

Brockton Fires in 2009

179 Total Fires¹ — 125 Structures, 30 Vehicles & 24 Other Fires

The Brockton Fire Department reported 179 fires to the Massachusetts Fire Incident Reporting System (MFIRS) in 2009. The 125 structure fires, 30 motor vehicle fires, 10 outside rubbish fires, three brush fires, five special outside fires; and six unclassified fires caused one civilian death, 10 civilian injuries, 12 firefighter injuries and an estimated dollar loss of \$2.7 million.

1 Brockton Resident Killed in 1 Fatal Fire

- On April 3, 2009, at 4:59 p.m., the Brockton Fire Department was called to a fatal smoking fire in a single-family home. The victim, an 83-year old woman ignited her clothing with a match she was using it to light her cigarette. Her badly burned body was discovered by a family member after the fire had extinguished itself and who then called the fire department. Smoke detectors were present but it was undetermined if they operated. The building was not sprinklered. No estimation was made of the damages from the fire.

All Fires Down in 2009

Total fires decreased by 18 from the 197 incidents reported in 2008. Reported structure fires were down 17 from the 142 reported during the previous year. Motor vehicle fires decreased by six from 36 the year before. Outside and other fires increased by five from the 19 reported in 2008.

BROCKTON FIRES FROM 2005 TO 2009

	Total Fires	Structure Fires	Vehicle Fires	Other Fires	Total Arsons	Structure Arsons	Vehicle Arsons	Other Arsons
2005	182	108	58	16	10	4	4	2
2006	163	124	24	15	12	7	4	1
2007	311	211	59	41	18	13	4	1
2008	197	142	36	19	12	9	1	2
2009 ²	179	125	30	24	17	10	5	2

BUILDING FIRES

There were 123 building fires of different types in Brockton in 2009. These 123 building fires accounted for 98.4% of all structure fires in Brockton.

89% of Building Fires in Homes

The 123 building fires that occurred in Brockton in 2009 can be broken down by fixed property use as follows: 109, or 89% of all building fires, were in residential properties;

¹ Because of a computer malfunction, Brockton had been unable to submit July 2009 data. Even without these incidents they met the minimum requirements for a community profile.

² July 2009 fires not included.

six happened in mercantile or business properties; four fires happened in storage facilities; two fires happened at special properties; one fire happened in a public assembly building; and one fire occurred in an institutional facility.

RESIDENTIAL FIRES

Residential Building Fires Down Slightly

There were 109 reported residential building fires in Brockton in 2009. These 109 fires are a decrease of six from the 115 reported residential building fires reported in 2008.

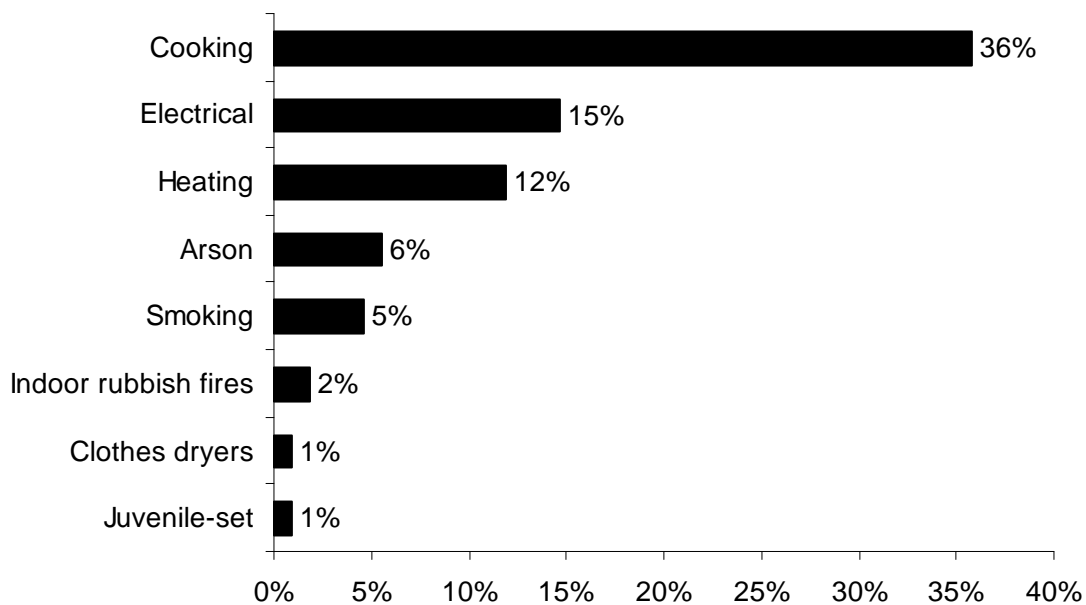
1- or 2-Family Homes Accounted for 51% of Residential Building Fires

