TOPICAL FIRE REPORT SERIES Volume 11, Issue 5 / November 2010

Thanksgiving Day Fires in Residential Buildings

These topical reports are designed to explore facets of the U.S. fire problem as depicted through data collected in the U.S. Fire Administration's (USFA's) National Fire Incident Reporting System (NFIRS). Each topical report briefly addresses the nature of the specific fire or fire-related topic, highlights important findings from the data, and may suggest other resources to consider for further information. Also included are recent examples of fire incidents that demonstrate some of the issues addressed in the report or that put the report topic in context.

Findings

- An estimated 2,000 Thanksgiving Day fires in residential buildings are reported to U.S. fire departments each year and cause an estimated average of 5 deaths, 25 injuries, and $21 million in property loss.
- Smaller, confined fires account for 71 percent of Thanksgiving Day fires in residential buildings.
- Thanksgiving Day fires in residential buildings occur most frequently in the afternoon hours from 12 to 4 p.m., peaking from noon to 1 p.m.
- Cooking is the leading cause of all Thanksgiving Day fires in residential buildings at 69 percent. Nearly all of these cooking fires (97 percent) are small, confined fires with limited damage.
- Electrical malfunctions (14 percent), carelessness or other unintentional actions (14 percent), and open flames (13 percent) are the leading causes of the larger, nonconfined Thanksgiving Day fires in residential buildings.
- Nonconfined Thanksgiving Day fires in residential buildings most often start in cooking areas and kitchens (22 percent).
- The leading category of factors contributing to ignition of nonconfined Thanksgiving Day fires in residential buildings is the "misuse of material or product" (35 percent). Within this category, heat source too close to combustible materials and abandoned or discarded materials account for 14 percent and 9 percent of all nonconfined Thanksgiving Day fires in residential buildings, respectively.
- No smoke alarms were present in 20 percent of nonconfined Thanksgiving Day fires in occupied residential buildings.

From 2006 to 2008, an estimated 4,300 Thanksgiving Day fires occurred annually in the United States causing 10 deaths, 50 injuries, and $30 million in property loss. Of these Thanksgiving Day fires, an estimated 2,000 fires occurred in residential buildings resulting in an estimated average of 5 deaths, 25 injuries, and $21 million in property loss each year.[1,2,3]

On Thanksgiving Day, many families customarily spend the holiday inside their home or the home of a friend or family member with the family dinner being the highlight of the day.[4] Because of this holiday custom, from 2006 to 2008, the average number of reported residential building fires on Thanksgiving Day almost doubled (49 percent) from the average number of fires in residential buildings on all days other than Thanksgiving (26 percent). As a result, it is particularly important to look at the characteristics of residential building fires on Thanksgiving.

This report addresses the characteristics of Thanksgiving Day fires in residential buildings reported to the National Fire Incident Reporting System (NFIRS) between 2006 and 2008, the most recent data available at the time of analysis. Thanksgiving Day fires in residential buildings are fire incidents that occurred on November 23, 2006, November 22, 2007, and November 27, 2008.

Type of Fire

Building fires are divided into two classes of severity in NFIRS: "confined fires," which are those fires confined to certain types of equipment or objects, and "nonconfined fires," which are not. Confined building fires are small fire incidents that are limited in extent, staying within pots or fireplaces or certain other noncombustible containers.[5] Confined fires rarely result in serious injury or large content losses, and are expected to have no significant accompanying property losses due to flame damage.[6] Of these two classes, the smaller, confined fires account for the majority of Thanksgiving Day fires in residential buildings at 71 percent. Of these confined fires, cooking is, by far, the predominant type of fire. Nonconfined fires account for the remaining 29 percent of Thanksgiving Day fires in residential buildings (Table 1).

Table 1. Thanksgiving Day Fires in Residential Buildings by Type of Incident (2006–2008)

Incident Type	Percent
Confined fires	70.9
Cooking fire, confined to container	60.6
Chimney or flue fire, confined to chimney or flue	5.8
Incinerator overload or malfunction, fire confined	0.1
Fuel burner/boiler malfunction, fire confined	2.3
Commercial compactor fire, confined to rubbish	0.2
Trash or rubbish fire, contained	2.0
Nonconfined fires	29.1
Total	100.0

Source: NFIRS 5.0.

Loss Measures

Table 2 presents losses, averaged over the 3-year-period of 2006-2008, of reported Thanksgiving Day fires in residential buildings as well as fires that occur in residential buildings on all days other than Thanksgiving Day.[7] Although the average number of reported residential building fires on Thanksgiving Day is nearly double that of those on all other days, the average numbers of injuries and dollar loss for all Thanksgiving Day fires in residential buildings are about half those of the same loss measures for non-Thanksgiving Day fires in residential buildings.

Table 2. Loss Measures for Thanksgiving Day and Non-Thanksgiving Day Fires in Residential Buildings (3-year-average, 2006–2008)

Measure	All Thanksgiving Day Fires in Residential Buildings	**Confined Thanksgiving** Day Fires in Residential Buildings	**Nonconfined Thanksgiving** Day Fires in Residential Buildings	Non-Thanksgiving Day Fires in Residential Buildings
Average Loss:				
Fatalities/1,000 fires	2.1	0.0	7.1	5.5
Injuries/1,000 fires	14.8	5.5	37.5	28.2
Dollar loss/fire	$8,840	$80	$30,180	$16,100

