



1995 RESIDENTIAL FIRE LOSS ESTIMATES

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Executive Summary

The attached tables present estimated product-related fire losses that occurred in U.S. residential structure fires attended by the fire service during 1995, the most recent year for which these data are available. In addition, trend data for the latest five years and the benchmark year 1980 are presented. These estimates were derived from data provided by the U.S. Fire Administration (USFA) and the National Fire Protection Association (NFPA).

- ! An estimated 425,500 residential structure fires were attended by fire departments in 1995. These fires resulted in an estimated 3,695 civilian deaths, 19,125 civilian injuries, and \$4.4 billion in property loss.¹ (Table 1)
- ! Fires in residential properties accounted for about 74 percent of all structure fires in 1995 and resulted in 81 percent of all civilian deaths and 74 percent of all civilian injuries.
- ! Among products within CPSC jurisdiction (which excludes cigarettes), the products most frequently involved in fire deaths were upholstered furniture (18%), mattresses/bedding (15%), and heating equipment (12%). Electrical distribution systems, mainly home wiring and light fixtures, accounted for about 10 percent of all residential structure fire deaths. These four product groups accounted for a combined total of over 50 percent of fire deaths. (Tables 1 and 2)
- ! Cooking equipment, primarily ranges and ovens, was the most frequent product type involved in residential fires and injuries (about an estimated 25 percent for both). Most cooking equipment-related fires and injuries involved electrical products (14 percent and 16 percent, respectively, of all residential structure fires and injuries.) Heating equipment was the second leading product type involved in fires (16%). (Table 1)
- ! Between 1980 and 1995, estimated residential structure fires decreased about 44 percent. Estimated deaths associated with these fires decreased about 33 percent and estimated injuries decreased about 9 percent.
- ! Fire loss estimates presented in this report are fires, deaths, and injuries associated with consumer products. Only selected product categories are presented in the attached tables, therefore, the detail of the product categories may not add to the total number of residential structure fires, deaths, injuries, and property loss. The product categories selected represent most of the products within the jurisdiction of CPSC. The remaining product categories include medical and industrial equipment and other miscellaneous items.

¹ Michael J. Karter, Jr., "NFPA's Latest Fire Loss Figures", NFPA Journal, Sept./Oct.1996, pp. 52 - 59.

Table 1
Estimated Fire Losses in Residential Structures
by Selected Kind of Equipment Involved, 1995

Equipment	Fires	Civilian Deaths	Civilian Injuries	Property Loss (In Millions)
Total Residential	425,500	3,695	19,125	\$4,363.0
Total Heating Equipment	69,600	440	1,850	\$600.0
Fixed Heater	19,300	140	370	\$139.8
Portable Heater	5,400	150	490	\$87.6
Central Heating	10,100	80	260	\$78.3
Fireplace	9,000	10	130	\$82.7
Chimney or Connector	14,100	10	80	\$89.9
Water Heater	7,900	20	400	\$72.6
Other or Unknown	3,700	30	110	\$49.0
Total Cooking Equipment	99,400	280	4,790	\$366.3
Range/Oven	84,600	220	4,110	\$269.3
Gas	21,500	130	870	\$55.5
Electric	50,700	70	2,670	\$163.2
Other or Unknown	12,400	20	570	\$50.5
All Other Cooking	14,800	60	680	\$97.0
Gas	2,000	10	110	\$11.1
Electric	7,700	30	340	\$42.6
Other or Unknown	5,100	20	230	\$43.3
Total Electric Distribution	42,100	380	1,510	\$643.3
Installed Wiring	14,600	160	400	\$257.0
Cord, Plug	7,200	90	480	\$111.8
Switch, Outlet	4,900	40	160	\$65.0
Lamp, Light Fixture	8,800	50	300	\$119.0
Other or Unknown	6,600	40	170	\$90.4
Total Appliances (Except Above)	29,700	130	830	\$216.6
TV, Radio, Phono	1,900	40	90	\$24.9
Dryer	15,800	10	290	\$74.2
Washing Machine	1,900	10	20	\$5.7
Heat Producing Appliance	3,300	40	160	\$48.1
Non-Heat Producing Appliance	900	*	50	\$12.4
Other or Unknown	5,900	30	210	\$51.3
Total Cooling, Air Conditioning	4,600	20	140	\$39.5

Source: U.S. Consumer Product Safety Commission/EHHA, from data obtained from the U.S. Fire Administration and NFPA.

Note: Detail may not add to total due to rounding. Estimates less than 10 are denoted by an asterisk(*).

Table 2
Estimated Fire Losses in Residential Structures
by Selected Product Involved, 1995

Product	Fires	Civilian Deaths	Civilian Injuries	Property Loss (In Millions)
Total Residential	425,500	3,695	19,125	\$4,363.0
	By Form of Heat of Ignition			
Cigarette, Other Tobacco Prod.	27,000	1,070	2,370	\$315.0
Match	22,700	280	1,340	\$245.2
Child Play	7,700	100	690	\$102.2
Other	14,400	170	620	\$138.1
Unknown	600	10	20	\$4.9
Lighter	12,800	230	1,610	\$170.1
Child Play	8,200	180	1,220	\$115.7
Other	4,300	40	350	\$51.1
Unknown	300	10	30	\$3.3
Candle	8,700	80	990	\$123.4
	By Form of Material First Ignited			
Upholstered Furniture	13,600	670	1,710	\$244.1
Smoking Material Ignition	6,400	500	880	\$110.9
Open Flame Ignition	3,500	90	490	\$62.0
Other	3,700	80	340	\$71.2
Mattress, Bedding	26,400	540	2,780	\$339.6
Smoking Material Ignition	7,300	270	780	\$76.4
Open Flame Ignition	11,100	160	1,370	\$159.2
Other	8,000	110	630	\$104.0
Other Materials				
Electric Cable Insulation	33,800	160	860	\$271.9
Interior Wall Covering	16,300	220	590	\$275.6
Wearing Apparel-Worn	800	150	200	\$6.7
Wearing Apparel-Not Worn	15,400	120	720	\$137.1
Floor Covering	9,800	130	530	\$126.9
Curtains, Drapes	4,000	20	270	\$35.9
Magazine, Newspaper	6,000	40	310	\$63.0
Thermal Insulation	4,600	10	120	\$47.2
Cabinet, Desk	6,200	50	390	\$63.9
Trash, Rubbish	37,800	60	500	\$142.6
Toy, Game	800	--	80	\$3.9

Source: U.S. Consumer Product Safety Commission/EHHA, from data obtained from the USFA and NFPA.
Note: Detail may not add to total due to rounding. Estimates less than 10 are denoted by an asterisk(*).

