(%)	Count	(%)
Equipment not being operated properly	60	(2%)	0	(0%)	\$0	(0%)
Non-Confined	10	(0%)	0	(0%)	\$0	(0%)
Confined	50	(1%)	0	(0%)	\$0	(0%)
Unclassified operational deficiency	50	(2%)	0	(0%)	\$0	(0%)
Non-Confined	10	(0%)	0	(0%)	\$0	(0%)
Confined	40	(1%)	0	(0%)	\$0	(0%)
Other known factor contributing to ignition	280	(8%)	10	(25%)	\$17	(34%)
Non-Confined	180	(5%)	10	(22%)	\$17	(34%)
Confined	110	(3%)	0	(3%)	\$0	(0%)
<b>Total fires</b>	<b>3,430</b>	<b>(100%)</b>	<b>57</b>	<b>(100%)</b>	<b>\$48</b>	<b>(100%)</b>
Non-Confined	1,430	(42%)	44	(78%)	\$48	(99%)
Confined	2,000	(58%)	13	(22%)	\$0	(1%)
<b>Total factors</b>	<b>3,580</b>	<b>(104%)</b>	<b>64</b>	<b>(113%)</b>	<b>\$51</b>	<b>(106%)</b>
Non-Confined	1,480	(43%)	52	(90%)	\$51	(105%)
Confined	2,100	(61%)	13	(22%)	\$0	(1%)

Sums may not equal totals due to rounding, fires in which the factor contributing to ignition was coded as none, unknown, or not reported were allocated proportionally among fires with known factor(s) contributing to ignition.

Source: NFIRS and NFPA Fire Experience survey.

**Table 20. Structure Fires in Schools, by Heat Source  
2011-2015 Annual Averages**

Heat Source	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
	Count	(%)	Count	(%)	Count	(%)
Lighter	820	(24%)	17	(30%)	\$7	(15%)
Non-Confined	320	(9%)	17	(30%)	\$7	(15%)
Confined	500	(15%)	0	(0%)	\$0	(0%)
Unclassified heat from powered equipment	520	(15%)	5	(9%)	\$5	(10%)
Non-Confined	220	(7%)	4	(6%)	\$5	(10%)
Confined	290	(9%)	1	(2%)	\$0	(0%)
Radiated or conducted heat from operating equipment	460	(13%)	10	(18%)	\$2	(4%)
Non-Confined	140	(4%)	3	(5%)	\$2	(3%)
Confined	320	(9%)	8	(13%)	\$0	(0%)
Match	330	(9%)	5	(8%)	\$2	(4%)
Non-Confined	80	(2%)	5	(8%)	\$2	(4%)
Confined	240	(7%)	0	(0%)	\$0	(0%)
Arcing	270	(8%)	6	(10%)	\$4	(8%)
Non-Confined	210	(6%)	6	(10%)	\$4	(8%)
Confined	50	(2%)	0	(0%)	\$0	(0%)
Unclassified heat source	200	(6%)	3	(5%)	\$2	(4%)
Non-Confined	60	(2%)	1	(2%)	\$2	(4%)
Confined	130	(4%)	2	(4%)	\$0	(0%)
Unclassified hot or smoldering object	180	(5%)	1	(2%)	\$6	(12%)
Non-Confined	70	(2%)	1	(2%)	\$6	(12%)
Confined	110	(3%)	0	(0%)	\$0	(0%)
Spark, ember or flame from operating equipment	140	(4%)	3	(6%)	\$2	(3%)
Non-Confined	70	(2%)	3	(6%)	\$2	(3%)
Confined	70	(2%)	0	(0%)	\$0	(0%)
Smoking materials	110	(3%)	1	(1%)	\$5	(11%)
Non-Confined	30	(1%)	1	(1%)	\$5	(11%)
Confined	80	(2%)	0	(0%)	\$0	(0%)

**Table 20. Structure Fires in Schools, by Heat Source  
2011-2015 Annual Averages (Continued)**

<b>Heat Source</b>	<b>Fires</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
Heat from direct flame or convection currents	70	(2%)	2	(3%)	\$0	(1%)
Non-Confined	20	(1%)	0	(0%)	\$0	(1%)
Confined	50	(1%)	2	(3%)	\$0	(0%)
Flame or torch used for lighting	70	(2%)	0	(0%)	\$0	(0%)
Non-Confined	30	(1%)	0	(0%)	\$0	(0%)
Confined	30	(1%)	0	(0%)	\$0	(0%)
Other known heat source	280	(8%)	0	(7%)	\$14	(29%)
Non-Confined	160	(5%)	0	(7%)	\$14	(29%)
Confined	120	(3%)	0	(0%)	\$0	(0%)
<b>Total</b>	<b>3,430</b>	<b>(100%)</b>	<b>57</b>	<b>(100%)</b>	<b>\$48</b>	<b>(100%)</b>
Non-Confined	1,430	(42%)	44	(78%)	\$48	(99%)
Confined	2,000	(58%)	13	(22%)	\$0	(1%)

Sums may not equal totals due to rounding. Estimates of matches, lighters, smoking materials, and candles included a proportional share of fires in which the heat source was heat from an unclassified open flame or smoking material.

Source: NFIRS and NFPA Fire Experience survey.

**Table 21. Structure Fires in Schools, by Area of Origin  
2011-2015 Annual Averages**

Area of Origin	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
	Count	Percentage	Count	Percentage	Count	Percentage
Lavatory, locker room or check room	1,080	(31%)	12	(20%)	\$2	(3%)
Non-Confined	360	(10%)	7	(13%)	\$1	(3%)
Confined	720	(21%)	4	(7%)	\$0	(0%)
Kitchen or cooking area	470	(14%)	7	(12%)	\$1	(3%)
Non-Confined	60	(2%)	1	(2%)	\$1	(3%)
Confined	410	(12%)	5	(9%)	\$0	(0%)
Small assembly area, less than 100 person capacity	150	(4%)	4	(8%)	\$7	(14%)
Non-Confined	80	(2%)	4	(8%)	\$7	(14%)
Confined	60	(2%)	0	(0%)	\$0	(0%)
Unclassified outside area	140	(4%)	0	(0%)	\$2	(5%)
Non-Confined	30	(1%)	0	(0%)	\$2	(5%)
Confined	110	(3%)	0	(0%)	\$0	(0%)
Unclassified area of origin	110	(3%)	1	(2%)	\$0	(1%)
Non-Confined	50	(1%)	1	(2%)	\$0	(1%)
Confined	70	(2%)	0	(0%)	\$0	(0%)
Trash or rubbish chute	110	(3%)	3	(5%)	\$1	(1%)
Non-Confined	10	(0%)	2	(3%)	\$1	(1%)
Confined	110	(3%)	1	(2%)	\$0	(0%)
Heating equipment room	90	(3%)	1	(3%)	\$1	(2%)
Non-Confined	30	(1%)	0	(1%)	\$1	(2%)
Confined	60	(2%)	1	(2%)	\$0	(0%)
Hallway, corridor, or mall	90	(3%)	0	(1%)	\$1	(2%)
Non-Confined	40	(1%)	0	(1%)	\$1	(2%)
Confined	50	(1%)	0	(0%)	\$0	(0%)
Unclassified function area	80	(2%)	0	(1%)	\$1	(3%)
Non-Confined	40	(1%)	0	(1%)	\$1	(3%)
Confined	40	(1%)	0	(0%)	\$0	(0%)
Exterior roof surface	70	(2%)	1	(1%)	\$4	(9%)
Non-Confined	60	(2%)	1	(1%)	\$4	(9%)
Confined	0	(0%)	0	(0%)	\$0	(0%)

**Table 21. Structure Fires in Schools, by Area of Origin  
2011-2015 Annual Averages (Continued)**

<b>Area of Origin</b>	<b>Fires</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
Office	60	(2%)	1	(2%)	\$2	(4%)
Non-Confined	30	(1%)	1	(2%)	\$2	(4%)
Confined	30	(1%)	0	(0%)	\$0	(0%)
Other known area of origin	970	(28%)	26	(46%)	\$26	(53%)
Non-Confined	630	(18%)	25	(44%)	\$26	(53%)
Confined	340	(10%)	1	(2%)	\$0	(0%)
Confined chimney or flue fire	10	(0%)	0	(0%)	\$0	(0%)
<b>Total</b>	<b>3,430</b>	<b>(100%)</b>	<b>57</b>	<b>(100%)</b>	<b>\$48</b>	<b>(100%)</b>
Non-Confined	1,430	(42%)	44	(78%)	\$48	(99%)
Confined	2,000	(58%)	13	(22%)	\$0	(1%)

Note: Totals may not equal sums due to rounding errors. Property damage has not been adjusted for inflation. Confined fires, incident type 113-118 are analyzed separately and included in the table. Non-confined and non-contained structure fires in which the area of origin was unknown or not reported have been allocated proportionally among fires with known area of origin.

Source: NFIRS and NFPA Fire Experience survey.

**Table 22. Structure Fires in Schools, by Item First Ignited  
2011-2015 Annual Averages**

Item First Ignited	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
	Count	(%)	Count	(%)	Count	(%)
Rubbish, trash, or waste	770	(22%)	8	(14%)	\$4	(8%)
Non-confined	120	(4%)	2	(3%)	\$4	(8%)
Confined	650	(19%)	6	(11%)	\$0	(0%)
Cooking materials, including food	420	(12%)	2	(4%)	\$0	(0%)
Non-confined	20	(0%)	1	(1%)	\$0	(0%)
Confined	400	(12%)	2	(3%)	\$0	(0%)
Magazine, newspaper, or writing paper	390	(11%)	1	(2%)	\$3	(6%)
Non-confined	120	(4%)	1	(2%)	\$3	(6%)
Confined	270	(8%)	0	(0%)	\$0	(0%)
Unclassified item first ignited	300	(9%)	5	(9%)	\$1	(1%)
Non-confined	160	(5%)	4	(7%)	\$1	(1%)
Confined	140	(4%)	1	(2%)	\$0	(0%)
Electrical wire or cable insulation	240	(7%)	3	(6%)	\$2	(4%)
Non-confined	200	(6%)	3	(6%)	\$2	(4%)
Confined	30	(1%)	0	(0%)	\$0	(0%)
Rolled or wound material	220	(6%)	5	(9%)	\$0	(1%)
Non-confined	120	(3%)	5	(9%)	\$0	(1%)
Confined	100	(3%)	0	(0%)	\$0	(0%)
Flammable or combustible liquids or gases, piping or filter	100	(3%)	14	(25%)	\$5	(10%)
Non-confined	60	(2%)	14	(25%)	\$5	(9%)
Confined	50	(1%)	0	(0%)	\$0	(0%)
Box, carton, bag, basket, or barrel	100	(3%)	3	(4%)	\$0	(1%)
Non-confined	40	(1%)	0	(0%)	\$0	(1%)
Confined	60	(2%)	3	(4%)	\$0	(0%)
Multiple items first ignited	80	(2%)	0	(1%)	\$2	(4%)
Non-confined	50	(1%)	0	(1%)	\$2	(4%)
Confined	30	(1%)	0	(0%)	\$0	(0%)
Appliance housing or casing	80	(2%)	1	(1%)	\$1	(2%)
Non-confined	50	(1%)	1	(1%)	\$1	(2%)
Confined	30	(1%)	0	(0%)	\$0	(0%)



**Table 22. Structure Fires in Schools, by Item First Ignited  
2011-2015 Annual Averages (Continued)**

<b>Item First Ignited</b>	<b>Fires</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
Other known item first ignited	720	(21%)	14	(25%)	\$31	(64%)
Non-confined	490	(14%)	13	(23%)	\$31	(64%)
Confined	230	(7%)	1	(1%)	\$0	(0%)
<b>Total</b>	<b>3,430</b>	<b>(100%)</b>	<b>57</b>	<b>(100%)</b>	<b>\$48</b>	<b>(100%)</b>
Non-confined	1,430	(42%)	44	(78%)	\$48	(99%)
Confined	2,000	(58%)	13	(22%)	\$0	(1%)

Sums may not equal totals due to rounding.