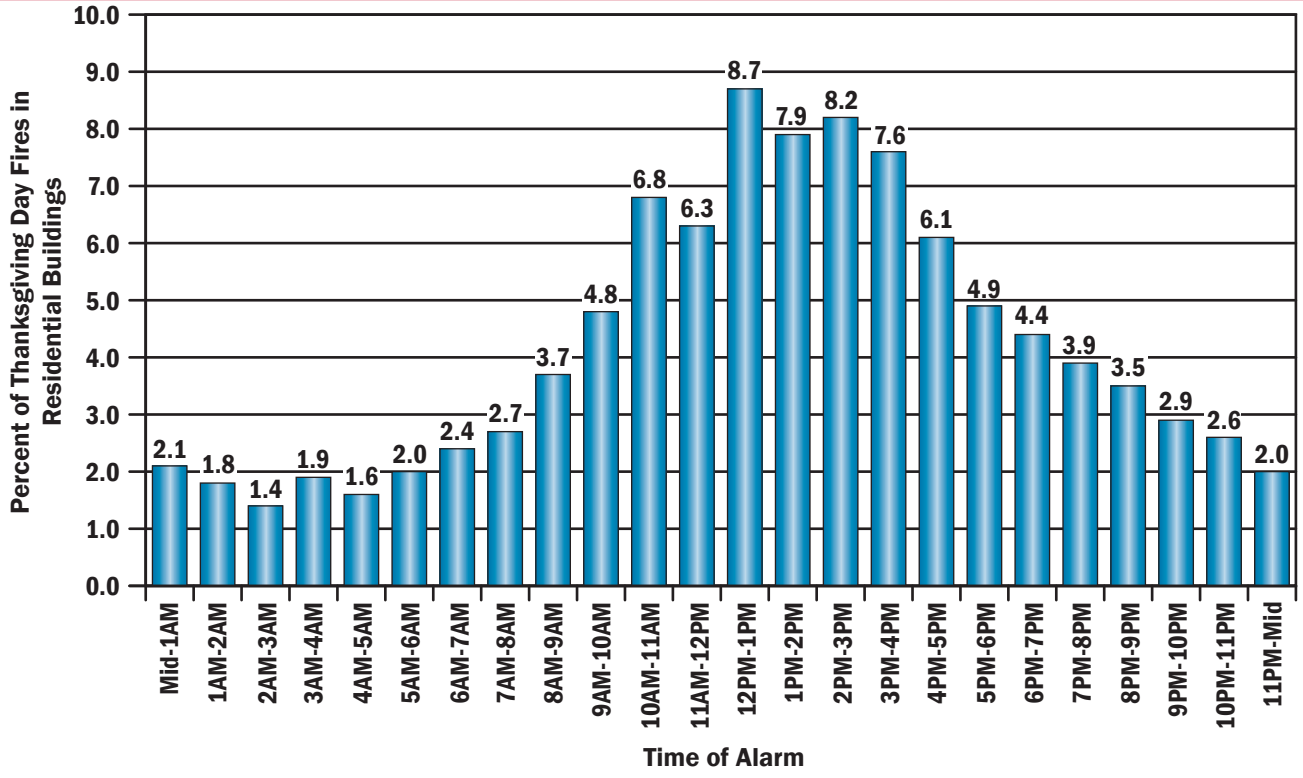
Source: NFIRS 5.0.

Notes: 1) Zero deaths in confined Thanksgiving Day fires in residential buildings were reported to NFIRS during 2006–2008; the resulting loss of 0.0 fatalities per 1,000 fires reflects only data reported to NFIRS.
2) Average loss for fatalities and injuries is computed per 1,000 fires; average dollar loss is computed ***per fire*** and is rounded to the nearest $10.

When Thanksgiving Day Fires in Residential Buildings Occur

As shown in Figure 1, Thanksgiving Day fires in residential buildings occur most frequently in the afternoon hours from 12 to 4 p.m., peaking from noon to 1 p.m., when many are expected to be preparing Thanksgiving dinner.[8] Cooking fires, discussed in the section "Causes of Thanksgiving Day Fires in Residential Buildings," account for 69 percent of Thanksgiving Day fires in residential buildings. Fires then decline throughout the evening, reaching the lowest point during the early morning hours (2 to 3 a.m.).

Figure 1. Thanksgiving Day Fires in Residential Buildings by Time of Alarm (2006–2008)



Source: NFIRS 5.0.

Causes of Thanksgiving Day Fires in Residential Buildings

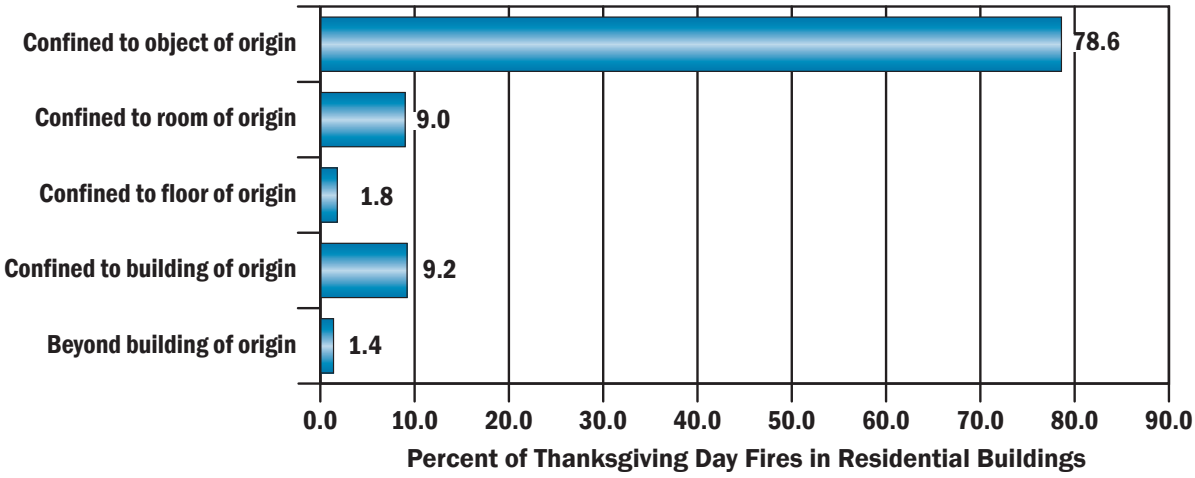
Cooking is, by far, the leading cause of all Thanksgiving Day fires in residential buildings at 69 percent. Nearly all of these cooking fires (97 percent) are small, confined fires with limited damage. By comparison, cooking is the cause of 42 percent of residential building fires that occur on all days of the year other than Thanksgiving Day.