Table 3
Estimated Heating Equipment Fire Losses
in Residential Structures, 1995

Heating Equipment	Fires	Civilian Deaths	Civilian Injuries	Property Loss (In Millions)
Total Residential	425,500	3,695	19,125	\$4,363.0
Total Heating Equipment	69,600	440	1,850	\$600.0
Solid Fuel	29,100	90	280	\$201.2
Fixed Heater	11,500	40	100	\$67.2
Portable Heater	200	*	10	\$1.0
Fireplace	6,400	10	70	\$64.2
Central Furnace	400	10	20	\$3.9
Chimney	8,200	10	60	\$44.2
Chimney Connector	1,900	--	10	\$13.5
Other or Unknown	500	10	10	\$7.2
Gas-Fired	11,900	80	660	\$121.8
Fixed Heater	2,500	30	120	\$23.9
Portable Heater	800	10	60	\$12.6
Water Heater	4,600	10	330	\$44.1
Central Furnace	2,700	40	110	\$29.9
Other or Unknown	1,200	--	30	\$11.3
Electric	10,700	100	370	\$96.7
Fixed Heater	2,600	30	70	\$23.2
Portable Heater	2,300	70	230	\$38.7
Water Heater	1,600	--	10	\$10.3
Central Furnace	3,000	--	40	\$11.7
Other or Unknown	1,200	--	20	\$12.7
Liquid Fuel	4,700	60	150	\$45.4
Fixed Heater	700	10	10	\$8.1
Portable Heater	1,100	30	90	\$19.7
Water Heater	400	*	10	\$4.0
Central Furnace	2,200	10	40	\$11.4
Chimney or Connector	200	--	--	\$1.3
Other or Unknown	200	--	*	\$0.9
All Other, Unknown Fuel	13,200	110	380	\$134.9
Fixed Heater	2,000	30	60	\$17.4
Portable Heater	1,000	40	100	\$15.6
Fireplace	2,200	--	60	\$15.0
Water Heater	1,300	10	50	\$13.7
Central Furnace	1,800	20	50	\$21.4
Chimney	2,500	--	10	\$14.2
Chimney Connector	900	--	10	\$12.5
Other or Unknown	1,600	10	40	\$25.0

Source: U.S. Consumer Product Safety Commission/EHHA, from data obtained from the USFA and NFPA.
 Note: Detail may not add to total due to rounding. Estimates less than 10 are denoted by an asterisk(*).

Table 4
Estimated Fire Losses in Residential Structures
by Selected Electrical Equipment, 1995

Electrical Equipment	Fires	Civilian Deaths	Civilian Injuries	Property Loss (In Millions)
Total Residential	425,500	3,695	19,125	\$4,363.0
Total Electrical	152,500	790	6,250	\$1,292.9
Electrical Heating Equipment	10,700	100	380	\$96.7
Central Heating	3,000	--	40	\$11.7
Fixed Heater	2,600	30	70	\$23.2
Portable Heater	2,300	70	230	\$38.7
Water Heater	1,600	--	10	\$10.3
Other or Unknown	1,200	--	20	\$12.7
Electrical Cooking Equipment	58,400	110	3,010	\$205.9
Range/Oven	50,700	70	2,670	\$163.2
Toaster/Toaster Oven	3,100	20	120	\$19.2
Microwave Oven	1,500	10	80	\$7.9
Range/Oven Hood	700	--	30	\$5.4
Coffee Maker, Teapot	600	*	30	\$3.9
Deep Fat Fryer	300	--	20	\$1.6
Hot Plate	300	*	20	\$2.0
Other or Unknown	1,200	10	40	\$2.7
Electrical Distribution	42,100	380	1,510	\$643.3
Installed Wiring	14,600	160	400	\$257.0
Light Fixture	5,200	30	150	\$72.6
Receptacle	3,800	30	130	\$50.7
Extension Cord	3,700	40	240	\$59.6
Other Electrical Cord	3,200	40	200	\$49.3
Lamp, Light Bulb	3,500	20	160	\$46.5
Circuit Breaker	2,200	10	60	\$26.8
Switch	1,300	10	50	\$17.0
Meter	800	--	*	\$7.8
Fuse	900	*	30	\$10.3
Transformer	500	--	10	\$4.3
Other or Unknown	2,400	40	80	\$41.4
Electrical Appliances	20,000	110	560	\$147.3
Clothes Dryer	9,000	*	160	\$39.2
Fan	2,600	10	110	\$29.3
Washing Machine	1,400	10	10	\$4.5
Heat Tape	1,100	10	60	\$14.0
Television	1,000	20	50	\$13.6
Iron	500	10	30	\$6.3
Dishwasher	1,000	10	40	\$8.7
Radio, Cassette Player	800	20	40	\$11.2
Hair Dryer, Curling Iron	600	10	30	\$7.3
Electric Blanket	300	*	20	\$4.8
Other or Unknown	1,700	20	10	\$8.4

Table 4 (Continued)
Estimated Fire Losses in Residential Structures
by Selected Electrical Equipment, 1995

Electrical Equipment	Fires	Civilian Deaths	Civilian Injuries	Property Loss (In Millions)
Cooling Equipment	4,000	20	140	\$35.2
Refrigerator, Freezer	1,100	20	50	\$10.8
Central Air Conditioning	900	--	20	\$5.1
Fixed Room Air Conditioning	700	--	20	\$5.8
Portable Air Conditioning	800	*	40	\$9.2
Other or Unknown	600	--	10	\$4.3

Source: U.S. Consumer Product Safety Commission/EHHA, from data obtained from the USFA and NFPA.

