Suffolk County

2013 Fire Data Analysis

MFIRS
Massachusetts Fire Incident Reporting System

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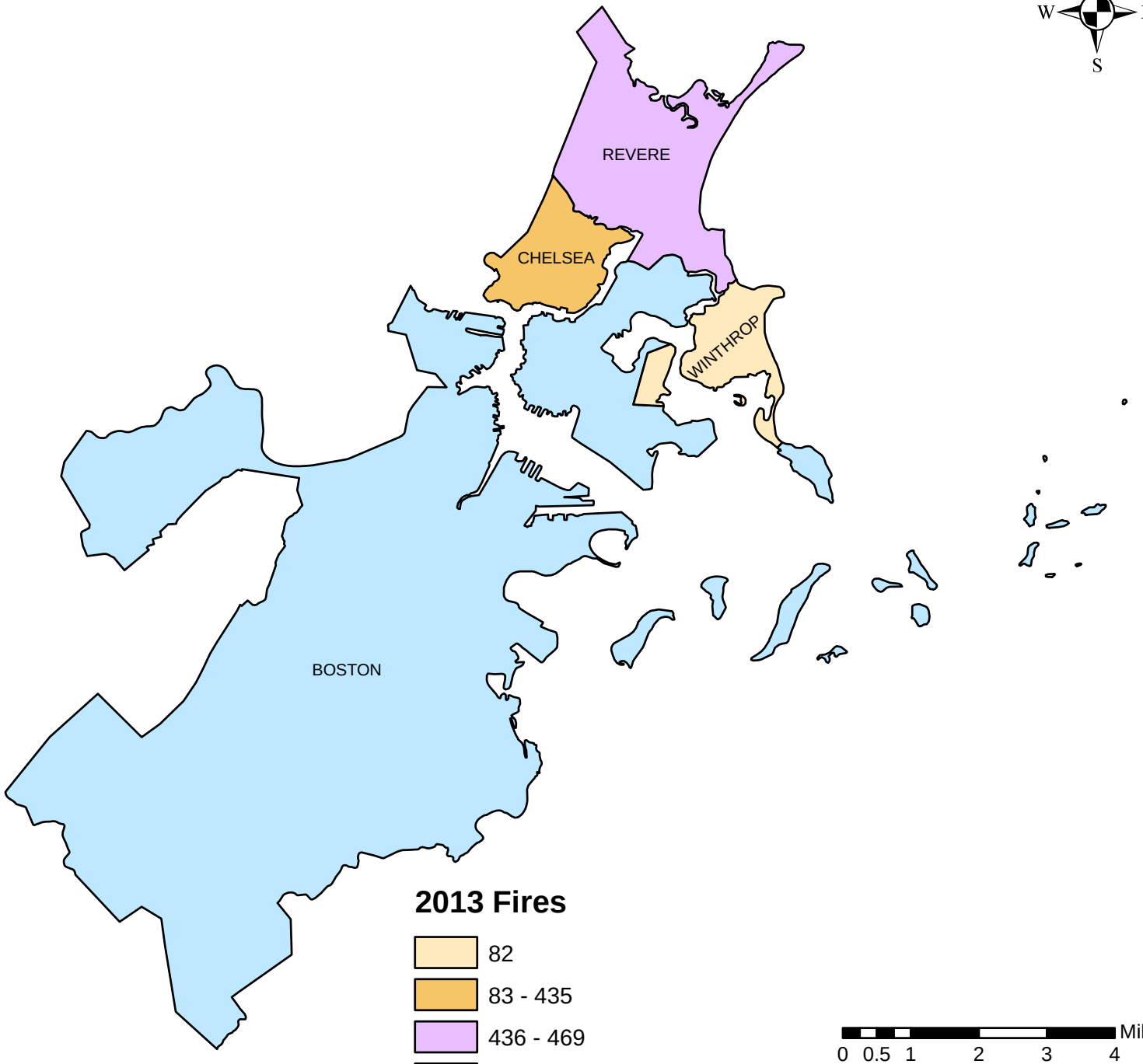
Suffolk County Fires 2013



MFIRS
Massachusetts Fire Incident Reporting System

Massachusetts Fire Incident Reporting System 2013

Table of Contents

Suffolk County Fires in 2013

Boston, Chelsea, Revere & Winthrop Comprise Suffolk County

Suffolk County is composed of four communities: the City of Boston, the largest city in the Commonwealth; the City of Chelsea; the City of Revere; and the Town of Winthrop. Because 86% of Suffolk County's residents live in Boston, statistics about the whole county are very heavily influenced by Boston's experience and may not reveal important problems in the other communities.

6,886 Total Fires — 4,992 Structures, 349 Vehicles & 1,545 Other Fires

The four communities in Suffolk County reported a total of 6,886 fires to the Massachusetts Fire Incident Reporting System (MFIRS) in 2013[1]. The 4,992 structure fires, 349 motor vehicle fires, 653 brush, tree or lawn fires, 625 outside rubbish fires, 112 special outside fires, six cultivated vegetation or crop fires, and 149 other fires caused five civilian deaths, 26 civilian injuries, 66 fire service injuries and an estimated dollar loss of $54.2 million. Although 11% of Massachusetts residents live in Suffolk County, these four Suffolk County fire departments reported 23% of the state's 29,828 fires.

Comparing Communities: Rate of Fire/1,000 Population

The easiest way to compare fire problems from community to community while taking into consideration the size of the community is to compare rates of fire per 1,000 population. Suffolk County had 9.5 fires per 1,000 people in 2013, almost twice the statewide rate of 4.6 fires per 1,000 population. Chelsea had the highest rate at 12.4 fires per 1,000 people in 2013. Winthrop had the lowest rate, 4.7 fires per 1,000 people this year, less than the county average. Boston had the second highest rate of fires per population with 9.4. Revere's fire rate per 1,000 population was 9.1.

Structure Fires Per 1,000 Population

Suffolk County had a rate of 6.9 structure fires per 1,000 people in 2013. The community with the highest rate of structure fires per 1,000 population was Chelsea, having 7.9 structure fires per 1,000 people. Boston had 9.4 fires per 1,000 population. Revere had 6.7 structure fires per 1,000 people. Winthrop had the lowest rate of structure fires with 3.4 per 1,000 population. The rate of structure fires per 1,000 people in Massachusetts in 2013 was 2.7. Boston, Chelsea and Revere all experienced a higher than statewide average number of structure fires per 1,000 population.

Vehicle Fires Per 1,000 Population

Suffolk County had 0.48 motor vehicle fires per 1,000 population in 2013. Chelsea had the highest rate in the county at a rate of 0.51 motor vehicle fires per 1,000 people. Boston had the next highest rate at 0.48 motor vehicle fires per 1,000 people. Revere experienced 0.44 motor vehicle fires per 1,000 population and Winthrop was at 0.17. The state's rate was 0.39 motor vehicle fires per 1,000 people in 2013. Winthrop was the only community below the state rate.

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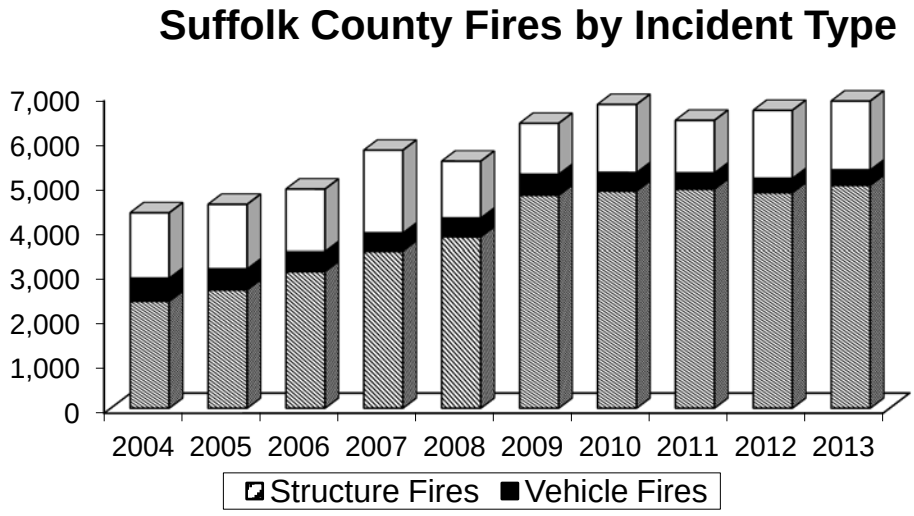
[1] This figure also includes the 119 fires reported by Massport at Logan Airport.