The peak fixed property uses for residential building fires were 1- or 2-family homes, accounting for 51% of the building fires in Brockton; 42% occurred in apartments; 2% each happened in residential board and care facilities and hotels or motels; 1% occurred in rooming houses; and 2% occurred in unclassified residences.

Unattended Cooking Leading Cause of Residential Fires

The leading cause of residential building fires in Brockton was unattended cooking and other unsafe cooking practices, accounting for 36% of these fires. Electrical problems caused 15% of these fires. Heating fires caused 12% of these fires. Arsons caused 6% of these fires. Smoking was the cause of 5% of Brockton’s residential fires. Indoor rubbish fires caused 2% of the fires. Clothes dryers and juvenile-set fires each caused 1% of the fires in Brockton’s residential occupancies in 2009.

2009 Leading Causes of Fires in Brockton Homes



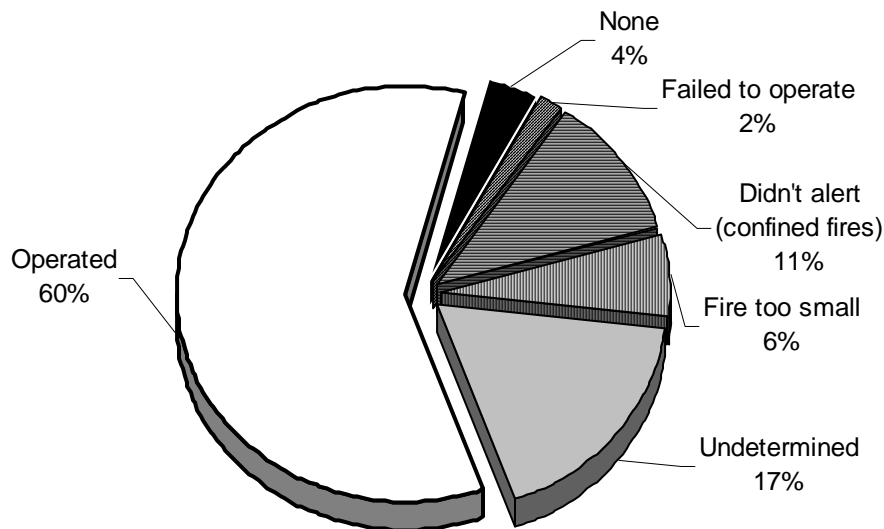
34% of Residential Building Fires Are Confined to Non-Combustible Containers³

Thirty-seven (37), or 34% of all residential building fires were confined to non-combustible containers in 2009. Twenty-three (23), or 21%, of all residential building fires reported in 2009 were cooking fires contained to a non-combustible container. Ten (10), or 9%, were fires confined to a fuel burner or boiler malfunction. Two (2), or 2%, of these fires were rubbish fires contained to a non-combustible container. One (1) fire, or 1%, was reported to have been contained to a chimney or flue; and another fire, or 1%, was confined to a commercial trash compactor.