Note: Detail may not add to total due to rounding. Estimates less than 10 are denoted by an asterisk(*).

Table 5
Estimated Fire Losses Involving Selected
Gas-Fired Equipment in Residential Structures, 1995

Gas-Fired Equipment	Fires	Civilian Deaths	Civilian Injuries	Property Loss (In Millions)
Total Residential	425,500	3,695	19,125	\$4,363.0
Total Gas-Fired Equipment	45,800	230	2,040	\$259.0
Gas Heating Equipment	11,900	80	660	\$121.8
Fixed Heater	2,500	30	120	\$23.9
Portable Heater	800	10	60	\$12.6
Central Furnace	2,700	40	110	\$29.9
Fireplace	300	--	*	\$2.3
Water Heater	4,600	10	330	\$44.1
Other or Unknown	900	--	30	\$9.1
Gas Cooking Equipment	23,500	140	980	\$66.6
Range/Oven	21,500	130	870	\$55.5
Open Grill Gas	500	--	20	\$4.2
Portable Cooking	200	--	20	\$1.2
Other or Unknown	1,200	10	70	\$5.6
Gas Appliances (Except Above)	3,500	--	80	\$18.7
Dryer	3,200	--	60	\$13.1
Other or Unknown	300	--	20	\$5.6

Source: U.S. Consumer Product Safety Commission/EHHA, from data obtained from the U.S. Fire Administration and NFPA.
Note: Detail may not add to total due to rounding. Estimates less than 10 are denoted by an asterisk(*).

Table 6
Trends in Estimated Residential Structure
Fires by Selected Kind of Equipment Involved, 1991-1995

Equipment	1980	1991	1992	1993	1994	1995
Total Residential	757,500	478,000	472,000	470,000	451,000	425,500
Total Heating Equipment	210,400	86,400	84,500	85,500	75,100	69,600
Fixed Heater	42,100	27,000	26,800	26,200	22,100	19,300
Portable Heater	6,500	5,400	5,300	5,700	5,500	5,400
Central Furnace	22,800	11,300	11,400	11,800	10,700	10,100
Fireplace	39,800	11,600	11,000	10,400	9,100	9,000
Chimney or Connector	77,800	18,300	17,400	18,900	15,700	14,100
Water Heater	15,400	8,800	8,500	8,500	8,200	7,900
Other or Unknown	5,900	4,000	4,100	4,000	3,900	3,700
Total Cooking Equipment	141,700	107,900	114,600	113,300	104,800	99,400
Range/Oven	124,900	93,100	98,200	96,700	88,500	84,600
Gas	40,400	28,700	29,500	29,000	24,800	21,500
Electric	63,100	50,300	53,800	53,400	51,000	50,700
Other or Unknown	21,400	14,100	14,900	14,300	12,700	12,400
All Other Cooking	16,800	14,800	16,400	16,600	16,300	14,800
Gas	1,300	1,700	1,900	2,100	2,300	2,000
Electric	9,000	7,400	8,000	8,100	7,900	7,700
Other or Unknown	6,400	5,700	6,500	6,400	6,000	5,100
Total Electrical Distribution	64,700	43,500	41,000	43,400	42,900	42,100
Installed Wiring	22,300	16,200	14,600	15,200	15,200	14,600
Cord, Plug	12,200	8,000	7,500	7,800	7,400	7,200
Switch, Outlet	7,400	5,000	4,800	5,200	4,900	4,900
Lamp, Light Fixture	12,100	7,600	7,800	8,400	8,700	8,800
Other or Unknown	10,700	6,600	6,400	6,800	6,800	6,600
Total Appliances (Except Above)	49,900	30,200	29,700	30,300	30,700	29,700
TV, Radio, Phono	9,700	2,400	2,300	2,100	2,200	1,900
Dryer	19,200	13,700	14,300	14,800	15,300	15,800
Washing Machine	3,400	2,400	2,500	2,400	2,100	1,900
Heat Producing Appliance	7,900	4,300	3,900	3,800	3,800	3,300
Other or Unknown	9,700	7,500	6,000	6,300	6,400	6,800
Total Cooling, Air Conditioning	6,400	5,300	4,800	4,900	4,500	4,600

Source: U.S. Consumer Product Safety Commission/EHHA, from data obtained from the USFA and NFPA.
Note: Detail may not add to total due to rounding. Estimates less than 10 are denoted by an asterisk(*).

Table 7
Trends in Estimated Residential Structure Fires
by Selected Product Involved, 1991-1995

Product	1980	1991	1992	1993	1994	1995
Total Residential	757,500	478,000	472,000	470,000	451,000	425,500
By Form of Heat of Ignition						
Cigarette, Other Tobacco Prod.	79,400	31,900	30,200	29,300	28,000	27,000
Match	71,600	30,700	29,900	26,600	25,200	22,700
Child Play	25,600	9,900	10,200	9,200	9,100	7,700
Other, Unknown	46,000	20,800	19,700	17,400	16,100	15,000
Lighter	11,900	12,600	13,600	14,600	15,500	12,800
Child Play	8,500	8,500	9,300	9,900	10,600	8,200
Other, Unknown	3,400	4,100	4,200	4,700	4,900	4,600
Candle	8,800	6,200	6,300	6,600	7,400	8,700
By Form of Material First Ignited						
Upholstered Furniture	38,600	16,600	15,600	14,700	14,300	13,600
Smoking Material Ignition	24,600	8,500	7,300	7,100	6,500	6,400
Open Flame Ignition	7,400	3,700	4,000	3,600	3,800	3,500
Other	6,600	4,400	4,300	4,000	4,000	3,700
Mattress, Bedding	68,000	32,900	31,800	31,300	30,200	26,400
Smoking Material Ignition	29,800	10,500	9,900	9,300	8,400	7,300
Open Flame Ignition	21,700	12,900	13,100	13,100	13,400	11,100
Other	16,500	9,500	8,800	8,900	8,400	8,000
Other Materials						
Electric Cable Insulation	46,400	36,700	34,600	35,900	34,200	33,800
Interior Wall Covering	34,200	18,600	17,900	18,400	17,100	16,300
Wearing Apparel-Worn	1,300	800	900	900	900	800
Wearing Apparel-Not Worn	20,900	16,100	16,200	16,200	15,800	15,400
Floor Covering	18,300	11,700	11,000	10,400	10,100	9,800
Curtains, Drapes	10,000	5,100	4,600	4,600	4,200	4,000
Magazine, Newspaper	11,000	6,900	6,700	6,600	6,300	6,000
Thermal Insulation	9,200	5,100	4,800	5,000	5,200	4,600
Cabinet, Desk	8,900	7,100	6,600	6,800	6,600	6,200
Toy, Game	1,400	900	800	900	800	800