Town	Total Fires Per 1,000 Pop.	Structure Fires Per 1,000 Pop.	MV Fires Per 1,000 Pop.	Other Fires Per 1,000 Pop.
Boston	9.44	6.97	0.48	2.00
Chelsea	12.37	7.87	0.51	3.98
Revere	9.06	6.67	0.44	1.95
Winthrop	4.69	3.37	0.17	1.14
Suffolk County	9.53	6.91	0.48	2.13
Massachusetts	4.55	2.65	0.39	1.78

All Fires Up in 2013

The total number of reported fires in Suffolk County increased by 208, or 3%, from the 6,678 reported in 2012. Reported structure fires increased by 165, or 3%, from 4,827 the previous year. Motor vehicle fires increased by 24, or 7%, from 325 the year before. The total number of reported outside and other fires increased by 19, or 1%, from 1,526 in 2012.



SUFFOLK COUNTY FIRES FROM 2004 TO 2013

Year	Total Fires	Structure Fires	Vehicle Fires	Other Fires	Total Arsons	Structure Arsons	Vehicle Arsons	Other Arsons
2004	4,376	2,401	524	1,451	165	80	54	31
2005	4,565	2,655	475	1,435	139	70	28	41
2006	4,911	3,068	445	1,398	154	60	27	67
2007	5,782	3,517	418	1,857	140	71	16	53
2008	5,535	3,833	428	1,274	124	49	50	55
2009	6,386	4,768	475	1,143	129	36	36	57
2010	6,810	4,861	422	1,527	141	38	19	84
2011	6,453	4,907	369	1,527	157	43	16	98
2012	6,678	4,827	349	1,526	169	33	22	114
2014	6,886	4,992	349	1,545	151	31	8	112

STRUCTURE FIRES

Reported Structure Fires Up
The 4,992 structure fires caused two civilian deaths, 25 civilian injuries, 54 fire service injuries and an estimated dollar loss of $41.1 million. These incidents represented 72% of Suffolk County's reported fires in 2013. The average estimated dollar loss per structure fire was $8,239. The total number of reported structure fires increased by 165, or 3%, from the 4,827 reported in 2012.

BUILDING FIRES

There were 4,982 building fires of different types in Suffolk County in 2013. These 4,982 building fires accounted for 99.8% of all structure fires in Suffolk County.

83% of Building Fires in Homes
The 4,982 building fires that occurred in Suffolk County in 2013 can be broken down by fixed property use as follows: 4,122, or 83%, of all reported building fires in 2013 were in residential properties; 228 fires occurred in public assembly properties; 223 fires took place in mercantile and office properties; 187 fires happened in institutional properties; 96 fires occurred in educational properties; 61 fires took place in special properties; 29 fires were in storage properties; seven occurred in industrial, utility, defense, agricultural or mining facilities; six were reported in manufacturing properties; and 23 fires occurred in unclassified buildings.

For a complete breakdown of building fires by individual property use type, see the chart on pages 21 through 23.

RESIDENTIAL FIRES

Cooking Caused 86% of Residential Building Fires

In 2013, 4,122, or 85%, of the 4,982 building fires in Suffolk County occurred in residential properties. Since this is such a large percentage of the building fires, we focus in on these incidents. The leading cause of residential building fires in Suffolk County was cooking, accounting for 86% of these fires.

Heating fires were the second leading cause of residential building fires in Suffolk County, causing 4% of these fires. Indoor rubbish fires caused 3% and electrical problems and smoking each caused 2% of these fires. Arson, accounted for 1% of these fires. Candles, clothes dryers and juvenile-set fires were each responsible for less than 1% of the fires in people's homes in Suffolk County in 2013.

89% of Residential Building Fires Are Confined to Non-Combustible Containers[2]

Three thousand six hundred and fifty-nine (3,659), or 89%, of all residential building fires were reported as confined to non-combustible containers in 2013. Three thousand four hundred and forty-two (3,442) of the reported fires were cooking fires contained to a non-combustible container accounting for 84% of residential building fires. There were 107 confined indoor rubbish fires, accounting for 3% of the residential building fires in 2013. Eighty-seven (87), or 2%, were fires confined to a fuel burner or boiler malfunction. Twenty-two (22), or 0.5%, of all residential fires were confined to chimneys or flues. One (1), or 0.02%, of the residential building fires in Suffolk County were confined commercial compactor fires. The number of contained fires increased by 155, or 4%, from the 3,504 reported in 2012.

Detectors Alerted Occupants in 77% of Fires

Smoke or heat detectors operated and alerted the occupants in 3,170, or 77%, of the residential building fires. In 4% of these fires[3], the detectors did not alert the occupants. Detectors were present but did not operate in less than 1% of these incidents. In 1% of these fires, no detectors were present at all. The fire was too small to trigger the detector in 1% of the residential fires. Smoke detector performance was undetermined in 685 incidents, or 17%, of Suffolk County's residential building fires.

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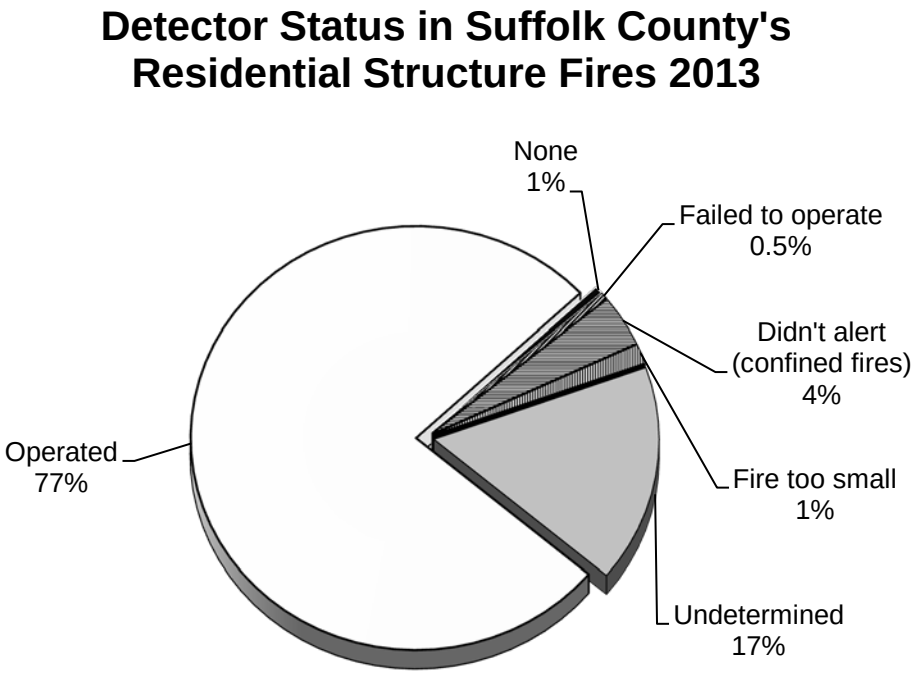
[2] In MFIRS v5 a fire in a building contained to a non-combustible container (Incident Type = 113-118) does not have to have a Fire Module completed. Therefore the following data fields do not need to be completed: Area of Origin, Detector Status, Item First Ignited, Heat Source, Factors Contributing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