Detectors Worked in 60% of Fires

Smoke or heat detectors operated and alerted the occupants in 65, or 60%, of the residential building fires. In 11% of these fires⁴, the detectors did not alert the occupants. Detectors were present but did not operate in 2% of these incidents. In 4% of these fires, no detectors were present at all. The fire was too small to trigger the detector in 6% of these fires. Smoke detector performance was undetermined in 19 incidents, or 17% of Brockton's residential building fires.

Detector Status in Brockton's Residential Fires 2009



³ In MFIRS v5 a fire in a building contained to a non-combustible container (Incident Type = 113-118) does not have to have a Fire Module completed. Therefore the following data fields do not need to be completed: Area of Origin, Detector Status, Item First Ignited, Heat Source, Factors Contributing to Ignition, Cause of Ignition, and Equipment Involved In Ignition. These incidents are not included in the analysis of these fields.

⁴ These represent confined fires where it was reported that the detector did not alert the occupants.

Undetermined Why Both Detectors Failed

It was undetermined in both cases why the detector failed to operate.

VACANT BUILDINGS

11% of Building Fires Occurred in Vacant Buildings

Brockton reported 13 fires that occurred in buildings that were vacant, under construction or demolition⁵. This represented 11% of the total 123 building fires reported to MFIRS in 2009. Six (6) one- or two-family homes, two apartment buildings, one business office, one detached residential garage, one residential or self storage unit; one outbuilding or shed; and one unclassified business were reported as vacant building fire incidents.

JUVENILE-SET FIRES

1 Juvenile-set Fire in 2009

Brockton reported one juvenile-set fire in 2009. This structure fire caused one fire service injury and an estimated dollar loss of \$80,000.

ARSONS

17 Arsons⁶ - 10 Structure, 5 Motor Vehicle and 2 Outside & Other

Seventeen (17), or 9%, of Brockton's 179 fires were considered intentionally set, or, for purposes of this analysis, arson. There were 10 structure arsons, five motor vehicle arsons and two outside and other arsons.

All Arsons Up in 2009

The total number of arsons increased by five from the 12 reported in 2008. Reported structure arsons increased by one from the nine reported in 2008. Motor vehicle arsons increased by four from the one reported in 2008. Outside and other arsons remained the same with two reported in both 2008 as well as in 2009.

33 Fires Reported as Undetermined or Still Under Investigation

In 2009, Brockton reported 33 fires under investigation or cause undetermined after investigation. Eight (8), or 24%, of these fires were reported to be undetermined after investigation. The other 25, or 76%, were still under investigation.

Eighteen (18), or 55%, of these 33 fires were structure fires. Eleven (11), or 33% were motor vehicle fires; and four, or 12%, were outside or other fires. Because so many fires

⁵ In version 4 a vacant building was defined by having a Fixed Property Use code in the subsection of construction, unoccupied properties, between 910 & 919. However in version 5, the Property Use is separate from the Building Status. In v5 a building is considered vacant if the Building Status is coded: 1- Under Construction; 3-Idle, not routinely used; 4-Under major renovation; 5-Vacant, secured; 6-Vacant, unsecured; & 7-Being demolished. The building use is coded separately in the Property Use field.

⁶ In MFIRS v5 a fire is considered an arson if the Cause of Ignition = 1 (Intentional) and the Age of Person (Fire Module) is greater than 17 or if the field is blank; or if the Wildland Module is used, the Wildland Fire Cause = 7 (Incendiary) and the Age of the Person (Wildland Module) is greater than 17 or if the field is left blank.

or under investigation or undetermined after investigation, the true arson number might be actually higher in Brockton for 2009.