Heating, at 10 percent, is the next leading cause of Thanksgiving Day fires in residential buildings. Eighty-five percent of heating fires are small, confined fires.[9]

Fire Spread in Thanksgiving Day Fires in Residential Buildings

Seventy-nine percent of Thanksgiving Day fires in residential buildings are confined to the object of origin (Figure 2). Included in these fires are those coded as "confined fires" in NFIRS. Nine percent of the Thanksgiving Day fires in residential buildings are confined to the room of origin, and the remaining 12 percent extend beyond the room of fire origin.

Figure 2. Extent of Fire Spread in Thanksgiving Day Fires in Residential Buildings (2006–2008)



Source: NFIRS 5.0.

Confined Fires

Confined fires are allowed abbreviated NFIRS reporting and many details of these fires that are not required are not reported. As previously discussed, however, it is known that confined fires account for 71 percent of all Thanksgiving Day fires in residential buildings. Cooking (87 percent) and heating (12 percent) are the top two causes of confined Thanksgiving Day fires in residential buildings accounting for a total of 99 percent of all these types of fires. In addition, the numbers of confined Thanksgiving Day fires in residential buildings are highest from 12 to 4 p.m, accounting for 37 percent of these types of fires.

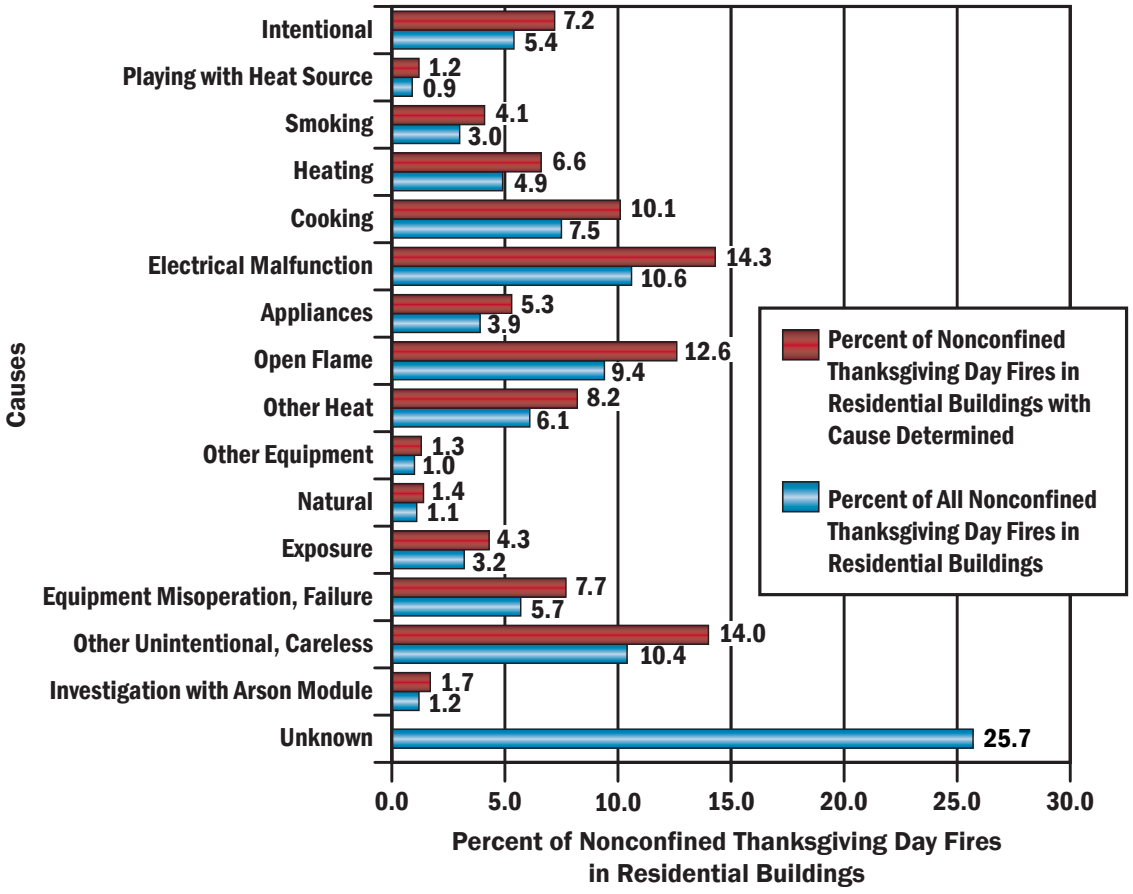
Nonconfined Fires

The next sections of this topical report address nonconfined Thanksgiving Day fires in residential buildings, the larger and more serious fires, where more detailed fire data are available.

Causes of Nonconfined Thanksgiving Day Fires in Residential Buildings

While cooking, by far, is the leading cause of all Thanksgiving Day fires in residential buildings as well as confined Thanksgiving Day fires in residential buildings, it only accounts for 10 percent of all nonconfined Thanksgiving Day fires in residential buildings. Rather, electrical malfunctions (14 percent), carelessness or other unintentional actions (14 percent), and open flames (13 percent) are the leading causes of all nonconfined Thanksgiving Day fires in residential buildings (Figure 3).

Figure 3. Causes of Nonconfined Thanksgiving Day Fires in Residential Buildings (2006–2008)



Source: NFIRS 5.0.

Where Nonconfined Thanksgiving Day Fires in Residential Buildings Start (Area of Fire Origin)

Nonconfined Thanksgiving Day fires in residential buildings most often start in cooking areas and kitchens (22 percent) as shown in Table 3. Bedrooms (12 percent) and common rooms, living rooms, or lounge areas (8 percent) are the next most common areas of fire origin in the home. Less common leading areas of fire origin are fires that start in wall assembly areas (6 percent), attics (5 percent), garages and carports (5 percent), and laundry areas (4 percent).