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



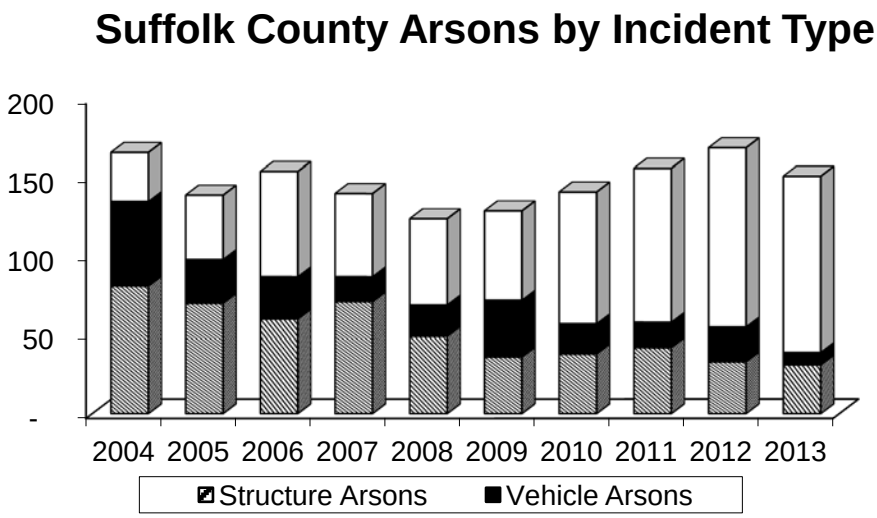
14% of Failed Detectors Had Missing or Dead Batteries
Of the 22 fires where smoke detectors were present but failed to operate, three, or 14%, failed because of missing or disconnected batteries. Two (2), or 9%, did not operate because of dead batteries; and one, or 5%, failed because of a missing battery. Two (2), or 9% failed from a lack of maintenance. Another two detectors, or 9%, failed because of improper installation or placement. One (1) detector, or 5%, failed from power failures, shut-offs or disconnects. In 14 cases, or 59%, the reason the detector failed was not determined or classified.

JUVENILE-SET FIRES

21 Juvenile-set Fires
There were 21 reported juvenile-set fires in Suffolk County in 2013. The seven structure fires, six brush fires, three special outside fires, one outside rubbish fire, and four unclassified fires caused $126,950 in estimated damages.

ARSONS

151 Arsons —31 Structure Arsons, 8 Vehicle Arsons & 112 Other Arsons
One hundred and fifty-one (151), or 2%, of Suffolk County's 6,886 fires were considered intentionally set, or for purposes of analysis, arson. The 31 structure arsons, eight motor vehicle arsons and 112 outside and other arsons caused two civilian deaths, 10 fire service injuries and an estimated dollar loss of $938,410.



All Arson Decrease
The total number of reported arson fires decreased by 18, or 11%, from the 169 reported in 2012. Structure arson decreased by two from the 33 reported a year earlier. Motor vehicle arsons decreased by 14 from 22 the previous year. Identified outside and other arsons increased by two from 114 the year before. Structure arsons represented 21% of the total arson problem while motor vehicle arson only accounted for 5% of all the 2013 arsons in Suffolk County.

Arson Rates Per Population
The community in Suffolk County with the highest rate of arson per population in 2013 was Chelsea with 0.28 arsons per 1,000 people. All of the communities, as well as the state in general had less than one arson per 1,000 population. For all of Suffolk County, the arson rate was 0.21 per 1,000 population; for the entire Commonwealth it was slightly lower at 0.14 per 1,000 population. Chelsea had the highest rate for structure arsons per 1,000 population with 0.20. Winthrop had the highest rate for motor vehicle arsons per 1,000 population with 0.06.

ALL INCIDENTS

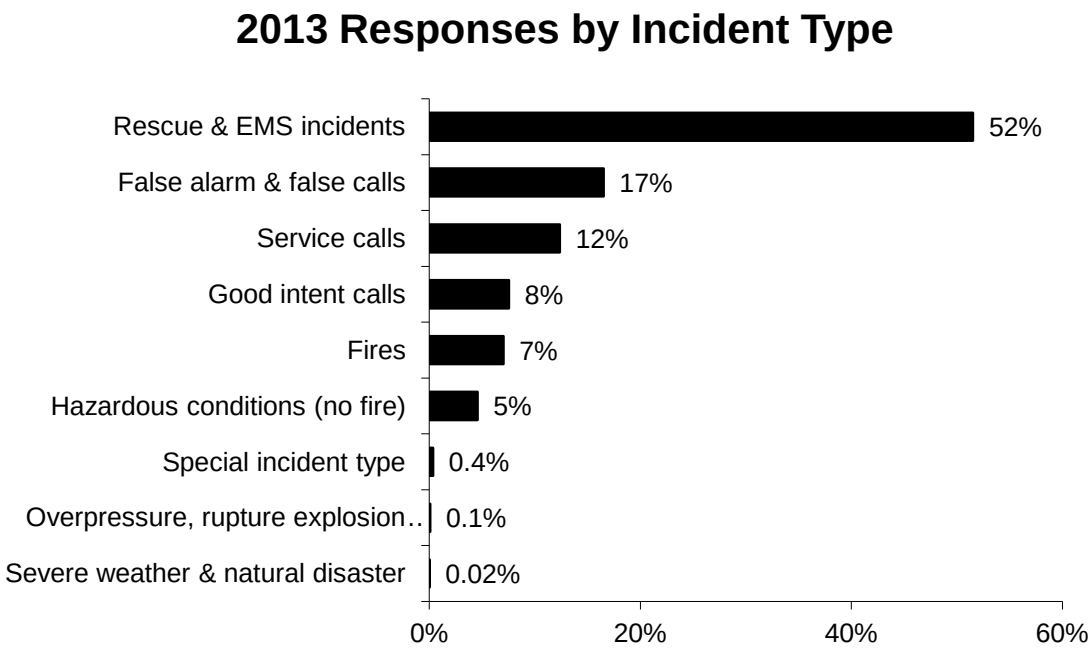
Rescue & EMS Calls Are Over 1/2 of All Reported Responses
In 2013, fire departments in Suffolk County reported 97,988 total responses to MFIRS. Of these 97,988 incidents, 91,097 non-fire calls were voluntarily reported.

Of these 91,097 non-fire calls, 50,489, or 52% of all the responses reported in 2013 were reported rescue and emergency medical services (EMS) calls[4]; 16,180, or 17%, were reported false alarm or false calls; 12,114, or 12%, were reported service calls such as lock-outs, water or smoke problem, unauthorized burning or public service assistance;

[4] The Boston Fire Department does not run any ambulances. Instead they dispatch their companies as first responders to all EMS calls.

7,399, or 8%, were reported good intent calls; 4,480, or 5%, were reported hazardous condition calls with no fire; 344, or 0.4%, were special incident type calls such as citizen complaints; 76, or 0.1%, were reported overpressure, rupture, explosion or overheat calls with no fire; and 15, or 0.02%, were severe weather calls.

Six thousand eight hundred and ninety-one (6,891), or 7%, of the total responses submitted by Suffolk County fire departments were fires[5].