Source: NFIRS and NFPA Fire Experience survey.

**Table 23. Structure Fires in Schools, by Extent of Flame Damage  
2011-2015 Annual Averages**

<b>Extent of Flame Damage</b>	<b>Fires</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
Confined fire identified by incident type	2,000	(58%)	13	(22%)	\$0	(1%)
Confined to object of origin	510	(15%)	10	(17%)	\$2	(4%)
Confined to room of origin	630	(18%)	29	(51%)	\$9	(18%)
Confined to floor of origin	70	(2%)	1	(2%)	\$3	(6%)
Confined to building of origin	190	(6%)	2	(3%)	\$31	(65%)
Beyond building of origin	30	(1%)	2	(4%)	\$3	(7%)
<b>Total</b>	<b>3,430</b>	<b>(100%)</b>	<b>57</b>	<b>(100%)</b>	<b>\$48</b>	<b>(100%)</b>

Sums may not equal totals due to rounding.

Source: NFIRS and NFPA Fire Experience survey.

**Table 24. Structure Fires in Adult Education Centers or College Classrooms, by Month  
2011-2015 Annual Averages**

<b>Month</b>	<b>Fires</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
January	50	(8%)	0	(4%)	\$0	(1%)
February	70	(11%)	0	(6%)	\$1	(10%)
March	60	(9%)	1	(17%)	\$1	(5%)
April	70	(10%)	1	(12%)	\$1	(5%)
May	50	(8%)	0	(0%)	\$1	(9%)
June	50	(7%)	0	(6%)	\$3	(30%)
July	40	(5%)	0	(6%)	\$1	(7%)
August	40	(7%)	2	(29%)	\$0	(3%)
September	70	(10%)	0	(6%)	\$0	(2%)
October	70	(10%)	0	(0%)	\$0	(3%)
November	60	(8%)	1	(9%)	\$1	(6%)
December	40	(6%)	0	(6%)	\$2	(19%)
<b>Total</b>	<b>670</b>	<b>(100%)</b>	<b>8</b>	<b>(100%)</b>	<b>\$11</b>	<b>(100%)</b>

Sums may not equal totals due to rounding.

Source: NFIRS and NFPA Fire Experience survey.

**Table 25. Structure Fires in Adult Education Centers or College Classrooms, by Day of Week  
2011-2015 Annual Averages**

<b>Day of Week</b>	<b>Fires</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
Sunday	70	(10%)	0	(6%)	\$1	(8%)
Monday	110	(17%)	2	(21%)	\$0	(4%)
Tuesday	110	(16%)	1	(18%)	\$3	(29%)
Wednesday	110	(17%)	1	(16%)	\$1	(5%)
Thursday	110	(17%)	1	(16%)	\$1	(9%)
Friday	90	(14%)	2	(23%)	\$2	(16%)
Saturday	70	(10%)	0	(0%)	\$3	(28%)
<b>Total</b>	<b>670</b>	<b>(100%)</b>	<b>8</b>	<b>(100%)</b>	<b>\$11</b>	<b>(100%)</b>

Sums may not equal totals due to rounding.

Source: NFIRS and NFPA Fire Experience survey.

**Table 26. Structure Fires in Adult Education Centers or College Classrooms, by Time of Day  
2011-2015 Annual Averages**

Time of Day	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
	Count	(%)	Count	(%)	Count	(%)
Midnight-12:59 a.m.	20	(3%)	0	(0%)	\$0	(3%)
1:00-1:59 a.m.	10	(1%)	0	(0%)	\$0	(2%)
2:00-2:59 a.m.	10	(1%)	0	(0%)	\$0	(0%)
3:00-3:59 a.m.	10	(1%)	0	(4%)	\$0	(2%)
4:00-4:59 a.m.	10	(1%)	0	(0%)	\$0	(1%)
5:00-5:59 a.m.	10	(1%)	0	(0%)	\$1	(6%)
6:00-6:59 a.m.	10	(2%)	0	(6%)	\$0	(3%)
7:00-7:59 a.m.	20	(3%)	0	(0%)	\$0	(3%)
8:00-8:59 a.m.	30	(4%)	0	(0%)	\$1	(6%)
9:00-9:59 a.m.	30	(5%)	0	(4%)	\$0	(2%)
10:00-10:59 a.m.	50	(7%)	1	(12%)	\$3	(28%)
11:00-11:59 a.m.	50	(8%)	1	(17%)	\$1	(8%)
12:00-12:59 p.m.	50	(7%)	0	(6%)	\$1	(7%)
1:00-1:59 p.m.	50	(7%)	1	(18%)	\$2	(18%)
2:00-2:59 p.m.	40	(6%)	0	(5%)	\$0	(0%)
3:00-3:59 p.m.	40	(7%)	1	(17%)	\$0	(1%)
4:00-4:59 p.m.	40	(6%)	0	(6%)	\$0	(1%)
5:00-5:59 p.m.	40	(5%)	0	(0%)	\$1	(4%)
6:00-6:59 p.m.	40	(5%)	0	(6%)	\$0	(0%)
7:00-7:59 p.m.	30	(5%)	0	(0%)	\$0	(1%)
8:00-8:59 p.m.	30	(5%)	0	(0%)	\$0	(2%)
9:00-9:59 p.m.	20	(3%)	0	(0%)	\$0	(0%)
10:00-10:59 p.m.	20	(3%)	0	(0%)	\$0	(0%)
11:00-11:59 p.m.	20	(3%)	0	(0%)	\$0	(0%)
<b>Total</b>	<b>670</b>	<b>(100%)</b>	<b>8</b>	<b>(100%)</b>	<b>\$11</b>	<b>(100%)</b>

Sums may not equal totals due to rounding.

Source: NFIRS and NFPA Fire Experience survey.

**Table 27. Structure Fires in Adult Education Centers or College Classrooms, by Leading Cause  
2011-2015 Annual Averages**

<b>Leading Cause</b>	<b>Fires</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
Cooking equipment	350	(52%)	1	(13%)	\$0	(3%)
Intentional	70	(11%)	1	(8%)	\$0	(2%)
Heating equipment	50	(7%)	0	(0%)	\$0	(1%)
Electrical distribution and lighting equipment	50	(7%)	0	(0%)	\$1	(12%)
Smoking materials	40	(6%)	0	(0%)	\$0	(0%)
Playing with heat source	10	(2%)	0	(0%)	\$0	(0%)

The causes in this table are drawn from multiple fields. The methodology used is described in [Appendix B](#).

Source: NFIRS and NFPA Fire Experience survey.

**Table 28. Structure Fires in Adult Education Centers or College Classrooms by Equipment Involved in Ignition, 2011-2015 Annual Averages**

Equipment Involved in ignition	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
<b>Cooking equipment</b>	<b>350</b>	<b>(52%)</b>	<b>1</b>	<b>(13%)</b>	<b>\$0</b>	<b>(3%)</b>
Confined cooking fire	330	(49%)	1	(10%)	\$0	(1%)
<b>Contained trash or rubbish fire</b>	<b>80</b>	<b>(12%)</b>	<b>0</b>	<b>(0%)</b>	<b>\$0</b>	<b>(0%)</b>
<b>Heating equipment</b>	<b>50</b>	<b>(7%)</b>	<b>0</b>	<b>(0%)</b>	<b>\$0</b>	<b>(1%)</b>
Confined fuel burner or boiler fire	20	(3%)	0	(0%)	\$0	(0%)
Fixed or portable space heater	10	(1%)	0	(0%)	\$0	(0%)
Central heat	10	(1%)	0	(0%)	\$0	(0%)
Other known heating equipment	10	(1%)	0	(0%)	\$0	(0%)
<b>Electrical distribution and lighting equipment</b>	<b>50</b>	<b>(7%)</b>	<b>0</b>	<b>(0%)</b>	<b>\$1</b>	<b>(12%)</b>
Lamp, bulb or lighting	20	(3%)	0	(0%)	\$0	(1%)
Wiring and related equipment	20	(3%)	0	(0%)	\$1	(4%)
Transformers and power supplies	10	(1%)	0	(0%)	\$1	(5%)
<b>No equipment involved in ignition</b>	<b>30</b>	<b>(5%)</b>	<b>1</b>	<b>(13%)</b>	<b>\$1</b>	<b>(10%)</b>
<b>Clothes dryer</b>	<b>20</b>	<b>(2%)</b>	<b>0</b>	<b>(0%)</b>	<b>\$0</b>	<b>(2%)</b>
<b>Torch, burner or soldering iron</b>	<b>10</b>	<b>(2%)</b>	<b>3</b>	<b>(38%)</b>	<b>\$0</b>	<b>(1%)</b>
<b>Air conditioner</b>	<b>10</b>	<b>(2%)</b>	<b>0</b>	<b>(0%)</b>	<b>\$0</b>	<b>(2%)</b>
<b>Unclassified laboratory equipment</b>	<b>10</b>	<b>(1%)</b>	<b>1</b>	<b>(13%)</b>	<b>\$6</b>	<b>(56%)</b>
<b>Fan</b>	<b>10</b>	<b>(1%)</b>	<b>0</b>	<b>(0%)</b>	<b>\$0</b>	<b>(0%)</b>
<b>Unclassified equipment</b>	<b>10</b>	<b>(1%)</b>	<b>1</b>	<b>(13%)</b>	<b>\$0</b>	<b>(3%)</b>
<b>Confined incinerator overload or malfunction</b>	<b>10</b>	<b>(1%)</b>	<b>0</b>	<b>(0%)</b>	<b>\$0</b>	<b>(4%)</b>
<b>Other known equipment involved in ignition</b>	<b>40</b>	<b>(6%)</b>	<b>0</b>	<b>(0%)</b>	<b>\$1</b>	<b>(6%)</b>
<b>Total</b>	<b>670</b>	<b>(100%)</b>	<b>8</b>	<b>(100%)</b>	<b>\$11</b>	<b>(100%)</b>

Note: NFPA treats fires in which EII=NNN and heat source is not in the range of 40-99 as an additional unknown. Totals may not equal sums due to rounding errors.

Source: NFIRS and NFPA Fire Experience survey.