Source: U.S. Consumer Product Safety Commission/EHHA, from data obtained from the USFA and NFPA.

Note: Detail may not add to total due to rounding. Estimates less than 10 are denoted by an asterisk(*).

Table 8
Trends in Estimated Heating Equipment Fires
in Residential Structures, 1991 - 1995

Heating Equipment	1980	1991	1992	1993	1994	1995
Total Residential	757,500	478,000	472,000	470,000	451,000	425,500
Total Heating Equipment	210,400	86,400	84,500	85,500	75,100	69,600
Solid Fuel	112,000	40,800	39,200	39,500	32,500	29,100
Fixed Heater	22,200	17,900	17,700	17,400	13,800	11,500
Portable Heater	1,200	200	200	200	200	200
Fireplace	28,300	8,100	7,700	7,100	6,300	6,400
Central Furnace	2,000	600	600	600	500	400
Chimney	47,000	10,900	9,900	10,800	9,000	8,200
Chimney Connector	8,700	2,300	2,400	2,700	2,100	1,900
Other or Unknown	2,400	800	700	700	600	500
Gas-Fired	27,000	14,200	13,400	13,500	12,700	11,900
Fixed Heater	6,600	3,100	3,000	2,800	2,600	2,500
Portable Heater	600	700	700	900	800	800
Water Heater	11,200	5,700	5,400	5,100	4,900	4,600
Central Furnace	6,900	3,300	3,000	3,300	3,100	2,700
Other or Unknown	1,800	1,400	1,300	1,400	1,300	1,200
Electric	15,400	10,600	10,700	11,300	10,800	10,700
Fixed Heater	4,600	2,700	2,700	2,700	2,700	2,600
Portable Heater	3,000	2,400	2,400	2,400	2,400	2,300
Water Heater	1,100	1,400	1,400	1,600	1,600	1,600
Central Furnace	5,200	3,000	3,200	3,400	3,000	3,000
Other or Unknown	1,400	1,100	1,000	1,100	1,100	1,200
Liquid Fuel	9,400	5,400	5,600	5,500	5,100	4,700
Fixed Heater	1,700	800	800	800	700	700
Portable Heater	600	1,200	1,100	1,200	1,200	1,100
Water Heater	900	400	400	400	300	400
Central Furnace	4,800	2,600	2,800	2,600	2,500	2,200
Chimney or Connector	1,000	200	200	200	200	200
Other or Unknown	400	200	200	300	200	200
All Other, Unknown Fuel	46,600	15,300	15,600	15,700	13,900	13,200
Fixed Heater	7,000	2,400	2,700	2,400	2,300	2,000
Portable Heater	1,100	1,000	800	1,000	1,000	1,000
Fireplace	10,700	3,100	2,900	2,800	2,300	2,200
Water Heater	2,200	1,200	1,200	1,400	1,300	1,300
Central Furnace	3,900	1,800	1,900	1,800	1,600	1,800
Chimney	17,300	3,100	3,300	3,600	2,900	2,500
Chimney Connector	2,800	1,000	1,000	1,100	900	900
Other or Unknown	1,700	1,700	1,800	1,600	1,600	1,600

Source: U.S. Consumer Product Safety Commission/EHHA, from data obtained from the USFA and NFPA.

Note: Detail may not add to total due to rounding. Estimates less than 10 are denoted by an asterisk(*).

Table 9
Trends in Estimated Residential Structure
Fires by Selected Electrical Equipment Involved, 1991-1995

Electrical Equipment	1991	1992	1993	1994	1995
Total Residential	478,000	472,000	470,000	451,000	425,500
Total Electrical Equipment	154,700	156,300	160,900	155,100	152,500
Heating Equipment	10,600	10,700	11,300	10,800	10,700
Central Heating	3,000	3,200	3,400	3,000	3,000
Fixed Heater	2,700	2,700	2,700	2,700	2,600
Portable Heater	2,400	2,400	2,400	2,400	2,300
Water Heater	1,400	1,400	1,600	1,600	1,600
Other or Unknown	1,100	1,000	1,100	1,100	1,200
Cooking Equipment	57,700	61,800	61,500	58,900	58,400
Range/Oven	50,300	53,800	53,400	51,000	50,700
Toaster/Toaster Oven	2,700	3,000	3,200	3,200	3,100
Microwave Oven	1,200	1,200	1,200	1,600	1,500
Range/Oven Hood	900	1,000	1,000	800	700
Coffee Maker, Teapot	800	900	700	500	600
Deep Fat Fryer	300	300	300	300	300
Hot Plate	400	400	300	300	300
Other or Unknown	1,100	1,200	1,400	1,200	1,200
Electric Distribution	43,500	41,000	43,300	42,900	42,100
Installed Wiring	16,200	14,600	15,200	15,200	14,600
Light Fixture	4,800	4,800	5,200	5,300	5,200
Receptacle	3,500	3,700	4,000	4,100	3,800
Extension Cord	3,300	3,100	3,300	3,200	3,700
Other Electrical Cord	3,300	3,100	3,300	3,200	3,200
Lamp, Light Bulb	2,800	3,000	3,200	3,400	3,500
Circuit Breaker	1,300	1,800	2,000	2,400	2,200
Switch	1,000	1,100	1,200	1,200	1,300
Meter	800	800	800	900	800
Fuse	1,000	600	700	800	900
Transformer	500	400	400	500	500
Other or Unknown	5,000	4,000	4,000	2,700	2,400
Electrical Appliances	20,100	21,300	22,400	22,700	20,000
Clothes Dryer	7,600	8,000	8,400	8,800	9,000
Fan	2,600	3,500	3,300	3,100	2,600
Washing Machine	1,700	1,800	1,700	1,600	1,400
Heat Tape	1,800	1,200	1,400	1,300	1,100
Television	1,200	1,400	1,300	1,300	1,000
Iron	700	700	500	600	500
Dishwasher	600	900	1,000	1,300	1,000
Radio, Cassette Player	700	600	700	1,100	800
Hair Dryer, Curling Iron	600	700	700	500	600
Electric Blanket	900	500	600	500	300
Other or Unknown	1,700	2,000	2,800	2,600	1,700