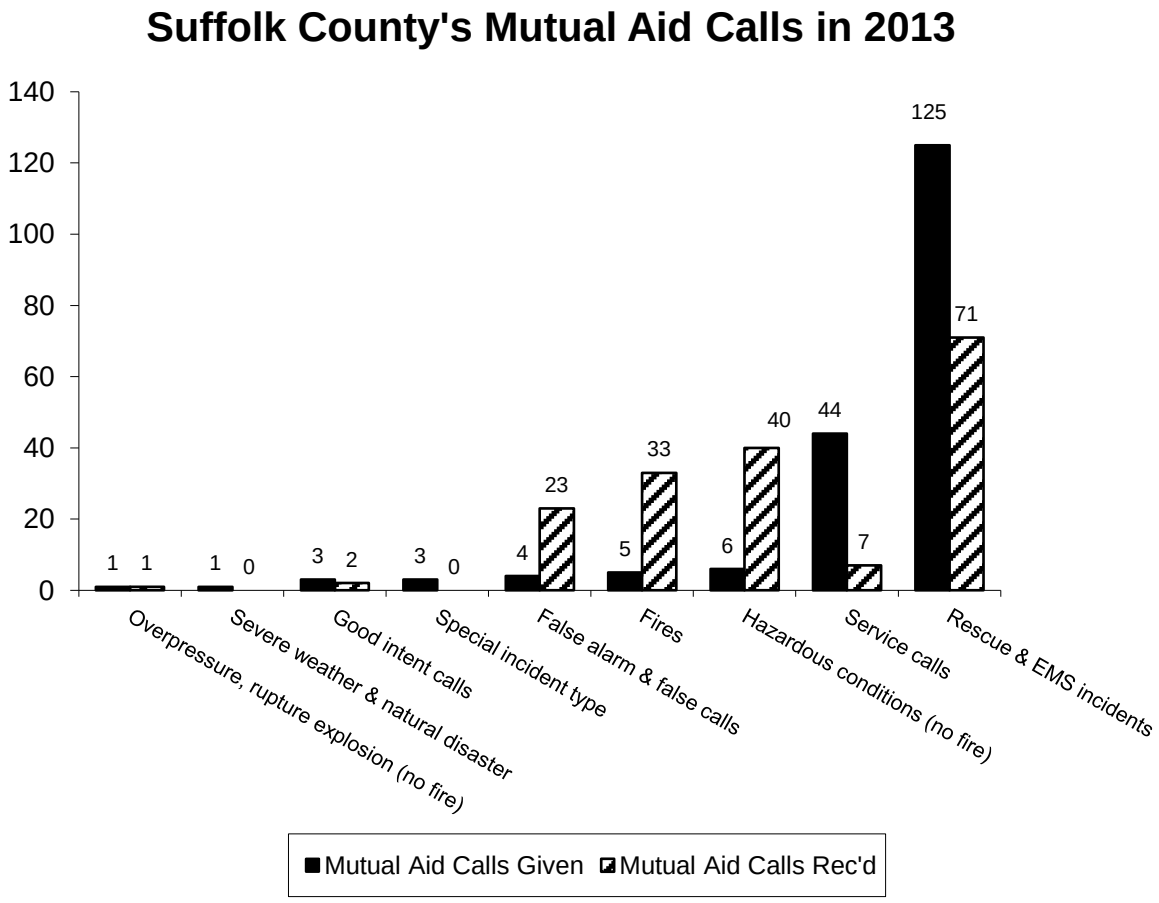


Suffolk County Fire Departments Reported Giving Mutual Aid 192 Times
In 2013, Suffolk County fire departments reported coming to the aid of other fire departments 192 times. Of these 192 responses, 125, or 65%, were for rescue or EMS incidents; 44, or 23%, were for service calls such as cover assignments; six, or 3%, were for hazardous condition calls with no fire; five, or 3%, were for fires; four, or 2%, were for false alarms or false calls; three, or 2%, were for good intent calls; three, or 2%, were special incident types; one, or 1%, was a severe weather call; and one, or 1% of the mutual aid given calls was for an overpressure, rupture explosion with no fire.

Suffolk County Fire Departments Reported Receiving Mutual Aid in 177 Incidents
In 2013, Suffolk County fire departments reported receiving aid from surrounding departments for 177 incidents. Of these 177 incidents, 71, or 40%, were rescue and emergency medical services calls; 40, or 23%, were hazardous conditions calls with no fire; 33, or 19%, were for fires; 23, or 13%, were false alarms or false calls; seven, or 4%

[5] This figure includes responses in which Suffolk County fire departments gave mutual aid to another fire department at a fire.

were service calls; two calls, or 1%, were good intent calls; and one, or 1% of the mutual aid received calls was for an overpressure, rupture explosion with no fire.



The City of Boston

5,831 Fires — 4,303 Structure Fires, 295 Vehicle Fires & 1,233 Other Fires
The Boston Fire Department reported 4,303 structure fires, 295 motor vehicle fires, 512 outside rubbish fires, 493 grass, tree or brush fires, 102 special outside fires, six cultivated vegetation or crop fires, and 120 unclassified fires to the Massachusetts Fire Incident Reporting System (MFIRS) in 2013. These 5,831 incidents caused five civilian deaths, 19 civilian injuries, 13 fire service injuries and an estimated dollar loss of $36.9 million. There were 9.4 fires for every 1,000 residents in 2013. Although fewer than 10% of the state's residents live in the City of Boston, the Boston Fire Department reported 20% of the 29,828 fire incidents reported statewide in 2013.

All Fires Up
The total number of Boston fires reported to the Massachusetts Fire Incident Reporting System increased by 138 from the 5,693 reported in 2012 to 5,831 in 2013. Structure fires increased by 111, motor vehicle fires increased by 15, and outside and other fires increased by 12. Motor vehicle fires have been on a downward trend since 1986; increasing only two other years since 1994. Outside and other fires continued their up and down trend over the past 10 years.

136 Arsons — 22 Structure Arsons, 6 Vehicle Arsons & 108 Other Arsons
One hundred and thirty-six (136), or 2%, of the 5,831 Boston fires were considered intentionally set, or, for purposes of this analysis, arson. The 22 structure arsons, six motor vehicle arsons and 108 outside and other arsons caused two civilian deaths and an estimated dollar loss of $283,185.

Cooking Caused 86% of Boston's Residential Fires
Cooking was the leading cause of the 3,555 fires in Boston residential buildings, accounting for 83% of these fires. Heating equipment was the cause of 4% of these fires. Indoor rubbish fires were responsible for 3%; and electrical problems and smoking each caused 2% of these fires. Arson, clothes dryers, candles and juvenile-set fires each accounted for less than 1% of the fires in Boston residences in 2013.

Detectors Alerted Occupants in 86% of Fires
Smoke or heat detectors operated and alerted the occupants in 3,061, or 86%, of the residential building fires. In 4% of these fires[6], the detectors did not alert the occupants. Detectors were present but did not operate in less than 1% of these incidents. In less than 1% of these fires, no detectors were present at all. The fire was too small to trigger the detector in 2% of the residential fires. Smoke detector performance was undetermined in 275 incidents, or 8%, of Boston's residential building fires.

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

Largest Loss Fires
The Boston Fire Department reported six fires with over $1 million in estimated damages. These six fires accounted for $11.9 million in total estimated damages, or 32% of all dollar loss reported in 2013.

- On February 20, 2013, at 9:18 a.m., the Boston Fire Department was called to an electrical fire in a five-unit apartment building. The fire was caused by a unspecified short-circuit somewhere in the fourth floor ceiling. There were no injuries associated with this fire. Smoke detectors were present and alerted the occupants. The building was not sprinklered. Damages were estimated to be $5.3 million.

The City of Chelsea

435 Fires — 277 Structure Fires, 18 Vehicle Fires and 140 Other Fires
The City of Chelsea reported 435 fires to the Massachusetts Fire Incident Reporting System (MFIRS) in 2013. The 277 structure fires, 18 motor vehicle fires, 107 grass, tree or brush fires, 14 outside rubbish fires, three special outside fires, and 16 unclassified fires caused four civilian injuries, 50 fire service injuries and an estimated dollar loss of $5 million. There were 12.4 fires for every 1,000 citizens in 2013.

Structure & MV Fires Down
Total fires increased by 10, or 2%, from the 425 fires reported in 2012. Structure fires decreased by 30 from 307 reported in 2012. Motor vehicle fires decreased by two, from 20 the previous year. Outside and other fires increased by 42 from the 98 reported in 2012.