**Table 29. Structure Fires in Adult Education Centers or College Classrooms  
by Cause of Ignition, 2011-2015 Annual Averages**

<b>Cause of Ignition</b>	<b>Fires</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
Unintentional	460	(68%)	7	(86%)	\$9	(78%)
Non-Confined	130	(20%)	6	(75%)	\$8	(73%)
Confined	320	(48%)	1	(10%)	\$1	(5%)
Failure of equipment or heat source	120	(18%)	1	(7%)	\$2	(19%)
Non-Confined	70	(10%)	1	(7%)	\$2	(19%)
Confined	50	(8%)	0	(0%)	\$0	(0%)
Intentional	70	(11%)	1	(8%)	\$0	(2%)
Non-Confined	20	(3%)	1	(8%)	\$0	(2%)
Confined	50	(8%)	0	(0%)	\$0	(0%)
Unclassified cause	20	(3%)	0	(0%)	\$0	(0%)
Non-Confined	0	(0%)	0	(0%)	\$0	(0%)
Confined	20	(2%)	0	(0%)	\$0	(0%)
Act of Nature	10	(1%)	0	(0%)	\$0	(2%)
Non-Confined	0	(0%)	0	(0%)	\$0	(2%)
Confined	0	(1%)	0	(0%)	\$0	(0%)
<b>Total</b>	<b>670</b>	<b>(100%)</b>	<b>8</b>	<b>(100%)</b>	<b>\$11</b>	<b>(100%)</b>
Non-Confined	230	(33%)	7	(90%)	\$11	(95%)
Confined	450	(67%)	1	(10%)	\$1	(5%)

Sums may not equal totals due to rounding.

Source: NFIRS and NFPA Fire Experience survey.



**Table 30. Structure Fires in Adult Education Centers or College Classrooms  
by Factor Contributing to Ignition, 2011-2015 Annual Averages**

Factor Contributing to Ignition	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
	Count	(%)	Count	(%)	Count	(%)
Equipment unattended	110	(16%)	1	(7%)	\$0	(3%)
Non-Confined	10	(2%)	1	(7%)	\$0	(3%)
Confined	100	(14%)	0	(0%)	\$0	(0%)
Heat source too close to combustibles	80	(13%)	1	(18%)	\$1	(8%)
Non-Confined	20	(3%)	1	(18%)	\$1	(8%)
Confined	60	(9%)	0	(0%)	\$0	(0%)
Electrical failure or malfunction	80	(12%)	0	(0%)	\$2	(15%)
Non-Confined	60	(9%)	0	(0%)	\$2	(15%)
Confined	20	(3%)	0	(0%)	\$0	(0%)
Mechanical failure or malfunction	80	(11%)	1	(10%)	\$4	(35%)
Non-Confined	40	(6%)	1	(10%)	\$4	(35%)
Confined	40	(6%)	0	(0%)	\$0	(0%)
Unclassified misuse of material or product	60	(9%)	1	(10%)	\$0	(1%)
Non-Confined	10	(2%)	1	(10%)	\$0	(1%)
Confined	50	(7%)	0	(0%)	\$0	(0%)
Abandoned or discarded material or product	50	(8%)	0	(0%)	\$2	(15%)
Non-Confined	10	(1%)	0	(0%)	\$2	(15%)
Confined	40	(6%)	0	(0%)	\$0	(0%)
Unclassified factor contributing to ignition	50	(7%)	0	(0%)	\$0	(1%)
Non-Confined	20	(2%)	0	(0%)	\$0	(1%)
Confined	30	(4%)	0	(0%)	\$0	(0%)
Failure to clean	40	(6%)	1	(10%)	\$0	(1%)
Non-Confined	0	(1%)	0	(0%)	\$0	(1%)
Confined	30	(5%)	1	(10%)	\$0	(0%)
Equipment not being operated properly	30	(4%)	0	(0%)	\$0	(1%)
Non-Confined	10	(1%)	0	(0%)	\$0	(1%)
Confined	20	(3%)	0	(0%)	\$0	(0%)
Improper container or storage	20	(3%)	0	(0%)	\$1	(6%)
Non-Confined	10	(1%)	0	(0%)	\$0	(1%)
Confined	20	(3%)	0	(0%)	\$1	(5%)

**Table 30. Structure Fires in Adult Education Centers or College Classrooms by Factor Contributing to Ignition, 2011-2015 Annual Averages (Continued)**

Factor Contributing to Ignition	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Cutting or welding too close to combustibles	20	(3%)	1	(10%)	\$0	(2%)
Non-Confined	20	(2%)	1	(10%)	\$0	(2%)
Confined	0	(0%)	0	(0%)	\$0	(0%)
Accidentally turned on, not turned off	20	(2%)	1	(11%)	\$0	(0%)
Non-Confined	0	(0%)	1	(11%)	\$0	(0%)
Confined	10	(2%)	0	(0%)	\$0	(0%)
Playing with heat source	10	(2%)	0	(0%)	\$0	(0%)
Non-Confined	0	(1%)	0	(0%)	\$0	(0%)
Confined	10	(1%)	0	(0%)	\$0	(0%)
Unclassified operational deficiency	10	(2%)	0	(0%)	\$0	(0%)
Non-Confined	0	(0%)	0	(0%)	\$0	(0%)
Confined	10	(1%)	0	(0%)	\$0	(0%)
Other known factor contributing to ignition	40	(6%)	0	(53%)	\$2	(19%)
Non-Confined	20	(3%)	0	(53%)	\$2	(19%)
Confined	20	(3%)	0	(0%)	\$0	(0%)
<b>Total fires</b>	<b>670</b>	<b>(100%)</b>	<b>8</b>	<b>(100%)</b>	<b>\$11</b>	<b>(100%)</b>
Non-Confined	230	(33%)	7	(90%)	\$11	(95%)
Confined	450	(67%)	1	(10%)	\$1	(5%)
<b>Total factors</b>	<b>700</b>	<b>(103%)</b>	<b>10</b>	<b>(129%)</b>	<b>\$12</b>	<b>(106%)</b>
Non-Confined	240	(35%)	9	(119%)	\$12	(101%)
Confined	460	(68%)	1	(10%)	\$1	(5%)

Sums may not equal totals due to rounding, fires in which the factor contributing to ignition was coded as none, unknown, or not reported were allocated proportionally among fires with known factor(s) contributing to ignition.

Source: NFIRS and NFPA Fire Experience survey.

**Table 31. Structure Fires in Adult Education Centers or College Classrooms, by Heat Source  
2011-2015 Annual Averages**

Heat Source	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
	Count	(%)	Count	(%)	Count	(%)
Unclassified heat from powered equipment	170	(25%)	0	(5%)	\$3	(24%)
Non-Confined	50	(8%)	0	(5%)	\$3	(24%)
Confined	110	(17%)	0	(0%)	\$0	(0%)
Radiated or conducted heat from operating equipment	100	(16%)	1	(17%)	\$0	(3%)
Non-Confined	30	(4%)	1	(17%)	\$0	(3%)
Confined	80	(11%)	0	(0%)	\$0	(0%)
Spark, ember or flame from operating equipment	70	(10%)	1	(13%)	\$0	(4%)
Non-Confined	20	(3%)	1	(13%)	\$0	(4%)
Confined	50	(7%)	0	(0%)	\$0	(0%)
Unclassified hot or smoldering object	50	(8%)	0	(0%)	\$2	(15%)
Non-Confined	20	(2%)	0	(0%)	\$2	(15%)
Confined	40	(6%)	0	(0%)	\$0	(0%)
Unclassified heat source	40	(7%)	0	(6%)	\$1	(9%)
Non-Confined	10	(1%)	0	(6%)	\$1	(9%)
Confined	40	(5%)	0	(0%)	\$0	(0%)
Arcing	40	(6%)	0	(6%)	\$1	(8%)
Non-Confined	40	(6%)	0	(6%)	\$1	(8%)
Confined	10	(1%)	0	(0%)	\$0	(0%)
Smoking materials	40	(6%)	0	(0%)	\$0	(0%)
Non-Confined	0	(1%)	0	(0%)	\$0	(0%)
Confined	30	(5%)	0	(0%)	\$0	(0%)
Hot ember or ash	30	(4%)	0	(0%)	\$0	(2%)
Non-Confined	10	(1%)	0	(0%)	\$0	(2%)
Confined	20	(3%)	0	(0%)	\$0	(0%)
Lighter	20	(3%)	0	(6%)	\$0	(3%)
Non-Confined	10	(1%)	0	(6%)	\$0	(3%)
Confined	10	(2%)	0	(0%)	\$0	(0%)

**Table 31. Structure Fires in Adult Education Centers or College Classrooms, by Heat Source  
2011-2015 Annual Averages (Continued)**

<b>Heat Source</b>	<b>Fires</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
Spontaneous combustion or chemical reaction	20	(3%)	0	(5%)	\$0	(2%)
Non-Confined	10	(2%)	0	(5%)	\$0	(2%)
Confined	10	(1%)	0	(0%)	\$0	(0%)
Match	20	(2%)	0	(0%)	\$0	(0%)
Non-Confined	0	(0%)	0	(0%)	\$0	(0%)
Confined	10	(2%)	0	(0%)	\$0	(0%)
Flame or torch used for lighting	10	(2%)	0	(0%)	\$0	(0%)
Non-Confined	10	(1%)	0	(0%)	\$0	(0%)
Confined	10	(1%)	0	(0%)	\$0	(0%)
Heat from direct flame or convection currents	10	(2%)	2	(23%)	\$0	(0%)
Non-Confined	0	(0%)	1	(13%)	\$0	(0%)
Confined	10	(1%)	1	(10%)	\$0	(0%)
Molten or hot metal	10	(2%)	1	(6%)	\$0	(4%)
Non-Confined	10	(1%)	1	(6%)	\$0	(4%)
Confined	0	(1%)	0	(0%)	\$0	(0%)
Other known heat source	40	(5%)	0	(12%)	\$3	(26%)
Non-Confined	20	(2%)	0	(12%)	\$2	(22%)
Confined	20	(3%)	0	(0%)	\$1	(5%)
<b>Total</b>	<b>670</b>	<b>(100%)</b>	<b>10</b>	<b>(100%)</b>	<b>\$11</b>	<b>(100%)</b>
Non-Confined	230	(33%)	10	(90%)	\$11	(95%)
Confined	450	(67%)	0	(10%)	\$1	(5%)

Sums may not equal totals due to rounding. Estimates of matches, lighters, smoking materials, and candles included a proportional share of fires in which the heat source was heat from an unclassified open flame or smoking material.

Source: NFIRS and NFPA Fire Experience survey.