Table 9 (Continued)
Trends in Estimated Residential Structure
Fires by Selected Electrical Equipment Involved, 1991-1995

Electrical Equipment	1991	1992	1993	1994	1995
Cooling Equipment	4,100	4,100	4,300	3,800	4,000
Refrigerator, Freezer	1,400	1,300	1,300	1,200	1,100
Central Air Conditioning	1,000	1,000	1,000	900	900
Fixed Room Air Conditioning	800	600	700	600	700
Portable Air Conditioning	600	500	600	600	800
Other or Unknown	300	700	700	500	600

Source: U.S. Consumer Product Safety Commission/EHHA, from data obtained from the USFA and NFPA.

Note: Detail may not add to total due to rounding. Estimates less than 10 are denoted by an asterisk(*).

Table 10
Trends in Estimated Fire Deaths in Residential Structures
by Selected Kind of Equipment Involved, 1991-1995

Equipment	1980	1991	1992	1993	1994	1995
Total Residential	5,500	3,575	3,765	3,825	3,465	3,695
Total Heating Equipment	850	510	500	560	490	440
Fixed Heater	300	140	130	220	150	140
Portable Heater	90	200	160	170	170	150
Central Furnace	90	30	50	50	70	80
Fireplace	100	40	30	10	10	10
Chimney or Connector	100	20	30	10	10	10
Water Heater	90	50	60	50	30	20
Other or Unknown	50	30	30	40	40	30
Total Cooking Equipment	420	280	270	340	300	280
Range/Oven	320	240	220	260	210	220
Gas	200	100	90	90	90	130
Electric	70	90	90	120	70	70
Other or Unknown	50	50	40	40	50	20
All Other Cooking	100	30	40	90	90	60
Gas	10	--	*	40	30	10
Electric	30	20	10	30	30	30
Other or Unknown	60	10	30	20	20	20
Total Electric Distribution	470	280	320	330	370	380
Installed Wiring	180	70	130	70	140	160
Cord, Plug	150	120	110	130	100	90
Switch, Outlet	20	30	10	20	40	40
Lamp, Light Fixture	30	50	30	70	50	50
Other or Unknown	90	20	40	40	30	40
Total Appliances (Except Above)	260	90	80	90	80	130
TV, Radio, Phono	150	40	30	30	10	40
Dryer	--	10	10	10	10	10
Washing Machine	--	--	--	--	--	10
Heat-Producing Appliance	40	20	10	30	40	40
Other or Unknown	70	30	30	10	20	30
Total Cooling, Air Conditioning	30	20	10	10	60	20

Source: U.S. Consumer Product Safety Commission/EHHA, from data obtained from the USFA and NFPA.

Note: Detail may not add to total due to rounding. Estimates less than 10 are denoted by an asterisk(*).

Table 11
Trends in Estimated Fire Deaths in Residential
Structures by Selected Product Involved, 1991-1995

Product	1980	1991	1992	1993	1994	1995
Total Residential	5,500	3,575	3,765	3,825	3,465	3,695
By Form of Heat of Ignition						
Cigarette, Other Tobacco Prod.	1,980	890	1,040	1,010	880	1,070
Match	510	320	320	340	260	280
Child Play	190	160	120	160	140	100
Other, Unknown	320	170	200	180	220	180
Lighter	340	280	240	250	300	230
Child Play	240	240	200	170	230	180
Other, Unknown	100	40	40	80	70	50
Candle	20	60	100	80	80	80
By Form of Material First Ignited						
Upholstered Furniture	1,400	700	640	670	680	670
Smoking Material Ignition	1,150	470	490	450	410	500
Open Flame Ignition	200	150	80	110	160	90
Other	50	80	70	110	110	80
Mattress, Bedding	980	640	650	610	490	540
Smoking Material Ignition	570	280	320	340	220	270
Open Flame Ignition	260	200	190	190	200	160
Other	160	160	140	80	70	110
Other Materials						
Electric Cable Insulation	170	120	110	180	170	160
Interior Wall Covering	520	220	240	260	160	220
Wearing Apparel-Worn	150	120	130	110	130	150
Wearing Apparel-Not Worn	120	120	80	100	110	120
Floor Covering	230	140	150	140	90	130
Curtains, Drapes	20	10	20	40	60	20
Magazine, Newspaper	70	70	60	60	70	40
Thermal Insulation	10	--	30	*	10	10
Cabinet, Desk	70	60	30	60	50	50
Toy, Game	--	*	*	*	*	--

Source: U.S. Consumer Product Safety Commission/EHHA, from data obtained from the USFA and NFPA.

Note: Detail may not add to total due to rounding. Estimates less than 10 are denoted by an asterisk(*).

