

# **U.S. Fire Administration TOPICAL FIRE RESEARCH SERIES**

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## **Church Fires**

### **FINDINGS**

- An average of 1,300 church fires are reported each year, causing \$38 million in property loss.
- The leading cause of church fires is arson (25%).
- 30% of church fires are the result of mechanical failures. Faulty wiring and improperly functioning heating systems are often at fault, perhaps because they are in older structures and have not been brought up to local fire codes.
- Of churches that reported fires, 65% had no smoke alarms and 96% had no sprinkler system.

Sources: NFPA and NFIRS

Each year from 1996 to 1998, an average of 1,300 churches reported a fire. These fires were responsible for an estimated \$38 million in property loss, less than 5 civilian deaths, and nearly 25 injuries annually.<sup>1</sup>

In 1996, a wave of church arsons received attention at the federal level, and the National Church Arson Task Force was formed by President Clinton. The Task Force made the investigation of these fires a top priority of federal law enforcement. This topical report examines some of the causes and characteristics of church fires.<sup>2</sup>

Church fires cause more property damage than other non-residential structure fires, as illustrated in Figure 1.

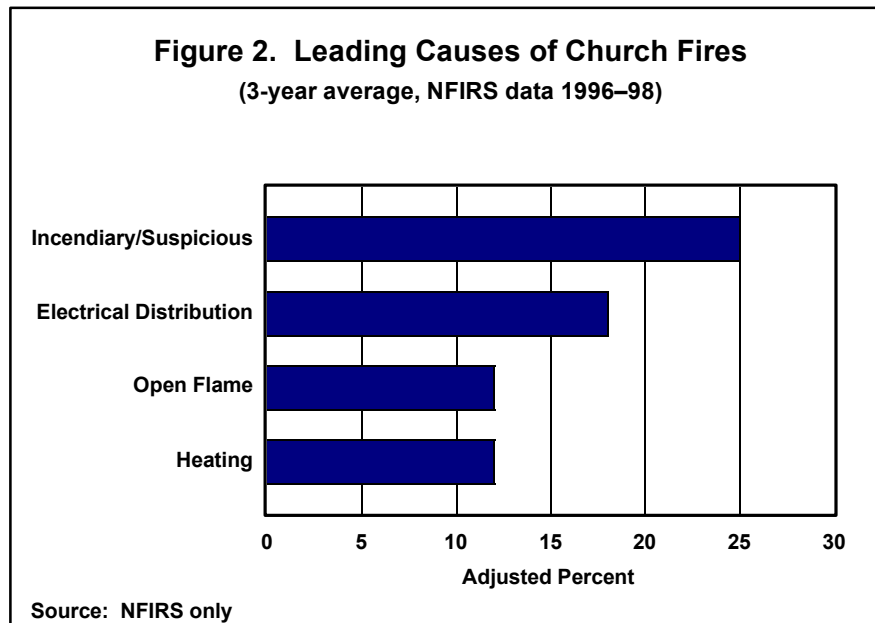
**Figure 1. Loss Measures for Church Fires**  
(3-year average, NFIRS data 1996–98)

MEASURE	NON-RESIDENTIAL STRUCTURE FIRES	CHURCH FIRES
Dollar Loss/Fire	\$21,878	\$36,564
Injuries/1,000 Fires	22.1	15.7
Fatalities/1,000 Fires	1.7	0.6

Source: NFIRS only

## CAUSE

One-quarter of all fires occurring in churches are reported as incendiary or suspicious fires (arson) (Figure 2). Often, the arsonist is never caught. Motives for arson vary. The National Church Arson Task Force reports that some arsons are hate crimes.<sup>3</sup> Other motives are not discovered until the prosecution of an arrested arsonist.



None of the reported church arson fires were set during a civil disturbance. In 55% of arson fires, a legal decision or physical evidence proved the fire was deliberately set. In the remaining 45% of church arson fires, the circumstances of the fire strongly indicated that it was deliberately set (i.e., other accidental factors were carefully ruled out), but no legal decision was reached.