**Table 32. Structure Fires in Adult Education Centers or College Classrooms, by Area of Origin  
2011-2015 Annual Averages**

Area of Origin	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
	Count	(%)	Count	(%)	Count	(%)
Kitchen or cooking area	210	(31%)	1	(10%)	\$0	(1%)
Non-Confined	10	(2%)	0	(0%)	\$0	(1%)
Confined	200	(29%)	1	(10%)	\$0	(0%)
Laboratory	60	(8%)	4	(46%)	\$1	(13%)
Non-Confined	30	(4%)	4	(46%)	\$1	(8%)
Confined	30	(5%)	0	(0%)	\$1	(5%)
Lavatory, locker room or check room	50	(8%)	0	(0%)	\$0	(0%)
Non-Confined	10	(2%)	0	(0%)	\$0	(0%)
Confined	40	(6%)	0	(0%)	\$0	(0%)
Office	20	(4%)	1	(12%)	\$1	(5%)
Non-Confined	10	(2%)	1	(12%)	\$1	(5%)
Confined	10	(2%)	0	(0%)	\$0	(0%)
Trash or rubbish chute, area or container	20	(3%)	0	(0%)	\$0	(0%)
Non-Confined	0	(0%)	0	(0%)	\$0	(0%)
Confined	20	(3%)	0	(0%)	\$0	(0%)
Heating equipment room	20	(3%)	0	(0%)	\$0	(0%)
Non-Confined	0	(1%)	0	(0%)	\$0	(0%)
Confined	20	(3%)	0	(0%)	\$0	(0%)
Unclassified area of origin	20	(3%)	0	(0%)	\$0	(0%)
Non-Confined	0	(1%)	0	(0%)	\$0	(0%)
Confined	20	(2%)	0	(0%)	\$0	(0%)
Unclassified outside area	20	(2%)	0	(0%)	\$0	(2%)
Non-Confined	0	(0%)	0	(0%)	\$0	(2%)
Confined	10	(2%)	0	(0%)	\$0	(0%)
Hallway, corridor, or mall	10	(2%)	0	(6%)	\$0	(0%)
Non-Confined	10	(1%)	0	(6%)	\$0	(0%)
Confined	10	(1%)	0	(0%)	\$0	(0%)
Duct for HVAC, cable, exhaust, heating or AC	10	(2%)	0	(0%)	\$0	(1%)
Non-Confined	10	(1%)	0	(0%)	\$0	(1%)
Confined	0	(1%)	0	(0%)	\$0	(0%)

**Table 32. Structure Fires in Adult Education Centers or College Classrooms, by Area of Origin  
2011-2015 Annual Averages (Continued)**

Area of Origin	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
	Count	(%)	Count	(%)	Count	(%)
Exterior roof surface	10	(2%)	0	(5%)	\$0	(1%)
Non-Confined	10	(2%)	0	(5%)	\$0	(1%)
Confined	0	(0%)	0	(0%)	\$0	(0%)
Laundry room or area	10	(2%)	0	(0%)	\$0	(0%)
Non-Confined	10	(1%)	0	(0%)	\$0	(0%)
Confined	0	(0%)	0	(0%)	\$0	(0%)
Common room, living room, lounge, or den	10	(2%)	0	(4%)	\$0	(0%)
Non-Confined	0	(0%)	0	(4%)	\$0	(0%)
Confined	10	(1%)	0	(0%)	\$0	(0%)
Unclassified function area	10	(2%)	0	(0%)	\$0	(0%)
Non-Confined	0	(1%)	0	(0%)	\$0	(0%)
Confined	10	(1%)	0	(0%)	\$0	(0%)
Small assembly area, less than 100 person capacity	10	(2%)	0	(0%)	\$0	(3%)
Non-Confined	10	(1%)	0	(0%)	\$0	(3%)
Confined	0	(0%)	0	(0%)	\$0	(0%)
Other known area of origin	160	(25%)	1	(17%)	\$8	(73%)
Non-Confined	100	(15%)	1	(17%)	\$8	(73%)
Confined	60	(10%)	0	(0%)	\$0	(0%)
<b>Total</b>	<b>670</b>	<b>(100%)</b>	<b>8</b>	<b>(100%)</b>	<b>\$11</b>	<b>(100%)</b>
Non-Confined	230	(33%)	7	(90%)	\$11	(95%)
Confined	450	(67%)	1	(10%)	\$1	(5%)

Note: Totals may not equal sums due to rounding errors. Property damage has not been adjusted for inflation. Confined fires, incident type 113-118 are analyzed separately and included in the table. Non-confined and non-contained structure fires in which the area of origin was unknown or not reported have been allocated proportionally among fires with known area of origin.

Source: NFIRS and NFPA Fire Experience survey.

**Table 33. Structure Fires in Adult Education Centers or College Classrooms, by Item First Ignited  
2011-2015 Annual Averages**

Item First Ignited	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
	Count	(%)	Count	(%)	\$	(%)
Cooking materials, including food	190	(29%)	1	(10%)	\$0	(0%)
Non-confined	10	(1%)	0	(0%)	\$0	(0%)
Confined	190	(28%)	1	(10%)	\$0	(0%)
Rubbish, trash, or waste	90	(13%)	0	(0%)	\$0	(3%)
Non-confined	10	(1%)	0	(0%)	\$0	(3%)
Confined	80	(12%)	0	(0%)	\$0	(0%)
Flammable or combustible liquids or gases, piping or filter	60	(8%)	4	(52%)	\$1	(10%)
Non-confined	20	(3%)	4	(52%)	\$1	(10%)
Confined	40	(5%)	0	(0%)	\$0	(0%)
Unclassified item first ignited	50	(8%)	1	(13%)	\$2	(13%)
Non-confined	20	(3%)	1	(13%)	\$2	(13%)
Confined	30	(4%)	0	(0%)	\$0	(0%)
Electrical wire or cable insulation	40	(6%)	1	(7%)	\$1	(6%)
Non-confined	40	(5%)	1	(7%)	\$1	(6%)
Confined	10	(1%)	0	(0%)	\$0	(0%)
Appliance housing or casing	30	(4%)	0	(0%)	\$1	(5%)
Non-confined	10	(2%)	0	(0%)	\$0	(0%)
Confined	20	(2%)	0	(0%)	\$1	(5%)
Magazine, newspaper, or writing paper	20	(3%)	0	(0%)	\$0	(1%)
Non-confined	10	(1%)	0	(0%)	\$0	(1%)
Confined	10	(2%)	0	(0%)	\$0	(0%)
Box, carton, bag, basket, or barrel	20	(3%)	0	(0%)	\$0	(2%)
Non-confined	10	(1%)	0	(0%)	\$0	(2%)
Confined	10	(2%)	0	(0%)	\$0	(0%)
Rolled or wound material	20	(2%)	0	(0%)	\$0	(0%)
Non-confined	0	(1%)	0	(0%)	\$0	(0%)
Confined	10	(2%)	0	(0%)	\$0	(0%)
Unclassified organic materials	20	(2%)	0	(0%)	\$0	(0%)
Non-confined	10	(1%)	0	(0%)	\$0	(0%)
Confined	10	(2%)	0	(0%)	\$0	(0%)

**Table 33. Structure Fires in Adult Education Centers or College Classrooms by Item First Ignited, 2011-2015 Annual Averages (Continued)**

<b>Item First Ignited</b>	<b>Fires</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
Exterior roof covering or finish	10	(2%)	1	(6%)	\$1	(5%)
Non-confined	10	(2%)	1	(6%)	\$1	(5%)
Confined	0	(0%)	0	(0%)	\$0	(0%)
Dust, fiber, lint, including sawdust or excelsior	10	(2%)	0	(0%)	\$0	(2%)
Non-confined	10	(1%)	0	(0%)	\$0	(2%)
Confined	10	(1%)	0	(0%)	\$0	(0%)
Other known item first ignited	110	(16%)	1	(11%)	\$6	(53%)
Non-confined	80	(12%)	1	(11%)	\$6	(53%)
Confined	30	(5%)	0	(0%)	\$0	(0%)
<b>Total</b>	<b>670</b>	<b>(100%)</b>	<b>8</b>	<b>(100%)</b>	<b>\$11</b>	<b>(100%)</b>
Non-confined	230	(33%)	7	(90%)	\$11	(95%)
Confined	450	(67%)	1	(10%)	\$1	(5%)

Sums may not equal totals due to rounding.

Source: NFIRS and NFPA Fire Experience survey.



**Table 34. Structure Fires in Adult Education Centers or College Classrooms  
by Extent of Flame Damage, 2011-2015 Annual Averages**

<b>Extent of Flame Damage</b>	<b>Fires</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
Confined fire identified by incident type	450	(67%)	1	(10%)	\$1	(5%)
Confined to object of origin	90	(13%)	3	(32%)	\$3	(30%)
Confined to room of origin	100	(15%)	4	(52%)	\$4	(38%)
Confined to floor of origin	10	(2%)	0	(6%)	\$0	(4%)
Confined to building of origin	20	(3%)	0	(0%)	\$3	(24%)
Beyond building of origin	0	(0%)	0	(0%)	\$0	(0%)
<b>Total</b>	<b>670</b>	<b>(100%)</b>	<b>8</b>	<b>(100%)</b>	<b>\$11</b>	<b>(100%)</b>

Sums may not equal totals due to rounding.

Source: NFIRS and NFPA Fire Experience survey.

**Table 35. Structure Fires in Day Care Properties, by Month  
2011-2015 Annual Averages**

<b>Month</b>	<b>Fires</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
January	40	(8%)	0	(0%)	\$1	(18%)
February	40	(7%)	0	(8%)	\$0	(6%)
March	50	(10%)	0	(0%)	\$0	(7%)
April	50	(9%)	0	(0%)	\$0	(5%)
May	40	(8%)	0	(0%)	\$1	(14%)
June	40	(7%)	1	(21%)	\$0	(7%)
July	50	(9%)	0	(0%)	\$0	(11%)
August	40	(7%)	0	(0%)	\$0	(1%)
September	50	(8%)	0	(12%)	\$0	(8%)
October	50	(9%)	1	(18%)	\$0	(7%)
November	50	(9%)	1	(31%)	\$0	(5%)
December	50	(8%)	0	(11%)	\$0	(11%)
<b>Total</b>	<b>560</b>	<b>(100%)</b>	<b>4</b>	<b>(100%)</b>	<b>\$4</b>	<b>(100%)</b>

Sums may not equal totals due to rounding.

Source: NFIRS and NFPA Fire Experience survey.

**Table 36. Structure Fires in Day Care Properties, by Day of Week  
2011-2015 Annual Averages**

<b>Day of Week</b>	<b>Fires</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
Sunday	30	(6%)	0	(0%)	\$1	(15%)
Monday	90	(16%)	2	(46%)	\$1	(14%)
Tuesday	100	(17%)	1	(27%)	\$0	(9%)
Wednesday	100	(19%)	0	(12%)	\$0	(12%)
Thursday	100	(18%)	0	(0%)	\$0	(9%)
Friday	100	(18%)	0	(0%)	\$1	(17%)
Saturday	30	(6%)	1	(15%)	\$1	(24%)
<b>Total</b>	<b>560</b>	<b>(100%)</b>	<b>4</b>	<b>(100%)</b>	<b>\$4</b>	<b>(100%)</b>

Sums may not equal totals due to rounding.

Source: NFIRS and NFPA Fire Experience survey.