Table 12
Trends in Estimated Heating Equipment Fire Deaths
In Residential Structures, 1991 - 1995

Heating Equipment	1980	1991	1992	1993	1994	1995
Total Residential	5,500	3,575	3,765	3,825	3,465	3,695
Total Heating Equipment	850	510	500	560	490	440
Solid Fuel	350	80	90	150	70	90
Fixed Heater	120	30	60	120	40	40
Portable Heater	10	--	10	*	10	*
Fireplace	90	30	10	10	10	10
Central Furnace	30	--	*	--	10	10
Chimney	60	10	10	10	10	10
Chimney Connector	30	10	*	*	--	--
Other or Unknown	10	--	*	10	--	10
Gas-Fired	150	160	130	110	160	80
Fixed Heater	30	50	20	40	50	30
Portable Heater	10	40	30	10	30	10
Water Heater	70	50	50	30	20	10
Central Furnace	40	20	30	30	50	40
Other or Unknown	--	10	*	10	--	--
Electric	70	90	110	110	110	100
Fixed Heater	20	10	20	30	30	30
Portable Heater	50	80	70	70	60	70
Water Heater	--	--	*	*	10	--
Central Heating	--	--	10	10	--	--
Other or Unknown	--	--	10	10	10	--
Liquid Fuel	120	30	50	40	50	60
Fixed Heater	70	10	10	10	*	10
Portable Heater	20	20	30	30	30	30
Water Heater	--	*	*	*	--	*
Central Furnace	30	--	10	--	10	10
Chimney or Connector	--	--	10	--	--	--
Other or Unknown	--	--	--	--	10	--
All Other, Unknown Fuel	160	140	120	140	100	110
Fixed Heater	60	40	30	30	20	30
Portable Heater	10	50	30	50	40	40
Fireplace	30	10	20	--	10	--
Water Heater	10	*	10	20	*	10
Central Furnace	--	10	10	20	10	20
Chimney	10	10	10	--	10	--
Chimney Connector	--	--	--	--	*	--
Other or Unknown	40	20	20	20	20	10

Source: U.S. Consumer Product Safety Commission/EHHA, from data obtained from the USFA and NFPA.
Note: Detail may not add to total due to rounding. Estimates less than 10 are denoted by an asterisk(*).

Table 13
Trends in Estimated Fire Deaths in Residential Structures
by Selected Electrical Equipment Involved, 1991-1995

Electrical Equipment	1991	1992	1993	1994	1995
Total Residential	3,575	3,765	3,825	3465	3,695
Total Electrical	660	700	800	750	790
Heating Equipment	90	110	110	110	100
Central Heating	*	10	10	--	--
Fixed Heater	10	20	30	30	30
Portable Heater	80	70	70	60	70
Water Heater	*	*	*	10	--
Other or Unknown	*	10	10	10	--
Cooking Equipment	110	100	150	100	110
Range/Oven	90	90	120	70	70
Toaster/Toaster Oven	*	*	20	20	20
Microwave Oven	*	*	10	10	10
Range/Oven Hood	*	*	*	--	--
Coffee Maker, Teapot	*	*	*	*	*
Deep Fat Fryer	10	*	*	--	--
Hot Plate	*	*	*	*	*
Other or Unknown	--	10	*	--	10
Electric Distribution	280	320	330	370	380
Installed Wiring	70	130	70	140	160
Light Fixture	30	10	50	40	30
Receptacle	20	10	20	30	30
Extension Cord	50	50	60	40	40
Other Electrical Cord	50	40	50	50	40
Lamp, Light Bulb	20	10	20	20	20
Circuit Breaker	10	10	10	10	10
Switch	10	*	10	10	10
Meter	*	*	*	*	--
Fuse	*	*	*	*	*
Transformer	*	*	*	--	--
Other or Unknown	20	60	40	30	40
Electrical Appliances	90	80	90	60	110
Clothes Dryer	10	10	*	*	*
Fan	20	10	20	10	10
Washing Machine	*	*	*	--	10
Heat Tape	10	10	10	10	10
Television	20	20	20	10	20
Iron	*	*	*	*	10
Dishwasher	*	10	10	*	10
Radio, Cassette Player	10	10	10	10	20
Hair Dryer, Curling Iron	*	*	*	*	10
Electric Blanket	*	*	*	*	*
Other or Unknown	10	10	20	20	20

Table 13 (Continued)
Trends in Estimated Fire Deaths in Residential Structures
by Selected Electrical Equipment Involved, 1991-1995

Electrical Equipment	1991	1992	1993	1994	1995
Cooling Equipment	20	10	10	40	20
Refrigerator, Freezer	20	*	10	10	20
Central Air Conditioning	--	*	*	--	--
Fixed Room Air Conditioning	10	*	*	20	--
Portable Air Conditioning	--	*	*	*	*
Other or Unknown	--	*	*	10	--

Source: U.S. Consumer Product Safety Commission/EHHA, from data obtained from the USFA and NFPA.

Note: Detail may not add to total due to rounding. Estimates less than 10 are denoted by an asterisk(*).

Table 14
Trends in Estimated Fire Injuries in Residential Structures
by Selected Kind of Equipment Involved, 1991-1995