Note that these areas of fire origin do not include areas associated with confined fires. As confined cooking fires are a substantial percentage of all Thanksgiving Day fires in residential buildings, it is likely that the kitchen is, by far, the leading area of fire origin for all Thanksgiving Day fires in residential buildings.

Table 3. Leading Areas of Fire Origin in Nonconfined Thanksgiving Day Fires in Residential Buildings (2006–2008)

Areas of Fire Origin	Percent (Unknowns Apportioned)
Cooking area, kitchen	22.2
Bedrooms	12.3
Common room, den, family room, living room, lounge	7.9
Wall assembly, concealed wall space	5.5
Attic	4.9
Vehicle storage area (garage, carport)	4.5
Laundry area	4.4

Source: NFIRS 5.0.

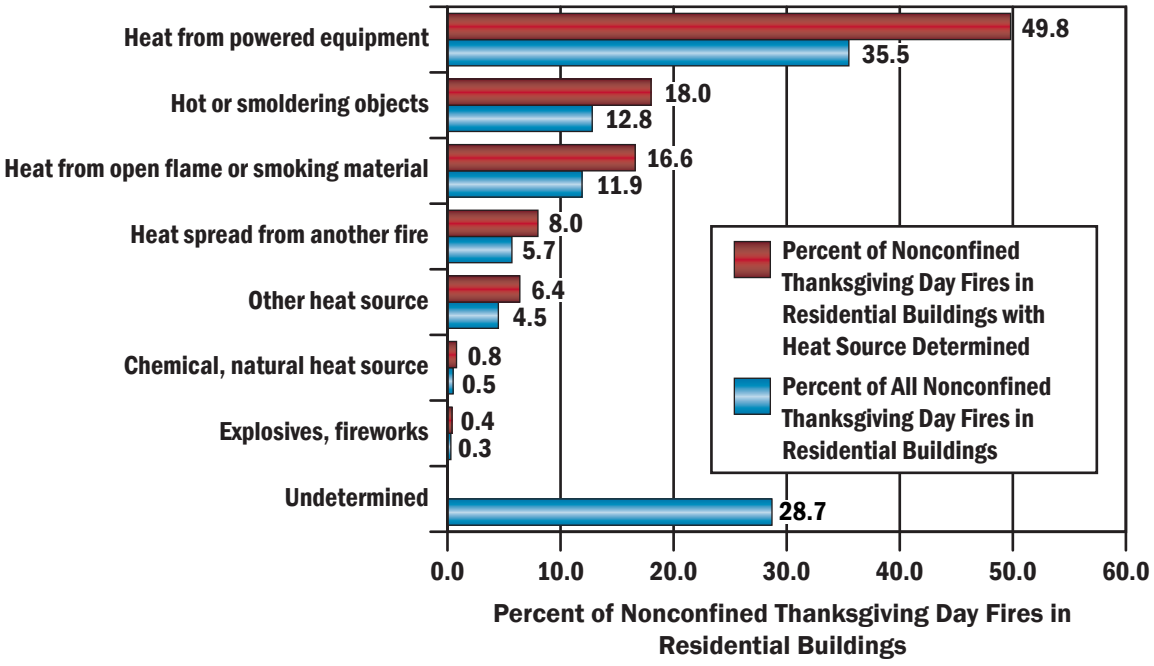
How Nonconfined Thanksgiving Day Fires in Residential Buildings Start (Heat Source)

Figure 4 shows sources of heat for nonconfined Thanksgiving Day fires in residential buildings. The "heat from powered equipment" category accounts for 50 percent of nonconfined Thanksgiving Day fires in residential buildings. Within this category, radiated or conducted heat from operating equipment accounts for 16 percent, electrical arcing accounts for 15 percent, heat from other powered equipment accounts for 12 percent, and spark, ember, or flame from operating equipment accounts for 6 percent of all nonconfined Thanksgiving Day fires in residential buildings.

The "hot or smoldering objects" category accounts for 18 percent of nonconfined Thanksgiving Day fires in residential buildings. This category includes items such as hot embers or ashes (8 percent) and miscellaneous hot or smoldering objects (8 percent).

"Heat from open flame or smoking material" is the third largest category at 17 percent. This category includes items such as candles (5 percent), heat from miscellaneous open flame or smoking materials (5 percent), and cigarettes (4 percent).

Figure 4. Sources of Heat in Nonconfined Thanksgiving Day Fires in Residential Buildings by Major Category (2006–2008)