**Table 37. Structure Fires in Day Care Properties, by Time of Day  
2011-2015 Annual Averages**

<b>Time of Day</b>	<b>Fires</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
Midnight-12:59 a.m.	10	(1%)	0	(0%)	\$0	(6%)
1:00-1:59 a.m.	10	(1%)	0	(0%)	\$0	(3%)
2:00-2:59 a.m.	10	(1%)	0	(0%)	\$0	(4%)
3:00-3:59 a.m.	0	(1%)	0	(0%)	\$0	(7%)
4:00-4:59 a.m.	0	(1%)	0	(12%)	\$0	(1%)
5:00-5:59 a.m.	0	(1%)	0	(0%)	\$0	(3%)
6:00-6:59 a.m.	20	(3%)	0	(0%)	\$0	(2%)
7:00-7:59 a.m.	30	(5%)	1	(22%)	\$0	(1%)
8:00-8:59 a.m.	50	(9%)	0	(12%)	\$0	(1%)
9:00-9:59 a.m.	50	(9%)	0	(11%)	\$0	(2%)
10:00-10:59 a.m.	60	(11%)	1	(19%)	\$0	(3%)
11:00-11:59 a.m.	60	(11%)	0	(0%)	\$0	(12%)
12:00-12:59 p.m.	50	(9%)	0	(0%)	\$0	(8%)
1:00-1:59 p.m.	30	(6%)	0	(0%)	\$0	(2%)
2:00-2:59 p.m.	30	(5%)	0	(8%)	\$0	(4%)
3:00-3:59 p.m.	30	(5%)	0	(9%)	\$0	(4%)
4:00-4:59 p.m.	30	(5%)	0	(0%)	\$0	(2%)
5:00-5:59 p.m.	20	(4%)	0	(0%)	\$0	(1%)
6:00-6:59 p.m.	20	(3%)	0	(8%)	\$0	(9%)
7:00-7:59 p.m.	20	(3%)	0	(0%)	\$0	(8%)
8:00-8:59 p.m.	10	(2%)	0	(0%)	\$0	(1%)
9:00-9:59 p.m.	10	(1%)	0	(0%)	\$0	(4%)
10:00-10:59 p.m.	10	(1%)	0	(0%)	\$0	(8%)
11:00-11:59 p.m.	10	(1%)	0	(0%)	\$0	(4%)
<b>Total</b>	<b>560</b>	<b>(100%)</b>	<b>4</b>	<b>(100%)</b>	<b>\$4</b>	<b>(100%)</b>

Sums may not equal totals due to rounding.

Source: NFIRS and NFPA Fire Experience survey.

**Table 38. Structure Fires in Day Care Properties, by Leading Cause  
2011-2015 Annual Averages**

<b>Leading Cause</b>	<b>Fires</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
Cooking equipment	380	(69%)	3	(65%)	\$1	(20%)
Heating equipment	40	(6%)	0	(0%)	\$0	(8%)
Electrical distribution and lighting equipment	30	(6%)	0	(0%)	\$2	(53%)
Intentional	30	(5%)	0	(12%)	\$0	(13%)
Exposure fire	10	(2%)	0	(0%)	\$0	(3%)

The causes in this table are drawn from multiple fields. The methodology used is described in [Appendix B](#).

Source: NFIRS and NFPA Fire Experience survey.

**Table 39. Structure Fires in Day Care Properties, by Equipment Involved in Ignition  
2011-2015 Annual Averages**

<b>Equipment Involved in Ignition</b>	<b>Fires</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
<b>Cooking equipment</b>	<b>380</b>	<b>(69%)</b>	<b>3</b>	<b>(65%)</b>	<b>\$1</b>	<b>(20%)</b>
Confined cooking fire	350	(64%)	1	(32%)	\$0	(0%)
Range with or without oven, cooking surface	20	(4%)	1	(33%)	\$0	(6%)
Other known cooking equipment	10	(2%)	0	(0%)	\$1	(14%)
<b>Heating equipment</b>	<b>40</b>	<b>(6%)</b>	<b>0</b>	<b>(0%)</b>	<b>\$0</b>	<b>(8%)</b>
Confined fuel burner or boiler fire	20	(4%)	0	(0%)	\$0	(0%)
Fixed or portable space heater	10	(1%)	0	(0%)	\$0	(6%)
Water heater	10	(1%)	0	(0%)	\$0	(2%)
<b>Electrical distribution and lighting equipment</b>	<b>30</b>	<b>(6%)</b>	<b>0</b>	<b>(0%)</b>	<b>\$2</b>	<b>(53%)</b>
Wiring and related equipment	20	(4%)	0	(0%)	\$2	(41%)
Lamp, bulb or lighting	10	(2%)	0	(0%)	\$0	(10%)
<b>Fan</b>	<b>30</b>	<b>(6%)</b>	<b>1</b>	<b>(35%)</b>	<b>\$0</b>	<b>(9%)</b>
<b>No equipment involved in ignition</b>	<b>20</b>	<b>(3%)</b>	<b>0</b>	<b>(0%)</b>	<b>\$0</b>	<b>(5%)</b>
<b>Contained trash or rubbish fire</b>	<b>20</b>	<b>(3%)</b>	<b>0</b>	<b>(0%)</b>	<b>\$0</b>	<b>(0%)</b>
<b>Clothes dryer</b>	<b>10</b>	<b>(2%)</b>	<b>0</b>	<b>(0%)</b>	<b>\$0</b>	<b>(1%)</b>
<b>Air conditioner</b>	<b>10</b>	<b>(2%)</b>	<b>0</b>	<b>(0%)</b>	<b>\$0</b>	<b>(0%)</b>
<b>Torch, burner, or soldering iron</b>	<b>0</b>	<b>(1%)</b>	<b>0</b>	<b>(0%)</b>	<b>\$0</b>	<b>(0%)</b>
<b>Other known equipment involved in ignition</b>	<b>20</b>	<b>(3%)</b>	<b>0</b>	<b>(0%)</b>	<b>\$0</b>	<b>(3%)</b>
<b>Total</b>	<b>560</b>	<b>(100%)</b>	<b>4</b>	<b>(100%)</b>	<b>\$4</b>	<b>(100%)</b>

Note: NFPA treats fires in which EII=NNN and heat source is not in the range of 40-99 as an additional unknown. Totals may not equal sums due to rounding errors.

Source: NFIRS and NFPA Fire Experience survey.

**Table 40. Structure Fires in Day Care Properties, by Cause of Ignition  
2011-2015 Annual Averages**

<b>Cause of Ignition</b>	<b>Fires</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
Unintentional	390	(69%)	2	(38%)	\$2	(51%)
Non-Confined	80	(14%)	2	(38%)	\$2	(50%)
Confined	310	(55%)	0	(0%)	\$0	(0%)
Failure of equipment or heat source	110	(20%)	1	(19%)	\$1	(30%)
Non-Confined	50	(9%)	1	(19%)	\$1	(30%)
Confined	60	(10%)	0	(0%)	\$0	(0%)
Unclassified cause	30	(6%)	0	(0%)	\$0	(3%)
Non-Confined	10	(1%)	0	(0%)	\$0	(3%)
Confined	20	(4%)	0	(0%)	\$0	(0%)
Intentional	30	(5%)	0	(12%)	\$0	(13%)
Non-Confined	20	(4%)	0	(12%)	\$0	(13%)
Confined	10	(1%)	0	(0%)	\$0	(0%)
Other known cause	0	(1%)	0	(0%)	\$0	(4%)
Non-Confined	0	(1%)	0	(0%)	\$0	(4%)
Confined	0	(0%)	0	(0%)	\$0	(0%)
<b>Total</b>	<b>560</b>	<b>(100%)</b>	<b>4</b>	<b>(100%)</b>	<b>\$4</b>	<b>(100%)</b>
Non-Confined	160	(29%)	3	(68%)	\$4	(99%)
Confined	390	(71%)	1	(32%)	\$0	(1%)

Sums may not equal totals due to rounding.

Source: NFIRS and NFPA Fire Experience survey.

**Table 41. Structure Fires in Day Care Properties, by Factor Contributing to Ignition  
2011-2015 Annual Averages**

Factor Contributing to Ignition	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
	Count	(%)	Count	(%)	Count	(%)
Equipment unattended	130	(24%)	0	(0%)	\$0	(0%)
Non-Confined	0	(1%)	0	(0%)	\$0	(0%)
Confined	130	(23%)	0	(0%)	\$0	(0%)
Electrical failure or malfunction	80	(15%)	1	(27%)	\$2	(55%)
Non-Confined	60	(10%)	1	(27%)	\$2	(54%)
Confined	30	(5%)	0	(0%)	\$0	(0%)
Mechanical failure or malfunction	80	(15%)	0	(0%)	\$0	(5%)
Non-Confined	30	(5%)	0	(0%)	\$0	(5%)
Confined	60	(10%)	0	(0%)	\$0	(0%)
Unclassified factor contributed to ignition	40	(7%)	0	(0%)	\$0	(7%)
Non-Confined	10	(2%)	0	(0%)	\$0	(7%)
Confined	30	(5%)	0	(0%)	\$0	(0%)
Unclassified misuse of material or product	40	(7%)	0	(0%)	\$0	(6%)
Non-Confined	10	(1%)	0	(0%)	\$0	(6%)
Confined	30	(6%)	0	(0%)	\$0	(0%)
Heat source too close to combustibles	30	(6%)	2	(42%)	\$0	(6%)
Non-Confined	20	(3%)	2	(42%)	\$0	(6%)
Confined	20	(3%)	0	(0%)	\$0	(0%)
Abandoned or discarded material or products	30	(6%)	0	(0%)	\$0	(1%)
Non-Confined	10	(1%)	0	(0%)	\$0	(1%)
Confined	30	(5%)	0	(0%)	\$0	(0%)
Failure to clean	30	(6%)	0	(0%)	\$0	(1%)
Non-Confined	10	(1%)	0	(0%)	\$0	(1%)
Confined	30	(5%)	0	(0%)	\$0	(0%)
Accidentally turned on, not turned off	20	(3%)	0	(0%)	\$0	(1%)
Non-Confined	0	(1%)	0	(0%)	\$0	(1%)
Confined	10	(2%)	0	(0%)	\$0	(0%)



**Table 41. Structure Fires in Day Care Properties, by Factor Contributing to Ignition  
2011-2015 Annual Averages (Continued)**

Factor Contributing to Ignition	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Equipment not being operated properly	10	(3%)	0	(0%)	\$0	(0%)
Non-Confined	0	(0%)	0	(0%)	\$0	(0%)
Confined	10	(2%)	0	(0%)	\$0	(0%)
Exposure fire	10	(2%)	0	(0%)	\$0	(3%)
Non-Confined	10	(2%)	0	(0%)	\$0	(3%)
Confined	0	(1%)	0	(0%)	\$0	(0%)
Unclassified operational deficiency	10	(2%)	0	(0%)	\$0	(0%)
Non-Confined	0	(0%)	0	(0%)	\$0	(0%)
Confined	10	(2%)	0	(0%)	\$0	(0%)
Other known factor contributing to ignition	40	(7%)	0	(0%)	\$1	(21%)
Non-Confined	30	(5%)	0	(0%)	\$1	(21%)
Confined	10	(2%)	0	(0%)	\$0	(0%)
<b>Total fires</b>	<b>560</b>	<b>(100%)</b>	<b>4</b>	<b>(100%)</b>	<b>\$4</b>	<b>(100%)</b>
Non-Confined	160	(29%)	3	(68%)	\$4	(99%)
Confined	390	(71%)	1	(32%)	\$0	(1%)
<b>Total factors</b>	<b>570</b>	<b>(102%)</b>	<b>4</b>	<b>(100%)</b>	<b>\$4</b>	<b>(105%)</b>
Non-Confined	170	(30%)	3	(68%)	\$4	(104%)
Confined	400	(71%)	1	(32%)	\$0	(1%)

Sums may not equal totals due to rounding, fires in which the factor contributing to ignition was coded as none, unknown, or not reported were allocated proportionally among fires with known factor(s) contributing to ignition.

Source: NFIRS and NFPA Fire Experience survey.