Equipment	1980	1991	1992	1993	1994	1995
Total Residential	21,100	21,850	21,600	22,600	20,025	19,125
Total Heating Equipment	3,180	2,210	2,200	2,530	1,970	1,850
Fixed Heater	760	450	550	570	380	370
Portable Heater	320	530	530	760	550	490
Central Furnace	450	290	300	270	260	260
Fireplace	450	150	150	150	140	130
Chimney or Connector	170	140	100	100	50	80
Water Heater	950	560	480	510	430	400
Other or Unknown	90	90	100	170	150	110
Total Cooking Equipment	4,680	5,360	5,310	5,840	4,860	4,790
Range/Oven	4,100	4,780	4,670	5,190	4,200	4,110
Gas	1,210	1,280	1,190	1,200	1,020	870
Electric	2,160	2,840	2,780	3,240	2,660	2,670
Other or Unknown	730	660	700	760	530	570
All Other Cooking	580	580	630	650	650	680
Gas	50	80	110	100	100	110
Electric	230	280	330	340	310	340
Other or Unknown	290	220	190	210	240	230
Total Electrical Distribution	1,600	1,700	1,630	1,720	1,440	1,510
Installed Wiring	390	360	410	430	380	400
Cord, Plug	450	680	530	610	470	480
Switch, Outlet	110	210	190	150	130	160
Lamp, Light Fixture	390	270	320	330	300	300
Other or Unknown	260	180	180	190	160	170
Total Appliances (Except Above)	1,090	1,080	1,060	1,110	1,030	830
TV, Radio, Phono	310	160	180	170	150	90
Dryer	240	290	330	360	330	290
Washing Machine	40	20	20	20	20	20
Heat-Producing Appliance	210	280	240	240	250	160
Other or Unknown	300	330	220	210	280	260
Total Cooling, Air Conditioning	160	190	140	150	150	140

Source: U.S. Consumer Product Safety Commission/EHHA, from data obtained from the USFA and NFPA.
Note: Detail may not add to total due to rounding. Estimates less than 10 are denoted by an asterisk(*).

Table 15
Trends in Estimated Fire Injuries in Residential
Structures by Selected Product Involved, 1991-1995

Product	1991	1992	1993	1994	1995
Total Residential	21,850	21,600	22,600	20,025	19,125
	By Form of Heat of Ignition				
Cigarette, Other Tobacco Prod.	2,880	2,870	3,010	2,540	2,370
Match	1,730	1,690	1,640	1,470	1,340
Child Play	810	870	780	750	690
Other, Unknown	920	820	860	720	640
Lighter	1,840	1,900	2,030	2,070	1,610
Child Play	1,430	1,530	1,600	1,560	1,220
Other, Unknown	410	370	430	510	380
Candle	670	610	670	870	990
	By Form of Material Ignited				
Upholstered Furniture	2,080	1,740	1,970	1,780	1,710
Smoking Material Ignition	1,160	880	1,060	960	880
Open Flame Ignition	580	490	490	540	490
Other	340	370	420	280	340
Mattress, Bedding	3,390	3,580	3,540	3,160	2,780
Smoking Material Ignition	1,110	1,250	1,120	850	780
Open Flame Ignition	1,450	1,550	1,580	1,630	1,370
Other	830	780	840	670	630
Other Materials					
Electric Cable Insulation	840	760	940	770	860
Interior Wall Covering	810	760	760	540	590
Wearing Apparel-Worn	200	240	230	200	200
Wearing Apparel-Not Worn	940	880	900	970	720
Floor Covering	600	520	560	460	530
Curtains, Drapes	390	310	370	310	270
Magazine, Newspaper	300	330	320	260	310
Thermal Insulation	60	80	70	110	120
Cabinet, Desk	570	380	480	330	390
Toy, Game	110	60	60	70	80

Source: U.S. Consumer Product Safety Commission/EHHA, from data obtained from the USFA and NFPA.
Note: Detail may not add to total due to rounding. Estimates less than 10 are denoted by an asterisk(*).

Table 16
Trends in Estimated Heating Equipment Fire Injuries
In Residential Structures, 1991 - 1995

Heating Equipment	1980	1991	1992	1993	1994	1995
Total Residential	21,100	21,850	21,600	22,600	20,025	19,125
Total Heating Equipment	3,180	2,210	2,210	2,530	1,970	1,850
Solid Fuel	630	300	290	310	220	280
Fixed Heater	180	110	120	140	80	100
Portable Heater	*	*	10	--	10	10
Fireplace	280	70	70	100	70	70
Central Furnace	40	*	20	*	10	20
Chimney	60	80	40	50	20	60
Chimney Connector	60	20	10	20	10	10
Other or Unknown	*	10	20	*	10	10
Gas-Fired	1,360	860	830	800	680	660
Fixed Heater	270	140	180	180	100	120
Portable Heater	10	80	80	60	60	60
Water Heater	790	460	410	360	310	330
Central Furnace	230	140	130	150	140	110
Other or Unknown	50	40	30	40	80	30
Electric	440	390	380	610	390	370
Fixed Heater	160	80	100	120	110	70
Portable Heater	200	240	200	420	210	230
Water Heater	20	10	20	30	20	10
Central Furnace	40	30	40	30	20	40
Other or Unknown	10	30	20	20	30	20
Liquid Fuel	170	220	280	270	240	150
Fixed Heater	20	40	30	30	20	10
Portable Heater	30	100	160	150	140	90
Water Heater	40	20	10	40	10	10
Central Furnace	40	50	60	40	40	40
Chimney or Connector	10	*	*	*	10	--
Other or Unknown	20	10	10	10	20	*
All Other, Unknown Fuel	590	430	440	540	440	380
Fixed Heater	120	80	110	110	60	60
Portable Heater	60	110	80	140	130	100
Fireplace	120	60	70	50	60	60
Water Heater	90	60	50	90	80	50
Central Furnace	100	60	50	50	50	50
Chimney	10	20	30	20	20	10
Chimney Connector	10	10	10	10	--	10
Other or Unknown	70	30	40	80	30	40

Source: U.S. Consumer Product Safety Commission/EHHA, from data obtained from the USFA and NFPA.

Note: Detail may not add to total due to rounding. Estimates less than 10 are denoted by an asterisk(*).