10 Arsons — 7 Structure Arsons, 1 Vehicle Arson & 2 Outside & Other Arsons
Ten (10), or 2%, of the 435 Chelsea fires were considered intentionally set, or, for purposes of this analysis, arson. The seven structure arsons, one motor vehicle arson and two outside and other arsons caused an estimated dollar loss of $420,325.

Unsafe Cooking Practices Caused Over 3/4 of Residential Fires
Cooking was the leading cause of fires in Chelsea's residential properties in 2013, accounting for 78% of these fires. Heating was the second leading cause, accounting for 6% of the fires in people's homes in Chelsea in 2013. Smoking caused 4%; and electrical problems and arsons each accounted for 3% of these fires. Indoor rubbish fires accounted for 1%. Candles, clothes dryers and juvenile-set fires each caused of less than 1% of residential building fires in Chelsea.

Detectors Operation Undetermined in Over 1/2 of Fires

Smoke or heat detectors operated and alerted the occupants in 71, or 32%, of the residential building fires. In 14% of these fires[7], the detectors did not alert the occupants. Detectors were present but did not operate in 1% of residential fires. In 1% of these fires, no detectors were present at all. The fire was too small to trigger the detector in 1% of these fires. Smoke detector performance was undetermined in 111 incidents, or 51% of Chelsea's residential building fires.

Largest Loss Fire in Chelsea

- On January 23, 2013, at 12:59 p.m., the Chelsea Fire Department was dispatched to a fire at a six unit apartment building. The three-alarm fire started on exterior wall and spread to the building next door. Five (5) firefighters were injured at this fire. Detectors were present and operated. The building was not sprinklered. Damages from this building and the exposure building were estimated to be $592,000.

The City of Revere

469 Fires — 345 Structure Fires, 23 Vehicle Fires and 101 Other Fires

The City of Revere reported 469 fires to the Massachusetts Fire Incident Reporting System (MFIRS) in 2013. The 345 structure fires, 23 motor vehicle fires, 63 outside rubbish fires, 33 grass, tree or brush fires, one special outside fire, and four unclassified fires caused two civilian injuries, three fire service injuries and an estimated dollar loss of $1.5 million. There were 9.1 fires for every 1,000 citizens in 2013.

All Fires Up

The total number of reported fires increased by 71 from the 398 reported in 2012. Structure fires increased by 45 from the 300 reported during the previous year. Motor vehicle fires increased by seven from the 16 reported in 2012. Reported outside and other fires increased by 19 from 82 the year before.

3 Arsons — 2 Structure Arsons & 1 Outside Arson

Three (3), or 1%, of Revere's 469 reported fires were considered intentionally set, or for purposes of this analysis, arson. Structure arsons remained the same with two reported in both 2012 and 2013. Motor vehicle arsons remained the same with none reported in 2013 or the previous year. Outside and other arsons decreased by one from two in 2012.

Unsafe Cooking Causes 89%of Residential Fires

Cooking was the leading cause of fires in Revere's residential properties in 2013, accounting for 89% of these fires. Heating equipment caused 4% of residential building fires in 2013. Electrical problems, indoor rubbish fires, arson, candles and smoking were

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

each responsible for 1% of these fires. Clothes dryers caused less than 1% of the residential building fires in Revere in 2013.

Detectors Alerted Occupants in Only 11% of Fires
Smoke or heat detectors operated and alerted the occupants in 34 or 11%, of the residential building fires. In 1% of these fires[8], the detectors did not alert the occupants. In 1% of these fires detectors were present but did not operate. In 1% of these fires, no detectors were present at all. The fire was too small to trigger a detector in less than 1% of these fires. Smoke detector performance was undetermined in 261 incidents, or 86% of Revere's residential building fires.

Largest Loss Fire In Revere

- At 5:48 p.m., on December 27, 2013, the Revere Fire Department was called to an electrical fire in a single-family home. Arcing from the electrical cord of a space heater ignited some clothes nearby. No one was injured at this fire. It was undetermined if detectors were present and the home did not have any sprinklers. The fire spread to a nearby car. Damages from this blaze were estimated to be $323,500.

The Town of Winthrop

82 Fires — 59 Structure Fires, 3 Vehicle Fires & 20 Other Fires
The Town of Winthrop reported 82 fires to the Massachusetts Fire Incident Reporting System (MFIRS) in 2013. The 59 structure fires, three motor vehicle fires, 13 brush and grass fires, three special outside fires, one outside rubbish fire, and three unclassified fires caused one civilian injury and an estimated dollar loss of $357,280. There were 4.7 fires for every 1,000 citizens in 2013.

All Fires Up
The total number of fires reported in Winthrop increased by 41 from 41 in 2012. Structure fires increased by 37 from the 22 reported in 2012. Motor vehicle fires increased by one from two in 2012. Outside and other fires increased by three from 17 in 2012.

1 Arson – 1 Motor Vehicle Arson
There was only one reported arson in Winthrop in 2013. This one motor vehicle arson, or 1%, of the 82 Winthrop fires was considered intentionally set, or, for purposes of this analysis, arson.

Unsafe Cooking Practices Caused Over 3/4 of Winthrop's Residential Fires
Cooking was the leading cause of fires in Winthrop residential properties in 2013, accounting for 77% of these fires. Heating equipment fires were the second leading

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

cause, accounting for 7% of these fires. Electrical problems, indoor rubbish fires and smoking each caused 5% of these fires. A lightning strike caused 2% of the fires in Winthrop's homes in 2013

Detectors Operation Undetermined in 86% of Fires

Smoke or heat detectors operated and alerted the occupants in five, or 12%, of the residential building fires. There were no reported fires[9] where the detectors did not alert the occupants. There were no reported fires where detectors were present but did not operate. In 2% of these fires there were no detectors. There were no reported fires where the fire was too small to trigger the detector. Smoke detector performance was undetermined in 38 incidents, or 86% of Winthrop's residential building fires.

Largest Loss Fire in Winthrop

- On June 30, 2013, at 8:22 a.m., the Winthrop Fire Department was called to an electrical fire at a single-family home. The fire was started by combustibles being placed too close to a lighting fixture. One (1) civilian was injured at this fire. Detectors were present but it was undetermined if they operated. The building was not sprinklered. Damages from this fire were estimated to be $125,000.

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

Suffolk County Population: 722,023

9.5 Fires/1,000 Population

Total Fires:	**6,886**		**$54,178,816**
Situation	**Fires**	**% of Fires**	**Dollar Loss**
Structure Fires	4,992	72%	$41,131,458
Vehicle Fires	349	5%	12,192,010
Other Fires	1,545	23%	855,348

5 Fatal Fires 0.73 Civilian Deaths/1,000 Fires
5 Civilian Deaths 0.07 Civilian Deaths/10,000 Population

26 Civilian Injuries 66 Fire Service Injuries

Building Fires: 4,982

Residential Building Fires: 4,122

Residential Building Fires Confined to Non-Combustible Containers: 3,659

Unconfined Residential Building Fires: 463

2 Civilian Deaths 25 Civilian Injuries 43 Fire Service Injuries

Occupancy	**Fires**	**%**
Apartments	2,797	68%
1- & 2-Family homes	512	12%
Dormitories	189	5%
Rooming houses	156	4%
Residential board & care	73	2%
Hotel/motel	43	1%

Detector Status	**Fires**	**%**
Operated	3,170	77%
Didn't operate	22	0.5%
None	24	1%
Fire too small	61	1%
Didn’t Alert (confined)	160	4%
Undetermined	685	17%

Area of Origin[10]	**%**
Kitchen	87%
Heating room or area	2%
Bedroom	1%
Exterior balcony/unencl. porch	1%
Chimney or flue	1%

Heat Source	**%**	**%Unconfined**[11]
Radiated heat from oper. eq.	2%	15%
Arcing	1%	11%
Heat from operating equip.	1%	11%
Hot or smoldering object	1%	9%
Cigarette	1%	5%

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

[11] 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 Heat Source from the fires contained to non-combustible containers (Incident Types 113 – 118). This field does not need to be completed for confined fires, but is sometimes voluntarily reported.