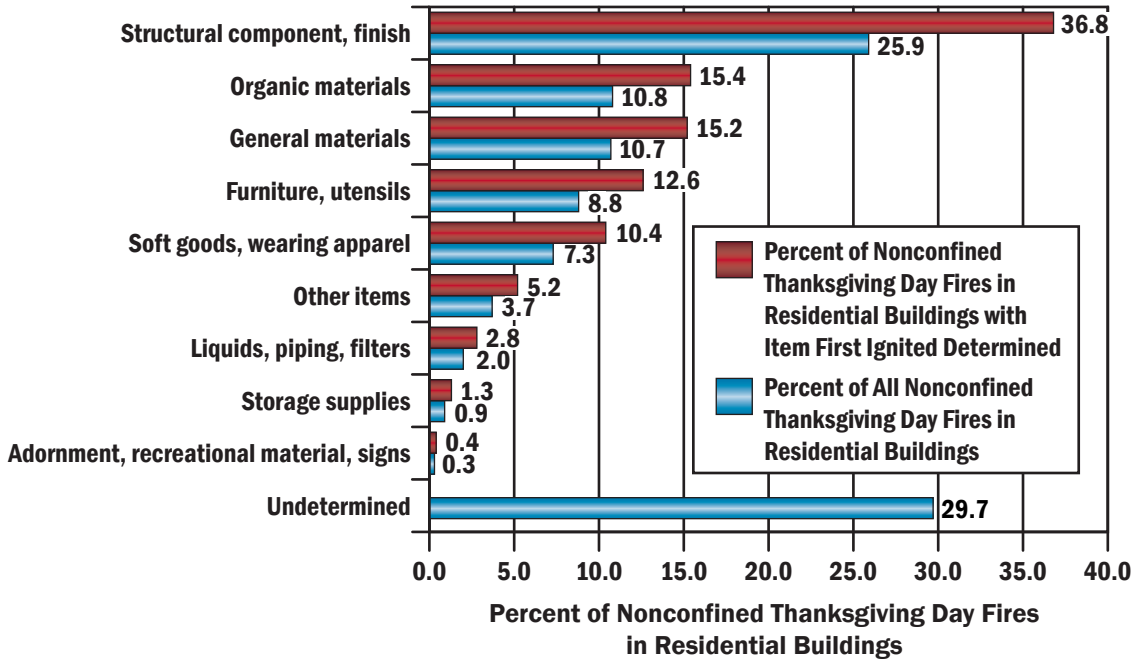


Source: NFIRS 5.0.

What Ignites First in Nonconfined Thanksgiving Day Fires in Residential Buildings

Thirty-seven percent of the items first ignited in nonconfined Thanksgiving Day fires in residential buildings with item first ignited determined fall under the "structural component, finish" category (Figure 5). This category includes exterior roof covering and trim, floor covering (rug, carpet, or mat), and interior wall and ceiling covering. The next leading categories, "organic materials" and "general materials," each account for 15 percent of nonconfined Thanksgiving Day fires in residential buildings. Structural member or framing (13 percent), cooking materials (12 percent), and electrical wire, cable insulation (8 percent) are the specific items most often first ignited in nonconfined Thanksgiving Day fires in residential buildings. Of interest, deep fryers were the equipment involved in the ignition in 6 percent of nonconfined residential building fires on Thanksgiving Day where the item first ignited was specified as cooking materials.[10]

Figure 5. Item First Ignited in Nonconfined Thanksgiving Day Fires in Residential Buildings (2006–2008)



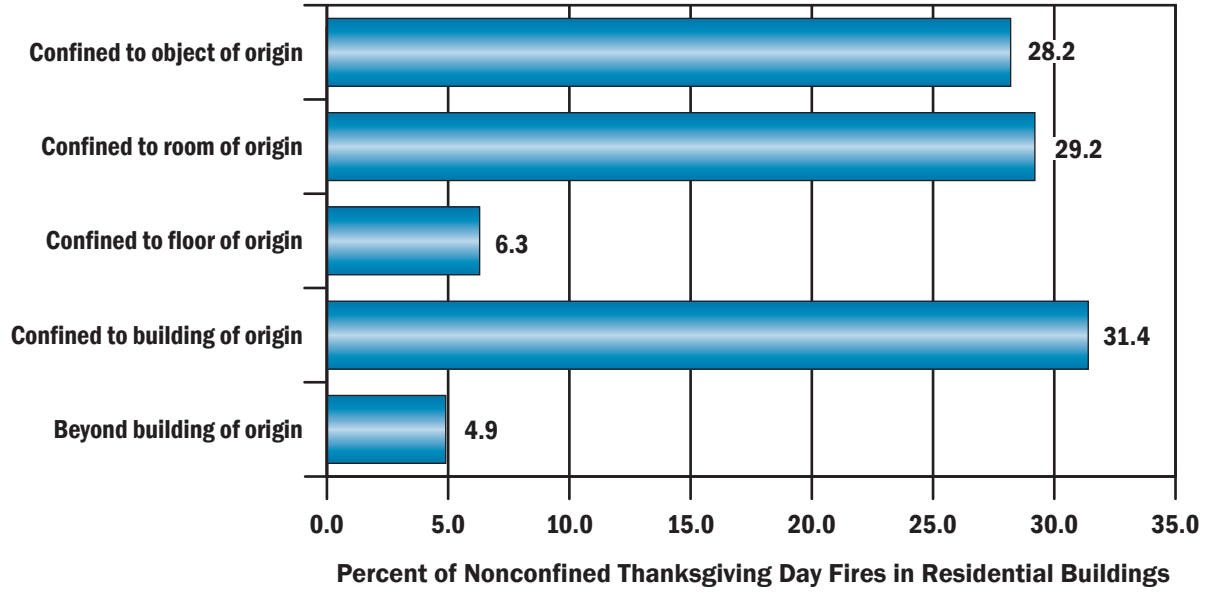
Source: NFIRS 5.0.

Fire Spread in Nonconfined Thanksgiving Day Fires in Residential Buildings

Figure 6 shows the fire spread in nonconfined Thanksgiving Day fires in residential buildings. The majority of these nonconfined fires, 57 percent, are limited to the object or room of fire origin with fire spread almost evenly split between the two areas of fire origin—in 29 percent of nonconfined fires, the fire is confined to the room of origin; in another 28 percent of fires, the fire is confined to the object of origin.

The remaining 43 percent of nonconfined Thanksgiving Day fires in residential buildings extend beyond the room of origin. The leading causes of these larger fires are other unintentional actions (carelessness), open flame, and electrical malfunctions.

Figure 6. Extent of Fire Spread in Nonconfined Thanksgiving Day Fires in Residential Buildings (2006–2008)



Source: NFIRS 5.0.

Factors Contributing to Ignition in Nonconfined Thanksgiving Day Fires in Residential Buildings

Table 4 shows the categories of factors contributing to ignition in nonconfined Thanksgiving Day fires in residential buildings. The leading category of factors contributing to ignition is the "misuse of material or product" (35 percent). Within this category, heat source too close to combustible materials and abandoned or discarded materials account for 14 percent and 9 percent of all nonconfined Thanksgiving Day fires in residential buildings, respectively.

The "electrical failure, malfunction" category is a contributing factor in 20 percent of nonconfined Thanksgiving Day fires in residential buildings. "Operational deficiency" and "mechanical failure, malfunction" are the next leading categories at 13 percent and 12 percent, respectively.