Table 17
Trends in Estimated Fire Injuries in Residential Structures
by Selected Electrical Equipment Involved, 1991-1995

Electrical Equipment	1991	1992	1993	1994	1995
Total Residential	21,850	21,600	22,600	20,025	19,125
Total Electrical Equipment	6,920	6,790	7,660	6,320	6,250
Heating Equipment	390	380	610	390	380
Central Furnace	30	40	30	20	40
Fixed Heater	80	100	120	110	70
Portable Heater	240	200	420	210	230
Water Heater	10	20	30	20	10
Other or Unknown	30	20	20	30	20
Cooking Equipment	3,120	3,110	3,580	2,970	3,010
Range/Oven	2,840	2,780	3,240	2,660	2,670
Toasters/Toaster Oven	100	120	100	130	120
Microwave Oven	50	50	60	60	80
Range/Oven Hood	30	30	40	20	30
Coffee Maker, Teapot	30	40	30	20	30
Deep Fat Fryer	10	30	40	10	20
Hot Plate	10	10	10	10	20
Other or Unknown	50	50	60	60	40
Electric Distribution	1,700	1,630	1,720	1,440	1,510
Installed Wiring	360	410	430	380	400
Light Fixture	140	140	120	140	150
Receptacle	140	150	120	110	130
Extension Cord	270	220	250	200	240
Other Electrical Cord	280	210	260	200	200
Lamp, Light Bulb	120	180	210	160	160
Circuit Breaker	20	60	40	60	60
Switch	40	40	40	30	50
Meter	10	*	10	10	*
Fuse	20	20	20	20	30
Transformer	10	10	20	20	10
Other or Unknown	290	190	200	110	80
Electrical Appliances	760	760	870	780	560
Clothes Dryer	130	170	150	130	160
Fan	120	130	170	130	110
Washing Machine	20	20	20	20	10
Heat Tape	100	70	90	80	60
Television	70	120	100	80	50
Iron	40	40	30	40	30
Dishwasher	20	30	30	50	40
Radio, Cassette Player	40	50	60	70	40
Hair Dryer, Curling Iron	40	40	40	30	30
Electric Blanket	60	20	40	30	20
Other or Unknown	120	70	140	120	10

Table 17 (Continued)

**Trends in Estimated Fire Injuries in Residential Structures
by Selected Electrical Equipment Involved, 1991-1995**

Electrical Equipment	1991	1992	1993	1994	1995
Cooling Equipment	155	110	130	120	140
Refrigerator, Freezer	60	30	60	50	50
Central Air Conditioning	5	20	20	10	20
Fixed Room Air Conditioning	60	30	20	30	20
Portable Air Conditioning	30	20	30	20	40
Other or Unknown	*	10	*	10	10

Source: U.S. Consumer Product Safety Commission/EHHA, from data obtained from the USFA and NFPA.

Note: Detail may not add to total due to rounding. Estimates less than 10 are denoted by an asterisk(*).

Methodology

This report is based on the U.S. Fire Administration's National Fire Incident Reporting System (NFIRS) data and the National Fire Protection Association's (NFPA) annual survey of fire departments. The NFIRS system is a compilation of fire reports completed by U.S. fire departments. In 1995, the NFIRS contained reports of 185,802 residential structure fires that resulted in 1,453 civilian deaths, 9,638 civilian injuries, and over \$1.915 billion in property loss from 40 states. Even though the system is not a random sample, the NFIRS contains data on roughly 1 out of every 2.3 estimated residential structure fires in the U.S., 1 of every 2.5 deaths, and 1 of every 2.0 injuries. It is believed that the distribution of participating fire departments is reasonably representative of all fire departments in the U.S. The NFPA survey is based on a stratified random sample of fire departments in the U.S. The sample is stratified by the size of community protected by the department. The NFPA makes national projections by weighting sample results according to the proportion of total U.S. population accounted for by communities of each size.

Estimates were derived by computing percentages in NFIRS and multiplying them by the total number of U.S. fires, deaths, injuries, or dollar loss estimated from the NFPA annual survey. For example, the national estimate for the number of residential cooking equipment fires was computed by taking the percentage of NFIRS residential fires (with known equipment) that were attributed to cooking equipment and multiplying it by the estimated total number of residential structure fires from the NFPA survey. The distribution of the unknowns is assumed to follow the distribution of the knowns. The Hall and Harwood article gives a detailed description of this methodology².

The estimates for products listed below³ were derived from a review of fire reports that included product identification/specification beyond that identified in current NFIRS codes. For example, electric heat tapes, irons, portable hand-held hair dryers, curling irons, and electric blankets are typically found in two or three of the NFIRS codes, such as the equipment code "portable appliance designed to produce heat" and "appliances, not specified or unknown". For each product, the known proportions were multiplied by the estimated total number of residential structure fires from the NFPA survey and then summed across the NFIRS codes in which they appeared to provide the estimated number of fires associated with that product. The estimation methodology for deaths, injuries and property loss involving these products assumed that they occurred in the same proportion as fires.

These data capture only fires attended by fire departments. It should be noted that product-specific death and injury estimates fluctuate year-to-year and that a small increase or decrease in any one year is not sufficient to denote a trend.

² John R. Hall, Jr. and Beatrice Harwood, "The National Estimates Approach to U.S. Fire Statistics", Fire Technology, May 1989, Volume 25, Number 2, pp. 99-113.

³ Toasters and toaster ovens, microwave ovens, coffee makers and teapots, hotplates, receptacles, extension cords, other electrical cords, circuit breakers, switches, fuses, fans, heat tapes, televisions, irons, dishwashers, radios and cassette players, hair dryers and curling irons, and electric blankets.



United States
CONSUMER PRODUCT SAFETY COMMISSION
Washington, D.C. 20207

MEMORANDUM

TO : The Commission
Sadye E. Dunn, Secretary

Through: Jeffery Bromme, General Counsel

Pamela Gilbert, Executive Director

Ron Medford, Assistant Executive Director
Office of Identification and Reduction

Mary Ann Danello, Ph.D. Associate Executive Director
Directorate for Epidemiology and Health Sciences

FROM : Linda Smith, Directorate for Epidemiology and Health Sciences
Kimberly Long, Directorate for Epidemiology and Health Sciences

SUBJECT: 1995 Residential Fire Loss Estimates

The attached report presents estimated product-related fires losses that occurred in U.S. residential structure fires attended by the fire service during 1995, the most recent year for which these data are available. Data for previous years are included as well.

Attachment