Item First Ignited[12]	**%**	**Factor Contrib. to Ignit.**	**%**	**%Unconfined**[13]
Food, cooking materials	61%	Abandoned materials	2%	15%
Rubbish, trash, waste	3%	Too close to combustibles	1%	9%
Flammable, combustible liquid	2%	Unspecified short circuit arc	1%	8%
Electrical wire, cable insulation	1%	Misuse of materials	1%	6%
Structural member, framing	1%	Equipment unattended	1%	6%

Equipment[14]	**%**	**Cause of Ignition**	**%**	**%Unconfined**[15]
Cooking equipment	85%	Unintentional	7%	61%
None	7%	Failure of eq. or heat source	2%	15%
Boiler, furnace, cent. heat unit	2%	Intentional	1%	5%
Electrical wiring	1%	Act of nature	0.02%	0.2%
Chimney or flue	1%	Undetermined	1%	6%
		Cause under investigation	1%	9%

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

Alerted Occupants	80%
Didn't Alert Occupants	4%
Undetermined	16%

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

[13] 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.

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

[15] 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.

Month	Total Fires	Structure Fires	Vehicle Fires	Other Fires
January	571	480	34	57
February	475	405	35	35
March	519	435	20	64
April	675	401	24	250
May	660	416	27	217
June	491	345	29	117
July	544	342	33	169
August	550	301	35	214
September	568	436	25	107
October	614	439	28	147
November	620	479	25	116
December	599	513	34	52

Day	Total Fires	Structure Fires	Vehicle Fires	Other Fires
Sunday	1,134	826	57	252
Monday	930	683	53	194
Tuesday	901	857	51	193
Wednesday	961	721	45	195
Thursday	945	653	50	242
Friday	951	675	51	225
Saturday	1,064	778	42	244

Time	Total Fires	Structure Fires	Vehicle Fires	Other Fires
00:01 - 04:00	504	323	46	135
04:01 - 08:00	435	312	40	83
08:01 - 12:00	1,168	918	67	183
12:01 - 16:00	1,657	1,142	63	452
16:01 - 20:00	1,859	1,404	71	384
20:01 - 00:00	1,263	893	62	308

Motor Vehicle Fires

Total: 349
Automobiles: 296 (85%)
8 (3%) of the automobile fires considered intentionally set.

Arson Fires

Total Arsons: 151 **Dollar loss: $938,410**

0.21 Arson Fires/1,000 Population

Situation	Arsons	% Situation	% Arson	Dollar Loss
Structure Arsons	31	1%	21%	$880,976
Vehicle Arsons	8	2%	5%	44,750
Other Arsons	112	7%	74%	12,684

0.04 Structure arsons/1,000 population
0.01 Vehicle arsons /1,000 population
0.16 Other arsons/1,000 population

2 Civilian Deaths 10 Fire Service Injuries

Peak Times of Day for:

Structure Arsons	#	%	Vehicle Arsons	#	%
16:01 - 20:00	9	29%	00:01 - 04:00	4	50%
00:01 - 04:00	7	23%	20:01 - 00:00	2	25%
08:01 - 12:00	6	19%	08:01 - 12:00	1	13%
12:01 - 16:00	6	19%	12:01 - 16:00	1	13%

Other Arsons	#	%
20:01 - 00:00	43	38%
16:01 - 20:00	30	27%
12:01 - 16:00	18	16%

Peak Fixed Property Uses for Structure Arsons	#	%
Apartments	18	58%
Residential, other	2	6%
Mercantile, business, other	2	6%
High/junior high/middle school	2	6%

BOSTON FIRES FROM 2009 TO 2013 **POPULATION: 617,594**

	Total	Structure	Vehicle	Other	Total	Structure	Vehicle	Other
2009	5,547	4,126	426	995	104	25	34	45
2010	5,812	4,187	378	1,247	123	31	17	75
2011	5,539	4,249	327	963	138	36	13	89
2012	5,693	4,192	280	1,221	150	27	18	105
2013	5,831	4,303	295	1,233	136	22	6	108

CHELSEA FIRES FROM 2009 TO 2013 **POPULATION: 35,177**

Year	Total Fires	Structure Fires	Vehicle Fires	Other Fires	Total Arsons	Structure Arsons	Vehicle Arsons	Other Arsons
2009	271	209	18	44	11	7	1	3
2010	376	254	17	105	15	8	0	7
2011	326	243	23	60	11	5	2	4
2012	425	307	20	98	12	4	4	4
2013	435	277	18	140	10	7	1	2

REVERE FIRES FROM 2009 TO 2013 **POPULATION: 51,755**

Year	Total Fires	Structure Fires	Vehicle Fires	Other Fires	Total Arsons	Structure Arsons	Vehicle Arsons	Other Arsons
2009	414	377	10	27	3	3	0	0
2010	468	368	9	91	1	0	1	0
2011	445	369	13	63	2	1	1	0
2012	398	300	16	82	4	2	0	2
2013	469	345	23	101	3	2	0	1

WINTHROP FIRES FROM 2009 TO 2013 **POPULATION: 17,497**

Year	Total Fires	Structure Fires	Vehicle Fires	Other Fires	Total Arsons	Structure Arsons	Vehicle Arsons	Other Arsons
2009	89	45	11	33	8	1	1	6
2010	88	45	3	40	6	0	0	6
2011	61	37	1	23	2	0	0	2
2012	41	22	2	17	2	0	0	2
2013	82	59	3	20	1	0	1	0

Suffolk County Fire Experience by Community for 2013

	Boston	Chelsea	Revere	Winthrop	Suffolk County*	State
Total Fires	**5,831**	**435**	**469**	**41**	**6,450**	**29,828**
Population	617,594	35,177	51,755	17,497	722,023	6,549,639
Rate/1K Pop.	9.4	12.4	9.1	4.7	9.5	4.5
Civilian Deaths	5	0	0	0	5	44
Civ. Deaths/10K Pop.	0.08	0	0	0	0.07	0.07
Fire Service Deaths	0	0	0	0	0	0
Civilian Injuries	19	4	2	1	26	323
Civ. Inj./1K Pop.	0.03	0.11	0.04	0.06	0.04	0.05
Fire Service Injuries	13	50	3	0	66	478
Est. $ Loss	$36,882,465	5,036,743	1,453,236	357,280	54,178,816	244,567,939
Structure Fires	**4,303**	**277**	**345**	**59**	**4,992**	**17,353**
Structure Fires/ 1,000 Population	7.0	7.9	6.7	3.4	7.0	2.7
Structure Fires Dollar Loss	$34,565,461	4,886,846	1,359,871	318,680	41,131,458	212,300,327
Residential Building Fires	3,555	219	304	44	4,112	14,476
Confined Fires	3,169	171	285	34	3,659	11,464
Vehicle Fires	**295**	**18**	**23**	**3**	**349**	**2,587**
Vehicle Fires 1,000 Population	0.5	0.5	0.4	0.2	0.5	0.4
Vehicle Fire Dollar Loss	$1,812,978	60,552	90,780	30,150	12,192,010	27,305,997
Other Fires	**1,233**	**140**	**101**	**20**	**1,545**	**9,888**
Other Fires Dollar Loss	$504,026	89,345	2,585	8,450	845,348	4,991,615

*This figure includes 63 incidents reported by Massport Fire-Rescue. There were 8 structure fires, 10 vehicle fires and 45 outside and other fires.