Table 4. Factors Contributing to Ignition for Nonconfined Thanksgiving Day Fires in Residential Buildings (Where Factors Contributing to Ignition are Specified, 2006–2008)

Factors Contributing to Ignition Category	Percent of Nonconfined Thanksgiving Day Fires in Residential Building (Unknowns Apportioned)
Misuse of material or product	35.2
Electrical failure, malfunction	20.4
Operational deficiency	12.7
Mechanical failure, malfunction	12.1
Fire spread or control	9.4
Design, manufacture, installation deficiency	7.2
Other factors contributing to ignition	6.4
Natural condition	1.1

Source: NFIRS 5.0.
Notes: 1) Includes only incidents where factors that contributed to the ignition of the fire were specified.
2) Multiple factors contributing to fire ignition may be noted for each incident; total will exceed 100 percent.

Alerting/Suppression Systems in Thanksgiving Day Fires in Residential Buildings

Technologies to detect and extinguish fires have been a major contributor to the drop in fire fatalities and injuries over the past 30 years. Smoke alarms are now present in the majority of residential buildings. In addition, the use of residential sprinklers is widely supported by the fire service and is gaining support within residential communities.[11]

Smoke alarm data are available for both confined and nonconfined fires, although for confined fires, the data are very limited in scope. As different levels of data are collected on smoke alarms in confined and nonconfined fires, the analyses are performed separately. Note that the data presented in Tables 5 to 7 are the raw counts from the NFIRS data set and are not scaled to national estimates of smoke alarms in Thanksgiving Day fires in residential buildings. In addition, NFIRS does not allow for the determination of the type of smoke alarm—that is, if the smoke alarm was photoelectric or ionization, or the location of the smoke alarm with respect to the area of fire origin.

Smoke Alarms in Nonconfined Fires

Overall, smoke alarms were reported as present in 46 percent of nonconfined Thanksgiving Day fires in residential buildings (Table 5). In 23 percent of nonconfined Thanksgiving Day fires in residential buildings, there were no smoke alarms present. In another 31 percent of these fires, firefighters were unable to determine if a smoke alarm was present. Thus, smoke alarms were potentially missing in between 23 and 54 percent of these fires with the ability to spread and possibly result in fatalities.

Table 5. Presence of Smoke Alarms in Nonconfined Thanksgiving Day Fires in Residential Buildings (2006-2008)

Presence of Smoke Alarms	Percent
Present	45.7
None present	22.9
Undetermined	31.4

Source: NFIRS 5.0.

While 14 percent of all nonconfined Thanksgiving Day fires occur in residential buildings that are *not* currently or routinely occupied, these occupancies—buildings under construction, undergoing major renovation, vacant, and the like—are unlikely to have alerting and suppression systems that are in place and, if in place, that operate. Only 10 percent of nonconfined Thanksgiving Day fires in unoccupied residential buildings were reported as having smoke alarms that operated. As a result, the detailed smoke alarm analyses in the next section focus on nonconfined fires in occupied residential buildings only.

Smoke Alarms in Nonconfined Fires in Occupied Residential Buildings

Smoke alarms were reported as present in 49 percent of nonconfined Thanksgiving Day fires in occupied residential buildings (Table 6). In 20 percent of nonconfined Thanksgiving Day fires in occupied residential buildings, there were no smoke alarms present. In another 32 percent of these fires, firefighters were unable to determine if a smoke alarm was present.

When smoke alarms were present (49 percent) and the alarm operational status is considered, the percentage of smoke alarms reported as present consists of:

- smoke alarms present and operated—25 percent;
- present but did not operate—15 percent (alarm did not operate, 8 percent; fire too small, 7 percent); and
- present, but operational status unknown—9 percent.

When the subset of incidents where smoke alarms were reported as present are analyzed separately, smoke alarms were reported to have operated in 51 percent of the incidents and failed to operate in 17 percent. In 14 percent of this subset, the fire was too small to activate the alarm. The operational status of the alarm was undetermined in 18 percent of these incidents.

Table 6. NFIRS Smoke Alarm Data for Nonconfined Thanksgiving Day Fires in Occupied Residential Buildings (NFIRS, 2006–2008)

Presence of Smoke Alarms	Smoke Alarm Operational Status	Smoke Alarm Effectiveness	Count	Percent
Present	Fire too small to activate smoke alarm		68	7.0
	Smoke alarm operated	Smoke alarm alerted occupants, occupants responded	175	18.1
		Smoke alarm alerted occupants, occupants failed to respond	9	0.9
		No occupants	27	2.8
		Smoke alarm failed to alert occupants	3	0.3
		Undetermined	26	2.7
	Smoke alarm failed to operate		80	8.3
	Undetermined		85	8.8
None present			190	19.6
Undetermined			306	31.6
Total Incidents			969	100.0

Source: NFIRS 5.0.

Notes: The data presented in this table are raw data counts from the NFIRS data set. They do not represent national estimates of smoke alarms in nonconfined Thanksgiving Day fires in occupied residential buildings. They are presented for informational purposes. Total may not add to 100 percent due to rounding.

Smoke Alarms in Confined Fires

Less information about smoke alarm status is collected for confined fires, but the data still give important insights about the effectiveness of alerting occupants in these types of fires. The analyses presented here do not differentiate between occupied and unoccupied residential buildings, as this data detail is not required when reporting confined fires in NFIRS. However, an assumption may be made that confined fires are fires in occupied housing as these types of fires are unlikely to be reported in residential buildings that are not occupied.

Smoke alarms operated and alerted occupants in 44 percent of the reported confined Thanksgiving Day fires in residential buildings (Table 7). The data suggest that smoke alarms may alert residents to confined fires as the early alerting allowed the occupants to extinguish the fires, or the fires self-extinguished. If this is the case, it is an example of the contribution to life safety and the ability to rapidly respond to fires in early stages that smoke alarms afford.[12]

Occupants were not alerted by smoke alarms in 15 percent of confined Thanksgiving Day fires in residential buildings.[13] In 42 percent of these confined fires, the smoke alarm effectiveness was unknown.