ALL INCIDENTS

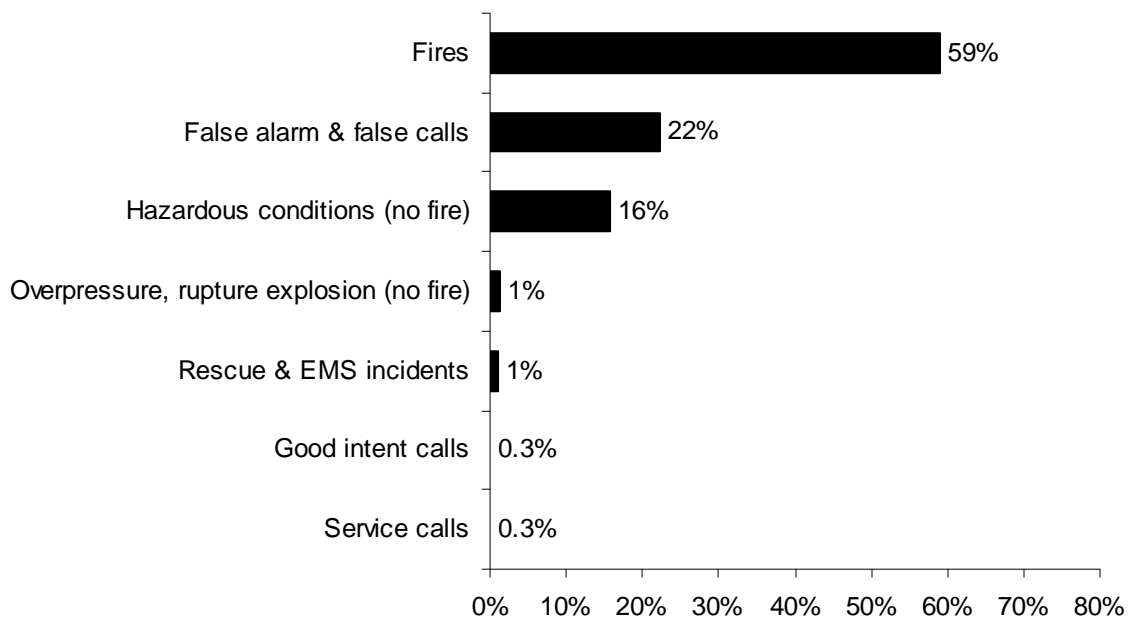
Fire Are 59% of All Reported Incidents

In 2009, Brockton voluntarily reported 305 incidents to MFIRS. Of these 305 incidents, 125, or 41% were non-fire incidents. Brockton mainly reports only fires to MFIRS, and thus the other 125 non-fire incidents reported to MFIRS for 2009 is only a small fraction of the non-fire calls to which the Brockton Fire Department responds.

Of these 125 non-fire incidents 68, or 22%, were reported false alarm or false calls; 48, or 16%, were reported hazardous condition calls with no fire; four, or 1%, were overpressure, rupture or explosions with no after fire calls; three, or 1% of all reported incidents in 2009, were reported rescue and emergency medical services (EMS) calls; one, or 0.3%, was a good intent call; and another incident, or 0.3%, was a service call.

In 2009, Brockton reported 180 fires⁷, accounting for 59% of all reported incidents.

2009 Incidents by Incident Type



Brockton Gave Mutual Aid in 1 Reported Incident

In 2009, Brockton reported coming to the aid of other fire departments once. This was for a fire in Stoughton.

⁷ This includes fires that Brockton responded to as mutual aid calls outside of their jurisdiction.

Brockton Received Mutual Aid in 6 Incidents

In 2009, surrounding fire departments gave aid to Brockton during six incidents. Five of these six incidents were for fires, and the other one was for a rescue or EMS call.

Item First Ignited ¹⁰	%	Factor Contrib. to Ignition	%	%Unconfined ¹¹
Cooking materials	33%	Abandoned materials	2%	3%
Structural member, framing	10%	Playing with heat source	1%	1%
Flammable or combustible liq.	9%	Short-circuit arc, worn insul.	1%	1%
Exterior sidewall covering	6%	Arc, spark from oper. equip.	1%	1%
Electrical wire, cable insulation	4%			

Equipment ¹²	%	Cause of Ignition	%	%Unconfined ¹³
None	46%	Unintentional	35%	53%
Cooking equipment	32%	Intentional	6%	8%
Boiler, furnace, cent. heat. unit	9%	Failure of eq./heat source	16%	24%
Clothes dryer	1%	Cause Under Investigation	10%	15%