Suffolk County Arson Experience by Community for 2013

	Boston	Chelsea	Revere	Winthrop	Suffolk County*	State
Total Arsons	**136**	**10**	**3**	**1**	**151**	**902**
Population	617,594	35,177	51,755	17,497	722,023	6,549,639
Rate/1,000 Population	0.22	0.28	0.06	0.06	0.21	0.14
Civilian Deaths	2	0	0	0	2	4
Fire Service Deaths	0	0	0	0	0	0
Civilian Injuries	0	0	0	0	0	9
Fire Service Injuries	0	8	2	0	10	30
Est. $ Loss	$283,185	420,075	230,500	4,400	938,410	6,608,710
Structure Arsons	**22**	**7**	**2**	**0**	**31**	**195**
Structure Arsons/ 1,000 Population	0.04	0.20	0.04	0.00	0.04	0.03
Structure Arson Dollar Loss	$232,401	418,075	230,500	0	880,976	6,093,309
% of Structure Fires Caused by Arson	1%	3%	1%	0%	1%	1%
% of Structure Fire Dollar Loss Caused by Arson	1%	9%	17%	0%	2%	3%
Residential Building Arsons	15	6	2	0	23	130
Vehicle Arsons	**6**	**1**	**0**	**1**	**8**	**75**
Vehicle Arsons/ 1,000 Population	0.01	0.03	0.00	0.06	0.01	0.01
Vehicle Arson Dollar Loss	$38,100	2,250	0	4,400	44,750	387,751
% of Vehicle Fires Caused by Arson	2%	6%	0%	33%	2%	3%
% of Vehicle Fire Dollar Loss Caused by Arson	2%	4%	0%	15%	0.4%	1%
Other Arsons	**108**	**2**	**1**	**0**	**112**	**632**
Other Arson Dollar Loss	$12,684	0	0	0	12,684	127,650

*There was 1 intentionally set fire reported by Massport Fire-Rescue.

2013 Suffolk County Structure Fires by Property Use

Property Use	Boston	Chelsea	Revere	Winthrop	Suffolk County[16]
Assembly	**197**	**9**	**9**	**6**	**228**
Assembly, other	16	0	0	0	17
Electronic amusement center	3	0	0	0	3
Ice rink: indoor, outdoor	1	0	0	0	1
Roller rink: indoor or outdoor	1	0	0	0	1
Ballroom, gymnasium	1	0	0	0	1
Convention center, exhibition hall	1	0	0	0	1
Stadium, arena	2	0	0	0	2
Playground	1	0	0	1	2
Places of worship, funeral parlors	1	0	0	0	1
Church, mosque, synagogue, temple	27	2	1	0	30
Clubs, other	2	0	1	0	3
Athletic/health club	4	1	0	0	5
Clubhouse	2	0	0	0	2
Yacht Club	0	0	0	1	1
Library	5	0	0	0	5
Museum	2	0	0	0	2
Memorial structure	1	0	0	0	1
Eating, drinking places	30	0	0	0	30
Restaurant or cafeteria	90	5	5	4	104
Bar or nightclub	5	1	2	0	8
Airport passenger terminal	0	0	0	0	6
Rapid transit station	1	0	0	0	1
Live performance theater	1	0	0	0	1
Educational	**82**	**10**	**3**	**1**	**96**
Educational, other	18	1	0	0	19
Schools, non-adult	1	0	0	0	1
Preschool	3	0	1	0	4
Elementary school	14	1	2	1	18
High/junior high/middle school	14	3	0	0	17
Adult education, college classroom	22	1	0	0	23
Day care, in commercial property	7	2	0	0	9
Day care, in residence, licensed	3	2	0	0	5
Institutional	**173**	**10**	**1**	**3**	**187**
Health care, detention, & corr., other	29	0	0	0	29
Nursing homes, 4+ persons	33	5	0	0	38
Mental retard./dev. disability facility	16	0	1	3	20
Alcohol/substance abuse recov. Ctr.	23	0	0	0	23
Asylum, mental institution 1	4	0	0	5	

[16] Suffolk County includes the 7 structure fires at airport terminals reported by Massport at Logan Airport.

2013 Suffolk County Structure Fires by Property Use

Property Use	Boston	Chelsea	Revere	Winthrop	Suffolk County
Institutional (con't)					
Hospital - medical or psychiatric	49	0	0	0	49
Hospices	4	0	0	0	4
Clinics, Dr. offices, hemodialysis ctr.	6	0	0	0	6
Clinic, clinic-type infirmary	3	1	0	0	4
Jail, prison (not juvenile)	1	0	0	0	1
Reformatory, juvenile detention ctr.	4	0	0	0	4
Police station	4	0	0	0	4
Residential	**3,560**	**220**	**304**	**44**	**4,122**
Residential, other	347	5	0	0	352
1 or 2 family dwelling	400	20	74	18	512
Multifamily dwellings	2,407	166	201	24	2,797
Boarding/rooming house	143	4	7	2	156
Hotel/motel, commercial	15	14	14	0	43
Residential board and care	58	7	8	0	73
Dormitory type residence, other	170	0	0	0	170
Sorority house, fraternity house	10	0	0	0	10
Barracks, dormitory	5	4	0	0	9
Mercantile, business	**173**	**19**	**27**	**4**	**223**
Mercantile, business, other	54	1	1	0	56
Convenience store	7	1	1	0	9
Food & beverage sales, grocery store	44	8	14	2	68
Textile, wearing apparel sales	2	0	0	0	2
Household goods, sales, repairs	1	2	0	0	3
Specialty shop	6	0	0	0	6
Pers. Serv., incl. barber, beauty shops	4	1	1	0	6
Laundry, dry cleaning	7	1	1	0	9
Professional supplies, services	3	0	0	0	3
Service station, gas station	0	0	1	0	1
MV or boat sales, services, repair	4	0	1	0	5
General retail, other	3	0	0	1	4
Department or discount store	1	0	0	0	1
Bank	3	1	0	0	4
Business office	34	4	7	1	46
Utility, defense, agriculture, mining	**7**	**0**	**0**	**0**	**7**
Utility, defense, agric., mining, other	1	0	0	0	1
Electric generating plant	1	0	0	0	1
Laboratory or science laboratory	5	0	0	0	5

2013 Suffolk County Structure Fires by Property Use

Property Use	Boston	Chelsea	Revere	Winthrop	Suffolk County
Manufacturing, processing	**2**	**4**	**0**	**0**	**6**
Storage	**23**	**4**	**1**	**1**	**29**
Storage, other	4	1	0	0	5
Outside material storage area	1	0	0	0	1
Outbuilding or shed	5	0	0	0	5
Livestock, poultry storage	0	0	1	0	1
Vehicle storage, other	1	0	0	0	1
Parking garage, (det. res. garage)	6	0	0	0	6
Parking garage, general vehicle	1	0	0	0	1
Fire station	2	0	0	0	2
Warehouse	3	3	0	0	6
Dock, marina, pier, wharf	0	0	0	1	1
Outside or special property	**61**	**0**	**0**	**0**	**61**
Property Use, other	**23**	**0**	**0**	**0**	**23**
Total Structure Fires	**4,296**	**275**	**345**	**59**	**4,982**

2013 Suffolk County Reponses[17] by Incident Type

Incident Type	Boston	Chelsea	Revere	Winthrop	Massport Fire Rescue	Suffolk County
Fires	5,849	447	473	82	74	6,925
Overpressure, rupture, explosion (no fire)	55	5	3	3	10	76
Rescue & EMS calls	33,663	6,519	6,156	1,812	2,339	50,489
Hazardous conditions (no fire)	3,645	269	172	99	295	4,480
Service calls	10,069	525	914	498	108	12,114
Good intent calls	6,349	386	392	154	118	7,399
False alarm & false calls	13,817	999	883	199	282	16,180
Severe weather & natural disaster	9	3	2	0	1	15
Special incident type	242	25	63	4	10	344

[17] These figures include mutual or automatic aid given calls.