**Table 42. Structure Fires in Day Care Properties, by Heat Source  
2011-2015 Annual Averages**

Heat Source	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
	Count	(%)	Count	(%)	Count	(%)
Radiated or conducted heat from operating equipment	150	(28%)	0	(0%)	\$1	(17%)
Non-Confined	20	(4%)	0	(0%)	\$1	(17%)
Confined	130	(23%)	0	(0%)	\$0	(0%)
Unclassified heat from powered equipment	140	(25%)	1	(21%)	\$1	(19%)
Non-Confined	30	(6%)	1	(21%)	\$1	(19%)
Confined	110	(19%)	0	(0%)	\$0	(0%)
Arcing	50	(10%)	1	(16%)	\$1	(31%)
Non-Confined	40	(7%)	1	(16%)	\$1	(31%)
Confined	10	(2%)	0	(0%)	\$0	(0%)
Unclassified heat source	50	(9%)	0	(0%)	\$0	(9%)
Non-Confined	10	(1%)	0	(0%)	\$0	(8%)
Confined	40	(8%)	0	(0%)	\$0	(0%)
Spark, ember or flame from operating equipment	50	(9%)	0	(0%)	\$0	(0%)
Non-Confined	10	(2%)	0	(0%)	\$0	(0%)
Confined	40	(8%)	0	(0%)	\$0	(0%)
Unclassified hot or smoldering object	30	(6%)	0	(0%)	\$0	(3%)
Non-Confined	10	(2%)	0	(0%)	\$0	(2%)
Confined	20	(4%)	0	(0%)	\$0	(0%)
Match	10	(2%)	1	(31%)	\$0	(3%)
Non-Confined	10	(1%)	1	(31%)	\$0	(3%)
Confined	10	(1%)	0	(0%)	\$0	(0%)
Heat from direct flame or convection currents	10	(2%)	0	(0%)	\$0	(2%)
Non-Confined	0	(1%)	0	(0%)	\$0	(2%)
Confined	10	(2%)	0	(0%)	\$0	(0%)
Lighter	10	(2%)	0	(0%)	\$0	(3%)
Non-Confined	0	(1%)	0	(0%)	\$0	(3%)
Confined	10	(1%)	0	(0%)	\$0	(0%)

**Table 42. Structure Fires in Day Care Properties, by Heat Source  
2011-2015 Annual Averages (Continued)**

Heat Source	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
Other known heat source	30	(6%)	0	(0%)	\$1	(14%)
Non-Confined	30	(5%)	0	(0%)	\$1	(14%)
Confined	10	(1%)	0	(0%)	\$0	(0%)
<b>Total</b>	<b>560</b>	<b>(100%)</b>	<b>4</b>	<b>100%</b>	<b>\$4</b>	<b>100%</b>
Non-Confined	160	(29%)	3	(68%)	\$4	(99%)
Confined	390	(71%)	1	(32%)	\$0	(1%)

Sums may not equal totals due to rounding. Estimates of matches, lighters, smoking materials, and candles included a proportional share of fires in which the heat source was heat from an unclassified open flame or smoking material.

Source: NFIRS and NFPA Fire Experience survey.

**Table 43. Structure Fires in Day Care Properties, by Area of Origin  
2011-2015 Annual Averages**

Area of Origin	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
	Count	(%)	Count	(%)	\$	(%)
Kitchen or cooking area	350	(63%)	1	(18%)	\$0	(10%)
Non-Confined	30	(5%)	1	(18%)	\$0	(10%)
Confined	330	(59%)	0	(0%)	\$0	(0%)
Lavatory, locker room or check room	30	(5%)	0	(8%)	\$0	(3%)
Non-Confined	20	(4%)	0	(8%)	\$0	(3%)
Confined	10	(2%)	0	(0%)	\$0	(0%)
Heating equipment room	20	(4%)	0	(0%)	\$0	(1%)
Non-Confined	0	(0%)	0	(0%)	\$0	(1%)
Confined	20	(4%)	0	(0%)	\$0	(0%)
Laundry room or area	10	(2%)	0	(12%)	\$0	(2%)
Non-Confined	10	(2%)	0	(12%)	\$0	(2%)
Confined	10	(2%)	0	(0%)	\$0	(0%)
Unclassified function area	10	(2%)	0	(12%)	\$0	(10%)
Non-Confined	10	(2%)	0	(12%)	\$0	(10%)
Confined	0	(0%)	0	(0%)	\$0	(0%)
Office	10	(2%)	0	(0%)	\$0	(2%)
Non-Confined	10	(2%)	0	(0%)	\$0	(2%)
Confined	0	(0%)	0	(0%)	\$0	(0%)
Common room, living room, lounge, or den	10	(2%)	0	(0%)	\$0	(9%)
Non-Confined	0	(0%)	0	(0%)	\$0	(9%)
Confined	0	(0%)	0	(0%)	\$0	(0%)
Exterior wall surface	10	(2%)	0	(0%)	\$0	(4%)
Non-Confined	10	(2%)	0	(0%)	\$0	(4%)
Confined	0	(0%)	0	(0%)	\$0	(0%)

**Table 43. Structure Fires in Day Care Properties, by Area of Origin  
2011-2015 Annual Averages (Continued)**

<b>Area of Origin</b>	<b>Fires</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
Other known area of origin	100	(18%)	1	(19%)	\$2	(58%)
Non-Confined	80	(14%)	1	(19%)	\$2	(58%)
Confined	20	(4%)	0	(0%)	\$0	(0%)
<b>Total</b>	<b>560</b>	<b>(100%)</b>	<b>4</b>	<b>(100%)</b>	<b>\$4</b>	<b>(100%)</b>
Non-Confined	160	(29%)	3	(68%)	\$4	(99%)
Confined	390	(70%)	1	(32%)	\$0	(1%)

Note: Totals may not equal sums due to rounding errors. Property damage has not been adjusted for inflation. Confined fires, incident type 113-118 are analyzed separately and included in the table. Non-confined and non-contained structure fires in which the area of origin was unknown or not reported have been allocated proportionally among fires with known area of origin.

Source: NFIRS and NFPA Fire Experience survey.

**Table 44. Structure Fires in Day Care Properties, by Item First Ignited  
2011-2015 Annual Averages**

Item First Ignited	Fires		Civilian Injuries		Direct Property Damage (in Millions)	
	Count	Percentage	Count	Percentage	Amount	Percentage
Cooking materials, including food	260	(48%)	0	(0%)	\$0	(1%)
Non-confined	10	(1%)	0	(0%)	\$0	(1%)
Confined	260	(46%)	0	(0%)	\$0	(0%)
Electrical wire or cable insulation	50	(8%)	0	(0%)	\$0	(8%)
Non-confined	30	(6%)	0	(0%)	\$0	(8%)
Confined	10	(3%)	0	(0%)	\$0	(0%)
Unclassified item first ignited	40	(7%)	0	(0%)	\$0	(5%)
Non-confined	10	(2%)	0	(0%)	\$0	(5%)
Confined	30	(5%)	0	(0%)	\$0	(0%)
Appliance housing or casing	40	(7%)	0	(0%)	\$0	(5%)
Non-confined	10	(2%)	0	(0%)	\$0	(5%)
Confined	30	(5%)	0	(0%)	\$0	(0%)
Flammable or combustible liquids or gases, piping or filter	20	(3%)	1	(14%)	\$0	(10%)
Non-confined	10	(1%)	1	(14%)	\$0	(10%)
Confined	10	(1%)	0	(0%)	\$0	(0%)
Household utensils	10	(3%)	0	(0%)	\$0	(0%)
Non-confined	0	(0%)	0	(0%)	\$0	(0%)
Confined	10	(2%)	0	(0%)	\$0	(0%)
Structural member or framing	10	(2%)	0	(0%)	\$1	(21%)
Non-confined	10	(2%)	0	(0%)	\$1	(21%)
Confined	0	(0%)	0	(0%)	\$0	(0%)
Multiple items first ignited	10	(2%)	0	(0%)	\$0	(1%)
Non-confined	0	(1%)	0	(0%)	\$0	(1%)
Confined	10	(1%)	0	(0%)	\$0	(0%)
Rubbish, trash, or waste	10	(2%)	0	(0%)	\$0	(1%)
Non-confined	0	(1%)	0	(0%)	\$0	(1%)
Confined	10	(1%)	0	(0%)	\$0	(0%)
Exterior wall covering or finish	10	(2%)	0	(0%)	\$0	(6%)
Non-confined	10	(2%)	0	(0%)	\$0	(6%)
Confined	0	(0%)	0	(0%)	\$0	(0%)

**Table 44. Structure Fires in Day Care Properties, by Item First Ignited  
2011-2015 Annual Averages (Continued)**

<b>Item First Ignited</b>	<b>Fires</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
Other known item first ignited	100	(18%)	2	(55%)	\$2	(42%)
Non-confined	70	(12%)	2	(55%)	\$2	(41%)
Confined	30	(6%)	0	(0%)	\$0	(0%)
<b>Total</b>	<b>560</b>	<b>(100%)</b>	<b>4</b>	<b>100%</b>	<b>\$4</b>	<b>100%</b>
Non-confined	160	(29%)	3	(68%)	\$4	(99%)
Confined	390	(71%)	1	(32%)	\$0	(1%)

Sums may not equal totals due to rounding.

Source: NFIRS and NFPA Fire Experience survey.

**Table 45. Structure Fires in Day Care Properties, by Extent of Flame Damage  
2011-2015 Annual Averages**

<b>Extent of Flame Damage</b>	<b>Fires</b>		<b>Civilian Injuries</b>		<b>Direct Property Damage (in Millions)</b>	
Confined fire identified by incident type	390	(70%)	1	(32%)	\$0	(1%)
Confined to object of origin	40	(8%)	0	(0%)	\$0	(2%)
Confined to room of origin	70	(12%)	1	(34%)	\$0	(12%)
Confined to floor of origin	10	(2%)	0	(0%)	\$1	(19%)
Confined to building of origin	40	(7%)	1	(34%)	\$2	(58%)
Beyond building of origin	0	(1%)	0	(0%)	\$0	(9%)
<b>Total</b>	<b>560</b>	<b>(100%)</b>	<b>4</b>	<b>(100%)</b>	<b>\$4</b>	<b>(100%)</b>

Sums may not equal totals due to rounding.

Source: NFIRS and NFPA Fire Experience survey.



## Appendix A. How National Estimates Statistics Are Calculated

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The statistics in this analysis are estimates derived from the U.S. Fire Administration's (USFA's) National Fire Incident Reporting System (NFIRS) and the National Fire Protection Association's (NFPA's) annual survey of U.S. fire departments. NFIRS is a voluntary system by which participating fire departments report detailed factors about the fires to which they respond. Roughly two-thirds of U.S. fire departments participate, although not all of these departments provide data every year. Fires reported to federal or state fire departments or industrial fire brigades are not included in these estimates.

NFIRS provides the most detailed incident information of any national database not limited to large fires. NFIRS is the only database capable of addressing national patterns for fires of all sizes by specific property use and specific fire cause. NFIRS also captures information on the extent of flame spread, and automatic detection and suppression equipment. For more information about NFIRS visit <http://www.nfirs.fema.gov/>. Copies of the paper forms may be downloaded from [http://www.nfirs.fema.gov/documentation/design/NFIRS\\_Paper\\_Forms\\_2008.pdf](http://www.nfirs.fema.gov/documentation/design/NFIRS_Paper_Forms_2008.pdf).