Detector Alerted Occupants (Confined Fires in Non-Combustible Containers)

Alerted Occupants	65%
Didn't Alert Occupants	32%
Undetermined	3%

All Reported Incidents	# of Incidents	% of Incidents
Fires ¹⁴	180	59%
False alarms & false calls	68	22%
Hazardous conditions (no fire)	48	16%
Overpressure rupture, explosion or overheat calls (no fire)	4	1%
Rescue & EMS incidents	3	1%
Good intent calls	1	0.3%
Service calls	1	0.3%

¹⁰ This field does not need to be completed for confined fires. Certain codes are inferred from the Incident Type.

¹¹ Some fields in version 5 allow for multiple entries. Therefore the number of entries may be greater than the actual number of incidents being analyzed. These figures were calculated only from those incidents, which were coded as Unconfined fires (Incident Types 111-112 or 120-129). The USFA & NFPA do not recommend inferring codes for Factors Contributing to Ignition from the fires contained to non-combustible containers (Incident Types 113 – 118). This field does not need to be completed for confined fires.

¹² This field does not need to be completed for confined fires. Certain codes are inferred from the Incident Type.

¹³ These figures were calculated only from those incidents, which were coded as Unconfined fires (Incident Types 111-112 or 120-129). The USFA & NFPA do not recommend inferring codes for Cause of Ignition from the fires contained to non-combustible containers (Incident Types 113 – 118). This field does not need to be completed for confined fires.

¹⁴ This figure contains the fire that Brockton gave mutual aid to in another jurisdiction.

Month	Total Fires	Structure Fires	Vehicle Fires	Other Fires
January	17	11	5	1
February	12	8	2	2
March	11	7	4	0
April	16	12	0	4
May	13	9	1	3
June	12	9	3	0
July ¹⁵	0	0	0	0
August	17	10	5	2
September	17	13	4	0
October	20	12	3	5
November	14	10	0	4
December	30	24	3	3

Day	Total Fires	Structure Fires	Vehicle Fires	Other Fires
Sunday	22	11	5	6
Monday	26	19	3	4
Tuesday	23	17	5	1
Wednesday	26	19	4	3
Thursday	26	21	1	4
Friday	30	22	5	3
Saturday	26	16	7	3

Time	Total Fires	Structure Fires	Vehicle Fires	Other Fires
00:01 - 04:00	27	15	8	4
04:01 - 08:00	19	13	4	2
08:01 - 12:00	24	19	3	2
12:01 - 16:00	28	18	7	3
16:01 - 20:00	43	32	3	8
20:01 - 24:00	38	28	5	5

Motor Vehicle Fires

Total: 30

Automobiles: 28 (93%)

4 (14%) of the automobile fires considered intentionally set.

¹⁵ Because of a computer malfunction, Brockton had been unable to submit their July 2009 incidents to MFIRS.

Arson Fires

Total Arsons: 17

Dollar loss: \$1,066,500

0.18 Arson Fires/1,000 Population

Situation	Arsons	% Situation	% Arson	Dollar Loss
Structure Arsons	10	8%	59%	\$1,032,500
Vehicle Arsons	5	17%	29%	9,000
Other Arsons	2	8%	12%	25,000

0.11 Structure arsons/1,000 population

0.05 Vehicle arsons/1,000 population

0.02 Other arsons/1,000 population

Peak Times of Day for:

Structure Arsons	#	%	Vehicle Arsons	#	%
00:01 - 04:00	4	40%	00:01 - 04:00	4	80%
20:01 - 00:00	4	40%			

Other Arsons	#	%
04:01 - 08:00	1	50%
08:01 - 12:00	1	50%

Peak Fixed Property Uses for Structure Arsons	#	%
Apartments	5	50%
1- or 2-Family homes	2	20%
Parking garage, detached residential	1	10%
Mercantile, business, other	1	10%
Household goods, sales, repairs	1	10%