Table 7. NFIRS Smoke Alarm Data for Confined Thanksgiving Day Fires in Residential Buildings (NFIRS, 2006–2008)

Smoke Alarm Effectiveness	Count	Percent
Smoke alarm alerted occupants	1,189	43.5
Smoke alarm did not alert occupants	410	15.0
Unknown	1,132	41.5
Total Incidents	2,731	100.0

Source: NFIRS 5.0.

Notes: The data presented in this table are raw data counts from the NFIRS data set. They do not represent national estimates of smoke alarms in confined Thanksgiving Day fires in residential buildings. They are presented for informational purposes.

Automatic Extinguishment Systems in Nonconfined Fires in Residential Buildings

The analyses presented here do not differentiate between occupied and unoccupied housing, as very few reported fires (1 percent) in unoccupied housing have automatic extinguishment systems (AES) present. Note that the data presented in Table 8 are the raw counts from the NFIRS data set and are not scaled to national estimates of AESs in Thanksgiving Day fires in residential buildings.

Overall, full or partial AESs, mainly sprinklers, were present in only 2 percent of nonconfined Thanksgiving Day fires in residential buildings (Table 8). AESs were not present in 91 percent of nonconfined Thanksgiving Day fires in residential buildings. The lack of AESs is not unexpected as only 3 percent of all nonconfined residential building fires have an AES present.

Sprinklers are required by code in hotels and many multifamily residences. There are major movements in the U.S. fire service to require or facilitate use of sprinklers in all new homes, which could improve the usage of residential sprinklers in the future. At present, however, they are largely absent nationwide.[14]

Table 8. NFIRS Automatic Extinguishing System (AES) Data for Nonconfined Thanksgiving Day Fires in Residential Buildings (2006–2008)

AES Presence	Count	Percent
AES present	24	2.1
Partial system present	0	0.0
AES not present	1,016	90.6
Unknown	81	7.2
Total Incidents	1,121	100.0

Source: NFIRS 5.0.

Notes: The data presented in this table are raw data counts from the NFIRS data set. They do not represent national estimates of AESs in nonconfined Thanksgiving Day fires in residential buildings. They are presented for informational purposes. Total may not add to 100 percent due to rounding.

Examples

The following are some recent examples of Thanksgiving Day fires in residential buildings reported by the media:

- Thanksgiving Day 2009: An early morning chimney fire destroyed a home in Magnolia, TX, when a small fire was left burning in the fireplace after the occupants went to bed. Smoke alarms were present in the house and operated. The occupants in the house escaped the three alarm fire without injury.[15]
- Thanksgiving Day 2009: A fire completely destroyed a home in Sandwich, MA, following a reported explosion at the residence. The occupant of the house sustained serious injuries in the explosion and fire. The cause of the blaze was still under investigation, but fire officials have focused on a water heater hooked up the night before the blast.[16]
- Thanksgiving Day 2008: Fire destroyed a mobile home in Berkeley Springs, WV, on Thanksgiving morning. The blaze presented firefighters with more danger than usual as some 5,000 rounds of ammunition kept exploding inside of the home and a couple of propane tanks were located on the porch. The cause of the fire was unclear, but it was known to be an unintentional fire. The owner of the mobile home was not there when the fire began. The total loss from the fire was estimated at $50,000.[17]
- Thanksgiving Day 2008: A 2-year-old boy died from injuries he suffered when flames tore through his Port Carbon, PA, home. The fire was reported to be accidentally started by a wood burner inside the home. Attempts to rescue the boy who was sleeping upstairs were suspended due to heavy flames and intense heat. The boy's mother and four others escaped the fire which resulted in a total loss of the home.[18]
- Thanksgiving Day 2007: In Otsego, MI, a fire killed two people early Thanksgiving morning in an apartment that had no working smoke alarms. The fire, which remains under investigation, was reported to be a small, smoldering fire that started in and burned through the floor of the bedroom. There was no outside structural damage to the building in which the apartment was located.[19]

NFIRS Data Specifications for Thanksgiving Day Fires in Residential Buildings

Data for this report were extracted from the NFIRS annual Public Data Release (PDR) files for 2006, 2007, and 2008. Only version 5.0 data were extracted.

Thanksgiving Day fires in residential buildings are defined as:

- Incident Types 111 to 123:

Incident Type	Description
111	Building fire
112	Fires in structure other than in a building
113	Cooking fire, confined to container
114	Chimney or flue fire, confined to chimney or flue
115	Incinerator overload or malfunction, fire confined
116	Fuel burner/boiler malfunction, fire confined
117	Commercial compactor fire, confined to rubbish
118	Trash or rubbish fire, contained
120	Fire in mobile property used as a fixed structure, other
121	Fire in mobile home used as fixed residence
122	Fire in motor home, camper, recreational vehicle
123	Fire in portable building, fixed location

  Note that Incident Types 113 to 118 do not specify if the structure is a building.

  Incident Type 112 is included prior to 2008 as previous analyses have shown that Incident Types 111 and 112 were used interchangeably. As of 2008, Incident Type 112 is excluded.

- Aid Types 3 (mutual aid given) and 4 (automatic aid given) are excluded to avoid double counting of incidents.
- Property use 400 to 464:

Property Use	Description
400	Residential, other
419	One- or two-family dwelling
429	Multifamily dwelling
439	Boarding/Rooming house, residential hotels
449	Hotel/Motel, commercial
459	Residential board and care
460	Dormitory-type residence, other
462	Sorority house, fraternity house
464	Barracks, dormitory

- Structure Type:
  - For Incident Types 113–118:
    - 1—Enclosed building,
    - 2—Fixed portable or mobile structure, and
    - Structure Type not specified (null entry).
  - For Incident Types 111, 112, and 120–123:
    - 1—Enclosed building, and
    - 2—Fixed portable or mobile structure.
- Only fire incidents that occurred on the Thanksgiving Day dates of November 23, 2006, November 22, 2007, and November 27, 2008 are included.