NFIRS has a wide variety of data elements and code choices. The NFIRS database contains coded information. Many code choices describe several conditions. These cannot be broken down further. For example, area of origin code 83 captures fires starting in vehicle engine areas, running gear areas or wheel areas. It is impossible to tell the portion of each from the coded data.

### **Methodology may change slightly from year to year.**

NFPA is continually examining its methodology to provide the best possible answers to specific questions, methodological and definitional changes can occur. *Earlier editions of the same report may have used different methodologies to produce the same analysis, meaning that the estimates are not directly comparable from year to year.*

### **NFPA's fire department experience survey provides estimates of the big picture.**

Each year, NFPA conducts an annual survey of fire departments which enables us to capture a summary of fire department experience on a larger scale. Surveys are sent to all municipal departments protecting populations of 50,000 or more and a random sample, stratified by community size, of the smaller departments. Typically, a total of roughly 3,000 surveys are returned, representing about one of every ten U.S. municipal fire departments and about one third of the U.S. population.

The survey is stratified by size of population protected to reduce the uncertainty of the final estimate. Small rural communities have fewer people protected per department and are less likely to respond to the survey. A larger number must be surveyed to obtain an adequate sample of those departments. (NFPA also makes follow-up calls to a sample of the smaller fire departments that do not respond, to confirm that those that did respond are truly representative of fire departments their size.) On the other hand, large city departments are so few in number and protect such a large proportion of the total U.S.

population that it makes sense to survey all of them. Most respond, resulting in excellent precision for their part of the final estimate.

The survey includes the following information: (1) the total number of fire incidents, civilian deaths, and civilian injuries, and the total estimated property damage (in dollars), for each of the major property use classes defined in NFIRS; (2) the number of on-duty firefighter injuries, by type of duty and nature of illness; (3) the number and nature of non-fire incidents; and (4) information on the type of community protected (e.g., county versus township versus city) and the size of the population protected, which is used in the statistical formula for projecting national totals from sample results. The results of the survey are published in the annual report [Fire Loss in the United States](#).

### **Projecting NFIRS to National Estimates**

As noted, NFIRS is a voluntary system. Different states and jurisdictions have different reporting requirements and practices. Participation rates in NFIRS are not necessarily uniform across regions and community sizes, both factors correlated with frequency and severity of fires. This means NFIRS may be susceptible to systematic biases. No one at present can quantify the size of these deviations from the ideal, representative sample, so no one can say with confidence that they are or are not serious problems. But there is enough reason for concern so that a second database -- the NFPA survey -- is needed to project NFIRS to national estimates and to project different parts of NFIRS separately. This multiple calibration approach makes use of the annual NFPA survey where its statistical design advantages are strongest.

Scaling ratios are obtained by comparing NFPA's projected totals of residential structure fires, non-residential structure fires, vehicle fires, and outside and other fires, and associated civilian deaths, civilian injuries, and direct property damage with comparable totals in NFIRS. Estimates of specific fire problems and circumstances are obtained by multiplying the NFIRS data by the scaling ratios. Reports for incidents in which mutual aid was given are excluded from NFPA's analyses.

Analysts at the NFPA, the USFA and the Consumer Product Safety Commission developed the specific basic analytical rules used for this procedure. "[The National Estimates Approach to U.S. Fire Statistics](#)," by John R. Hall, Jr. and Beatrice Harwood, provides a more detailed explanation of national estimates. A copy of the article is available online or through NFPA's Research, Data and Analytics Division.

Version 5.0 of NFIRS, first introduced in 1999, used a different coding structure for many data elements, added some property use codes, and dropped others. The essentials of the approach described by Hall and Harwood are still used, but some modifications have been necessary to accommodate the changes in NFIRS 5.0.

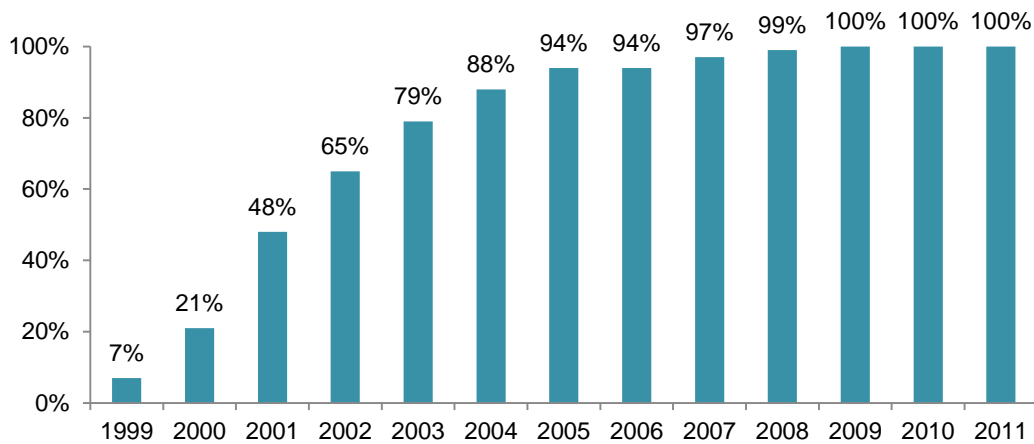
Figure A.1 shows the percentage of fires originally collected in the NFIRS 5.0 system. Each year's release version of NFIRS data also includes data collected in older versions of NFIRS that were converted to NFIRS 5.0 codes.

From 1999 data on, analyses are based on scaling ratios using only data originally collected in NFIRS 5.0:

NFPA survey projections  
NFIRS totals (Version 5.0)

For 1999 to 2001, the same rules may be applied, but estimates for these years in this form will be less reliable due to the smaller amount of data originally collected in NFIRS 5.0; they should be viewed with extreme caution.

**Figure A.1. Fires Originally Collected in NFIRS 5.0 by Year**



NFIRS 5.0 introduced six categories of confined structure fires, including:

- cooking fires confined to the cooking vessel,
- confined chimney or flue fires,
- confined incinerator fire,
- confined fuel burner or boiler fire or delayed ignition,
- confined commercial compactor fire, and
- trash or rubbish fires in a structure with no flame damage to the structure or its contents.

Because this analysis focused on fatalities only, no distinction was made between confined and non-confined fires.

For most fields other than Property Use and Incident Type, NFPA allocates unknown data proportionally among known data. This approach assumes that if the missing data were known, it would be distributed in the same manner as the known data. NFPA makes additional adjustments to several fields. *Casualty and loss projections can be heavily influenced by the inclusion or exclusion of unusually serious fire.*

In the formulas that follow, the term “all fires” refers to all fires in NFIRS on the dimension studied. The percentages of fires with known or unknown data are provided for non-confined fires and associated losses, and for confined fires only.

**Rounding and percentages.** The data shown are estimates and generally rounded. An entry of zero may be a true zero or it may mean that the value rounds to zero. Percentages are calculated from unrounded values. It is quite possible to have a percentage entry of up to 100% even if the rounded number entry is zero. The same rounded value may account for a slightly different percentage share. Because percentages are expressed in integers and not carried out to several decimal places, percentages that appear identical may be associated with slightly different values.

In the formulas that follow, the term “all fires” refers to all fires in NFIRS on the dimension studied. The percentages of fires with known or unknown data are provided for non-confined fires and associated losses, and for confined fires only.

**Cause of Ignition:** This field is used chiefly to identify intentional fires. “Unintentional” in this field is a specific entry and does not include other fires that were not intentionally set: failure of equipment or heat source, act of nature, or “other” (unclassified).” The last should be used for exposures but has been used for other situations as well. Fires that were coded as under investigation and those that were coded as undetermined after investigation were treated as unknown.

**Factor Contributing to Ignition:** In this field, the code “none” is treated as an unknown and allocated proportionally. For Human Factor Contributing to Ignition, NFPA enters a code for “not reported” when no factors are recorded. “Not reported” is treated as an unknown, but the code “none” is treated as a known code and not allocated. Multiple entries are allowed in both of these fields. Percentages are calculated on the total number of fires, not entries, resulting in sums greater than 100%. Although Factor Contributing to Ignition is only required when the cause of ignition was coded as: 2) unintentional, 3) failure of equipment or heat source; or 4) act of nature, data is often present when not required. Consequently, any fire in which no factor contributing to ignition was entered was treated as unknown.

In some analyses, all entries in the category of mechanical failure, malfunction (factor contributing to ignition 20-29) are combined and shown as one entry, “mechanical failure or malfunction.” This category includes:

21. Automatic control failure;
22. Manual control failure;
23. Leak or break. Includes leaks or breaks from containers or pipes. Excludes operational deficiencies and spill mishaps;
25. Worn out;
26. Backfire. Excludes fires originating as a result of hot catalytic converters;
27. Improper fuel used; Includes the use of gasoline in a kerosene heater and the like; and
20. Mechanical failure or malfunction, other.

Entries in “electrical failure, malfunction” (factor contributing to ignition 30-39) may also be combined into one entry, “electrical failure or malfunction.” This category includes:

31. Water-caused short circuit arc;
32. Short-circuit arc from mechanical damage;
33. Short-circuit arc from defective or worn insulation;
34. Unspecified short circuit arc;
35. Arc from faulty contact or broken connector, including broken power lines and loose connections;
36. Arc or spark from operating equipment, switch, or electric fence;
37. Fluorescent light ballast; and
30. Electrical failure or malfunction, other.

**Heat Source.** In NFIRS 5.0, one grouping of codes encompasses various types of open flames and smoking materials. In the past, these had been two separate groupings. A new code was added to NFIRS 5.0, which is code 60: “Heat from open flame or smoking material, other.” NFPA treats this code as a partial unknown and allocates it proportionally across the codes in the 61-69 range, shown below.

61. Cigarette;
62. Pipe or cigar;
63. Heat from undetermined smoking material;
64. Match;
65. Lighter: cigarette lighter, cigar lighter;
66. Candle;
67. Warning or road flare, fuse;
68. Backfire from internal combustion engine. Excludes flames and sparks from an exhaust system, (11); and
69. Flame/torch used for lighting. Includes gas light and gas-/liquid-fueled lantern.

In addition to the conventional allocation of missing and undetermined fires, NFPA multiplies fires with codes in the 61-69 range by

$$\frac{\text{All fires in range 60-69}}{\text{All fires in range 61-69}}$$

The downside of this approach is that heat sources that are truly a different type of open flame or smoking material are erroneously assigned to other categories. The grouping “smoking materials” includes codes 61-63 (cigarettes, pipes or cigars, and heat from undetermined smoking material, with a proportional share of the code 60s and true unknown data.

**Equipment Involved in Ignition (EII).** NFIRS 5.0 originally defined EII as the piece of equipment that provided the principal heat source to cause ignition if the equipment malfunctioned or was used improperly. In 2006, the definition was modified to “the piece of

equipment that provided the principal heat source to cause ignition.” However, much of the data predates the change. Individuals who have already been trained with the older definition may not change their practices. To compensate, NFPA treats fires in which EII = NNN and heat source is not in the range of 40-99 as an additional unknown.