Electrical distribution fires are the second leading cause of church fires at 18%. These occurrences are often in older church structures where electrical wiring may be fragile. Open flame and heating fires follow as other causes of church fires at 12% each.

### **DYNAMICS IN THE IGNITION OF CHURCH FIRES**

Of those non-arson-related church fires, nearly 40% involve a mechanical failure/malfunction. Sixty-five percent of mechanical failures are the result of electrical equipment short circuits or other electrical failures. Another 15% of mechanical failures result from some sort of part failure (a break, leak, or general failure). Mechanical failures and malfunctions are high in churches, perhaps due to older equipment and older, outdated electrical wiring that may not be up to current fire codes.

Where specific equipment was ignited in a church fire, fixed wiring, lighting fixtures, and central heating units were involved in equal proportions at 12% each. This explains the high incidence of faulty, possibly old, electrical wiring and improperly functioning heating equipment. This finding indicates the need for routine inspection and maintenance, especially in bringing these systems up to current fire codes. Stoves account for an additional 9% of equipment involved in church fires.

### **AREA OF FIRE ORIGIN**

The largest percentage of church fires (18%) originates in structural areas of the church (exterior walls and ceiling/roof assemblies) (Figure 3). One-quarter of these fires are the result of electrical distribution; another 17% are reported as arson.

**Figure 3. Leading Areas of Fire Origin in Church Fires**

AREA	PERCENT
Large Assembly Area	10
Kitchen	10
Exterior Wall	9
Ceiling/Roof	9
Heating Equipment Room	7
Small Assembly Area	7

Source: NFIRS only

Seventeen percent begin in worship, meeting, or classroom areas, one-third of which are arson related. Ten percent start in the kitchen (stoves were a leading equipment involved in church fires).

### **SMOKE ALARM/DETECTOR PERFORMANCE**

Smoke alarms were not present in 65% of church fires. These are vital in preventing significant property loss and casualties.

In 96% of church fires, no sprinkler system was installed. The high dollar loss resulting from these fires could probably be reduced substantially if sprinklers were installed in churches.

## **EXAMPLES**

- On June 18, 2001, a church fire gutted the century-old Cornerstone Christian Church in St. Francois County, Missouri. Authorities do not believe arson was suspected in this four-alarm fire, where two firefighters suffered minor injuries.<sup>4</sup>
- A church fire was officially ruled as arson, yet not specifically a hate crime. The fire broke out on Sunday, May 20, 2001, severely damaging Hellenic Orthodox Church of the Annunciation in Buffalo, New York, causing an estimated \$1.5 million damage. People were inside the church when the fire was discovered; no one was injured.<sup>5</sup>
- The former pastor of a church in Steelville, Missouri, has been accused of setting a fire that gutted the church in January 2001. His motive was to hide the theft of money from Sunday collections.<sup>6</sup>
- A self-described "missionary of Lucifer" is serving prison time for 26 church fires around the country. He pleaded guilty in five Georgia blazes set in 1998 and 1999, including one that killed a 27-year old firefighter. He is serving a 42-1/2-year sentence for a string of church fires in eight states and was ordered to pay \$3.6 million in restitution.<sup>7</sup>

\* \* \*

For additional information on church fires, contact your local fire department or the USFA.

## **NOTES:**

1. National estimates are based on National Fire Incident Reporting System (NFIRS) data (1996–1998) and the National Fire Protection Association's (NFPA) annual survey, *Fire Loss in the United States*.
2. *Fourth Year Report for the President*, National Church Arson Task Force, September 2000.
3. Ibid.
4. "Officials Dismiss Arson as Cause of Church Fire," *St. Louis Post Dispatch*, June 20, 2001.
5. "Church Fire Ruled Arson," *The Buffalo News*, May 23, 2001.
6. "Ex-Pastor Charged With Arson," *The Atlanta Constitution*, February 21, 2001.
7. "'Missionary of Lucifer' Sentenced in Arson," *Athens Newspaper*, November 14, 2000.

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