The analyses contained in this report reflect the current methodologies used by the U.S. Fire Administration (USFA). The USFA is committed to providing the best information on the United States' fire problem and continually examines its data and methodology to fulfill this goal. Because of this commitment, data collection strategies and methodological changes are possible and do occur. As a result, analyses and estimates of the fire problem may change slightly over time. Previous analyses and estimates on specific issues (or similar issues) may have used different methodologies or data definitions and may not be directly comparable to the current ones.

To request additional information or to comment on this report, visit http://www.usfa.fema.gov/applications/feedback/index.jsp

Notes:

[1] National estimates are based on 2006-2008 native version 5.0 data from the National Fire Incident Reporting System (NFIRS) and residential structure fire loss estimates from the National Fire Protection Association's (NFPA's) annual surveys of fire loss. Fires are rounded to the nearest 100, deaths to the nearest 5, injuries to the nearest 25, and loss to the nearest $million.

[2] In NFIRS, version 5.0, a structure is a constructed item of which a building is one type. In previous versions of NFIRS, the term "residential structure" commonly referred to buildings where people live. To coincide with this concept, the definition of a residential structure fire for NFIRS 5.0 has, therefore, changed to include only those fires where the NFIRS 5.0 Structure Type is 1 or 2 (enclosed building and fixed portable or mobile structure) with a residential property use. Such fires are referred to as "residential buildings" to distinguish these buildings from other structures on residential properties that may include fences, sheds, and other uninhabitable structures. Confined fire incidents that have a residential property use, but do not have a structure type specified are presumed to be buildings. Nonconfined fire incidents without a structure type specified are considered to be invalid incidents (structure type is a required field) and are not included.

[3] Residential buildings include, but are not limited to, one- or two-family dwellings, multifamily dwellings, boarding houses or residential hotels, commercial hotels, college dormitories, and sorority/fraternity houses.

[4] U.S. Fire Administration (USFA), *The Seasonal Nature of Fires*, January 2005, pg. 15, http://www.usfa.dhs.gov/downloads/pdf/publications/fa-236.pdf.

[5] In NFIRS, confined fires are defined by Incident Type codes 113 to 118.

[6] NFIRS distinguishes between "content" and "property" loss. Content loss includes loss to the contents of a structure due to damage by fire, smoke, water, and overhaul. Property loss includes losses to the structure itself or to the property itself. Total loss is the sum of the content loss and the property loss. For confined fires, the expectation is that the fire did not spread beyond the container (or rubbish for Incident Type 118) and hence, there was no property damage (damage to the structure itself) from the flames. There could be, however, property damage as a result of smoke, water, and overhaul.

[7] The average fire death and fire injury loss rates computed from the national estimates will not agree with average fire death and fire injury loss rates computed from NFIRS data alone. The fire death rate computed from national estimates would be (1,000*(5/2,000)) = 2.5 deaths per 1,000 Thanksgiving Day fires in residential buildings and the fire injury rate would be (1,000*(25/2,000)) = 12.5 injuries per 1,000 Thanksgiving Day fires in residential buildings.

[8] For the purposes of this report, the time of the fire alarm is used as an approximation for the general time the fire started. However, in NFIRS, it is the time the fire was reported to the fire department.

[9] The USFA cause hierarchy is designed for structure fires. Buildings are a subset of structures. The cause hierarchy was used to determine the cause of Thanksgiving Day fires in residential building incidents. The cause definitions can be found at: http://www.usfa.fema.gov/fireservice/nfirs/tools/fire_cause_category_matrix.shtm.

[10] Deep fryers were the equipment involved in ignition in only 1 percent of nonconfined Thanksgiving Day fires in residential buildings. In all nonconfined Thanksgiving Day fires (inside and outside of residential buildings), deep fryers were noted as the equipment involved in 3 percent of fires.

[11] USFA, *One- and Two-Family Residential Building Fires*, June 2010, pg. 9, http://www.usfa.dhs.gov/downloads/pdf/tfrs/v10i7.pdf.

[12] USFA, *One- and Two-Family Residential Building Fires*, June 2010, pg. 10, http://www.usfa.dhs.gov/downloads/pdf/tfrs/v10i7.pdf.

[13] In confined fires, the entry "smoke alarm did not alert occupants" can mean: no smoke alarm was present, the smoke alarm was present but did not operate, or the smoke alarm was present and operated but the occupant was already aware of the fire.

[14] USFA, *One- and Two-Family Residential Building Fires*, June 2010, pg. 11, http://www.usfa.dhs.gov/downloads/pdf/tfrs/v10i7.pdf.

[15] Miya Shay, "Three alarm fire destroys family's Thanksgiving," abclocal.go.com, November 26, 2009, http://abclocal.go.com/ktrk/story?section=news/local&id=7140417 (accessed August 26, 2010).

[16] George Brennan, "Sandwich fire victim thanks rescuers," capecodonline.com, December 2, 2009, http://www.capecodonline.com/apps/pbcs.dll/article?AID=/20091202/NEWS/912020314 (accessed August 26, 2010).

[17] Kate Evans, "Fire destroys home on Thanksgiving morning," morganmessenger.com, December 2, 2008, http://www.morganmessenger.com/news/content/story-3000 (accessed August 26, 2010).

[18] Frank Andruscavage, "Officials say fatal fire was accidental," findarticles.com, November 29, 2008, http://findarticles.com/p/news-articles/republican-herald-pottsville-pa/mi_8171/is_20081129/officials-fatal-fire-accidental/ai_n53496820/ (accessed August 31, 2010).

[19] Jim Borden, "Two die in first of two Otsego Thanksgiving fires," blog.mlive.com, November 22, 2007, http://blog.mlive.com/kzgazette/2007/11/fire_kills_two_in_otsego.html (accessed August 26, 2010).