To allocate unknown data for EII, the known data is multiplied by

$$\frac{\text{All fires}}{(\text{All fires} - \text{blank} - \text{undetermined} - [\text{fires in which EII} = \text{NNN and heat source} < 40-99])}$$

In addition, the partially unclassified codes for broad equipment groupings (i.e., code 100 - heating, ventilation, and air conditioning, other; code 200 - electrical distribution, lighting and power transfer, other; etc.) were allocated proportionally across the individual code choices in their respective broad groupings (heating, ventilation, and air conditioning; electrical distribution, lighting and power transfer, other; etc.). Equipment that is totally unclassified is not allocated further. This approach has the same downside as the allocation of heat source 60 described above. Equipment that is truly different is erroneously assigned to other categories.

In some analyses, various types of equipment are grouped together.

<b>Code Grouping</b>	<b>EII Code</b>	<b>NFIRS definitions</b>
Central heat	132	Furnace or central heating unit
	133	Boiler (power, process or heating)
Fixed or portable space heater	131	Furnace, local heating unit, built-in
	123	Fireplace with insert or stove
	124	Heating stove
	141	Heater, excluding catalytic and oil-filled
	142	Catalytic heater
	143	Oil-filled heater
Fireplace or chimney	120	Fireplace or chimney
	121	Fireplace, masonry
	122	Fireplace, factory-built
	125	Chimney connector or vent connector
	126	Chimney – brick, stone or masonry
	127	Chimney-metal, including stovepipe or flue
Fixed wiring and related equipment	210	Unclassified electrical wiring
	211	Electrical power or utility line
	212	Electrical service supply wires from utility
	213	Electric meter or meter box

	214	Wiring from meter box to circuit breaker
	215	Panel board, switch board or circuit breaker board
	216	Electrical branch circuit
	217	Outlet or receptacle
	218	Wall switch
	219	Ground fault interrupter
Transformers and power supplies	221	Distribution-type transformer
	222	Overcurrent, disconnect equipment
	223	Low-voltage transformer
	224	Generator
	225	Inverter
	226	Uninterrupted power supply (UPS)
	227	Surge protector
	228	Battery charger or rectifier
	229	Battery (all types)
<b>Code Grouping</b>	<b>EII Code</b>	<b>NFIRS definitions</b>
Lamp, bulb or lighting	230	Unclassified lamp or lighting
	231	Lamp-tabletop, floor or desk
	232	Lantern or flashlight
	233	Incandescent lighting fixture
	234	Fluorescent light fixture or ballast
	235	Halogen light fixture or lamp
	236	Sodium or mercury vapor light fixture or lamp
	237	Work or trouble light
	238	Light bulb
	241	Nightlight
	242	Decorative lights – line voltage
	243	Decorative or landscape lighting – low voltage
	244	Sign
Cord or plug	260	Unclassified cord or plug
	261	Power cord or plug, detachable from appliance
	262	Power cord or plug- permanently attached
	263	Extension cord
Torch, burner or soldering iron	331	Welding torch
	332	Cutting torch
	333	Burner, including Bunsen burners
	334	Soldering equipment

Portable cooking or warming equipment	631	Coffee maker or teapot
	632	Food warmer or hot plate
	633	Kettle
	634	Popcorn popper
	635	Pressure cooker or canner
	636	Slow cooker
	637	Toaster, toaster oven, counter-top broiler
	638	Waffle iron, griddle
	639	Wok, frying pan, skillet
	641	Bread making machine

Equipment was not analyzed separately for confined fires. Instead, each confined fire incident type was listed with the equipment or as other known equipment.

**Item First Ignited.** In most analyses, mattress and pillows (item first ignited 31) and bedding, blankets, sheets, and comforters (item first ignited 32) are combined and shown as “mattresses and bedding.” In many analyses, wearing apparel not on a person (code 34) and wearing apparel on a person (code 35) are combined and shown as “clothing.” In some analyses, flammable and combustible liquids and gases, piping and filters (item first ignited 60-69) are combined and shown together.

**Area of Origin.** Two areas of origin: bedroom for more than five people (code 21) and bedroom for less than five people (code 22) are combined and shown as simply “bedroom.” Chimney is no longer a valid area of origin code for non-confined fires.

**Rounding and percentages.** The data shown are estimates and generally rounded. An entry of zero may be a true zero or it may mean that the value rounds to zero. Percentages are calculated from unrounded values. It is quite possible to have a percentage entry of up to 100% even if the rounded number entry is zero. The same rounded value may account for a slightly different percentage share. Because percentages are expressed in integers and not carried out to several decimal places, percentages that appear identical may be associated with slightly different values.



## Appendix B.

### Methodology and Definitions Used in “Leading Cause” Tables

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The cause table reflects relevant causal factors that accounted for at least 2% of the fires in a given occupancy. Only those causes that seemed to describe a scenario are included. Because the causal factors are taken from different fields, some double counting is possible. Percentages are calculated against the total number of structure fires, including both confined and non-confined fires. Bear in mind that every fire has at least three “causes” in the sense that it could have been prevented by changing behavior, heat source, or ignitability of first fuel, the last an aspect not reflected in any of the major cause categories. For example, several of the cause categories in this system refer to types of equipment (cooking, heating, electrical distribution and lighting, clothes dryers and washers, torches). However, the problem may be not with the equipment but with the way it is used. The details in national estimates are derived from the U.S. Fire Administration’s National Fire Incident Reporting System (NFIRS). This methodology is based on the coding system used in Version 5.0 of NFIRS. The *NFIRS 5.0 Reference Guide*, containing all of the codes, can be downloaded from <http://www.nfirs.fema.gov/documentation/reference/>.

**Cooking equipment and heating equipment** are calculated by summing fires identified by equipment involved in ignition and relevant confined fires. Confined fires will be shown if they account for at least 2% of the incidents. **Confined cooking fires** (cooking fires involving the contents of a cooking vessel without fire extension beyond the vessel) are identified by NFIRS incident type 113.

**Confined heating equipment** fires include **confined chimney or flue fires** (incident type 114) and **confined fuel burner or boiler** fires (incident type 116). The latter includes delayed ignitions and incidents where flames caused no damage outside the fire box. The two types of confined heating fires may be combined or listed separately, depending on the numbers involved.

**Intentional** fires are identified by fires with a “1” (intentional) in the field “cause.” The estimate includes a proportional share of fires in which the cause was undetermined after investigation, under investigation, or not reported. All fires with intentional causes are included in this category regardless of the age of the person involved. Earlier versions of NFIRS included codes for incendiary and suspicious. Intentional fires were deliberately set; they may or may not be incendiary in a legal sense. No age restriction is applied.

Fires caused by **playing with heat source** (typically matches or lighters) are identified by code 19 in the field “factor contributing to ignition.” Fires in which the factor contribution to ignition was undetermined (UU), entered as none (NN) or left blank are considered unknown and allocated proportionally. Because factor contributing to ignition is not required for intentional fires, the share unknown, by these definitions, is somewhat larger than it should be.

The heat source field is used to identify fires started by: **smoking materials** (cigarette, code 61; pipe or cigar, code 62; and heat from undetermined smoking material, code 63); **candles** (code 66), **lightning** (code 73); and **spontaneous combustion or chemical reaction** (code 72). Fires started by heat from unclassified open flame or smoking materials (code 60) are allocated

proportionally among the “other open flame or smoking material” codes (codes 61-69) in an allocation of partial unknown data. This includes smoking materials and candles. This approach results in any true unclassified smoking or open flame heat sources such as incense being inappropriately allocated. However, in many fires, this code was used as an unknown.

The equipment involved in ignition field is used to find several cause categories. This category includes equipment that functioned properly and equipment that malfunctioned.

**Cooking equipment Non-confined fire** refers to equipment used to cook, heat or warm food (codes 620-649 and 654). Fire in which ranges, ovens or microwave ovens, food warming appliances, fixed or portable cooking appliances, deep fat fryers, open fired charcoal or gas grills, grease hoods or ducts, or other cooking appliances) were involved in the ignition are said to be caused by cooking equipment. Food preparation devices that do not involve heating, such as can openers or food processors, are not included here. As noted in Appendix A, a proportional share of unclassified kitchen and cooking equipment (code 600) is included here.

**Heating equipment Non-confined fire** (codes 120-199) includes central heat, portable and fixed heaters (including wood stoves), fireplaces, chimneys, hot water heaters, and heat transfer equipment such as hot air ducts or hot water pipes. Heat pumps are not included. As noted in Appendix A, a proportional share of unclassified heating, ventilation and air condition equipment (code 100) is included here.

Confined fires are excluded from the tallies of the remaining categories of fires involving equipment.

**Electrical distribution and lighting equipment** (codes 200-299) include: fixed wiring; transformers; associated overcurrent or disconnect equipment such as fuses or circuit breakers; meters; meter boxes; power switch gear; switches, receptacles and outlets; light fixtures, lamps, bulbs or lighting; signs; cords and plugs; generators, transformers, inverters, batteries and battery charges.

**Torch, burner or soldering iron** (codes 331-334) includes welding torches, cutting torches, Bunsen burners, plumber furnaces, blowtorches, and soldering equipment. As noted in Appendix A, a proportional share of shop tools and industrial equipment (code 300) is included here.

**Clothes dryer or washer** (codes 811, 813 and 814) includes clothes dryers alone, washer and dryer combinations within one frame, and washing machines for clothes. As noted in Appendix A, a proportional share of unclassified personal and household equipment (code 800) is included here.

**Electronic, office or entertainment equipment** (codes 700-799) includes: computers and related equipment; calculators and adding machines; telephones or answering machines; copiers; fax machines; paper shredders; typewriters; postage meters; other office equipment; musical instruments; stereo systems and/or components; televisions and cable TV converter

boxes,, cameras, excluding professional television studio cameras, video equipment and other electronic equipment. Older versions of NFIRS had a code for electronic equipment that included radar, X-rays, computers, telephones, and transmitter equipment.

**Shop tools and industrial equipment excluding torches, burners or soldering irons** (codes 300-330, 335-399) includes power tools; painting equipment; compressors; atomizing equipment; pumps; wet/dry vacuums; hoists, lifts or cranes; powered jacking equipment; water or gas drilling equipment; unclassified hydraulic equipment; heat-treating equipment; incinerators, industrial furnaces, ovens or kilns; pumps; compressors; internal combustion engines; conveyors; printing presses; casting, molding; or forging equipment; heat treating equipment; tar kettles; working or shaping machines; coating machines; chemical process equipment; waste recovery equipment; power transfer equipment; power takeoff; powered valves; bearings or brakes; picking, carding or weaving machines; testing equipment; gas regulators; separate motors; non-vehicular internal combustion engines; and unclassified shop tools and industrial equipment. . As noted in Appendix A, a proportional share of shop tools and industrial equipment (code 300) is included here.

**Medical equipment** (codes 410-419) includes: dental, medical or other powered bed, chair or wheelchair; dental equipment; dialysis equipment; medical monitoring and imaging equipment; oxygen administration equipment; radiological equipment; medical sterilizers, therapeutic equipment and unclassified medical equipment. As noted in Appendix A, a proportional share of commercial and medical equipment (code 400) is included here.

**Exposures** are fires that are caused by the spread of or from another fire. These were identified by factor contributing to ignition code 71. This code is automatically applied when the exposure number is greater than zero.