Boston Fires in 2013

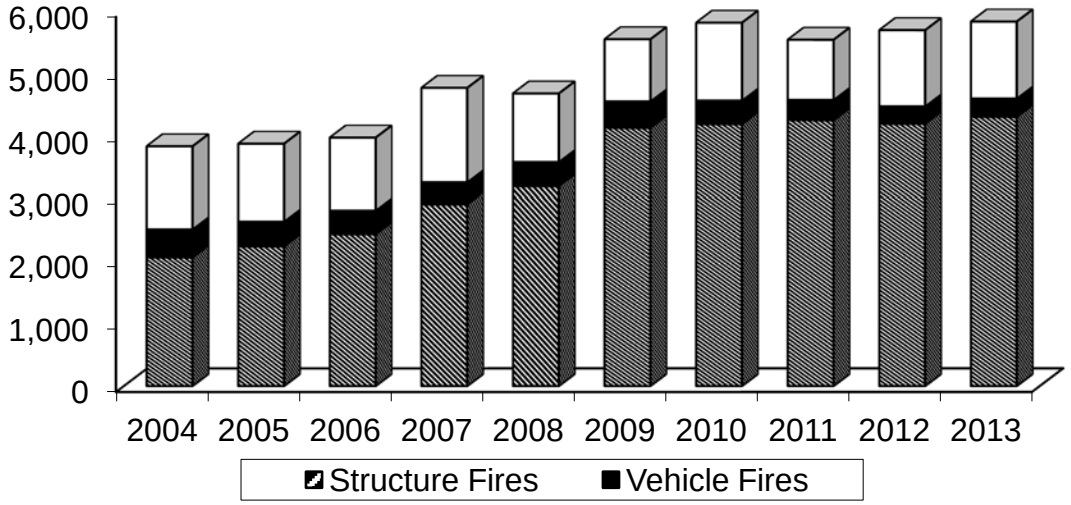
5,831 Fires — 4,303 Structure Fires, 295 Vehicle Fires & 1,233 Other Fires
The Boston Fire Department reported 4,303 structure fires, 295 motor vehicle fires, 512 outside rubbish fires, 493 grass, tree or brush fires, 102 special outside fires, six cultivated vegetation or crop fires, and 120 unclassified fires to the Massachusetts Fire Incident Reporting System (MFIRS) in 2013. These 5,831 incidents caused five civilian deaths, 19 civilian injuries, 13 fire service injuries and an estimated dollar loss of $36.9 million. There were 9.4 fires for every 1,000 residents in 2013. Although fewer than 10% of the state's residents live in the City of Boston, the Boston Fire Department reported 20% of the 29,828 fire incidents reported statewide in 2013.

All Fires Up
The total number of Boston fires reported to the Massachusetts Fire Incident Reporting System increased by 138 from the 5,693 reported in 2012 to 5,831 in 2013. Structure fires increased by 111, motor vehicle fires increased by 15, and outside and other fires increased by 12. Motor vehicle fires have been on a downward trend since 1986; but 2013 was third time since 1994 that they increased. Outside and other fires continued their up and down trend of the past 10 years.

BOSTON FIRES FROM 2004 TO 2013

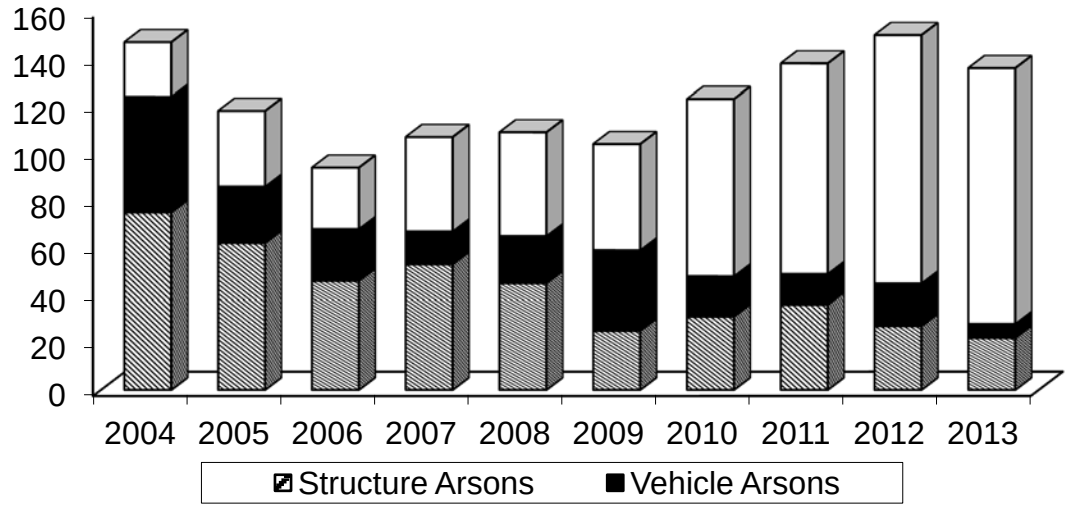
Year	Total Fires	Structure Fires	Vehicle Fires	Other Fires	Total Arsons	Structure Arsons	Vehicle Arsons	Other Arsons
2004	3,833	2,030	452	1,321	141	75	43	23
2005	3,874	2,238	397	1,239	118	62	24	32
2006	3,971	2,432	379	1,160	94	46	22	26
2007	4,768	2,910	347	1,511	107	53	14	40
2008	4,678	3,194	387	1,097	109	45	20	44
2009	5,547	4,126	426	995	104	25	34	45
2010	5,812	4,187	378	1,247	123	31	17	75
2011	5,539	4,249	327	963	138	36	13	89
2012	5,693	4,192	280	1,221	150	27	18	105
2013	5,831	4,303	295	1,223	136	22	6	108

Boston Fires by Incident Type



136 Arsons — 22 Structure Arsons, 6 Vehicle Arsons & 108 Other Arsons
One hundred and thirty-six (136), or 2%, of the 5,831 Boston fires were considered intentionally set, or, for purposes of this analysis, arson. The 22 structure arsons, six motor vehicle arsons and 108 outside and other arsons caused two civilian deaths and an estimated dollar loss of $283,185.

Boston Arsons by Incident Type



STRUCTURE FIRES

Reported Structure Fires Up

The 4,303 structure fires caused two civilian deaths, 19 civilian injuries, 13 fire service injuries and an estimated dollar loss of $34.6 million. These incidents represented 74% of Boston's reported fires in 2013. The average estimated dollar loss per structure fire was $8,033. The total number of reported structure fires increased by 11, or 3%, from the 4,192 reported in 2012.

Arson Caused 1% of Structure Fires

The 22 structure arsons caused an estimated dollar loss of $232,401. Arson was indicated as the cause of 1% of the structure fires and 1% of Boston's structure fire dollar loss. The 22 structure arsons accounted for 16% of the Boston arson fires reported in 2013. The total number of reported structure arsons decreased by five, or 19%, from 27 in 2012.

Over 2/3 of Structure Arsons Occurred in Residences

Sixty-eight percent (68%) of Boston's 22 structure arsons occurred in residential occupancies; 14% occurred in educational buildings; 9% happened in mercantile facilities; and 5% each happened in institutional properties and storage facilities.

BUILDING FIRES

There were 4,291 building fires of different types in Boston in 2013. These 4,291 building fires accounted for 99.7% of all structure fires in Boston.

83% of Building Fires in Homes

The 4,291 building fires that occurred in Boston in 2013 can be broken down by fixed property use as follows: 3,555, or 83%, of all the building fires reported in 2013 were in residential properties; 197 fires occurred in public assembly properties; 173 fires took place in mercantile and office properties; 173 fires happened in institutional facilities; 82 fires occurred in educational properties; 61 took place in special properties; 23 fires were in storage facilities; seven happened in industrial, utility, defense, agricultural or mining facilities; and two were reported in manufacturing or processing facilities. Eighteen (18) fires occurred in buildings where the property use was unclassified or not reported.

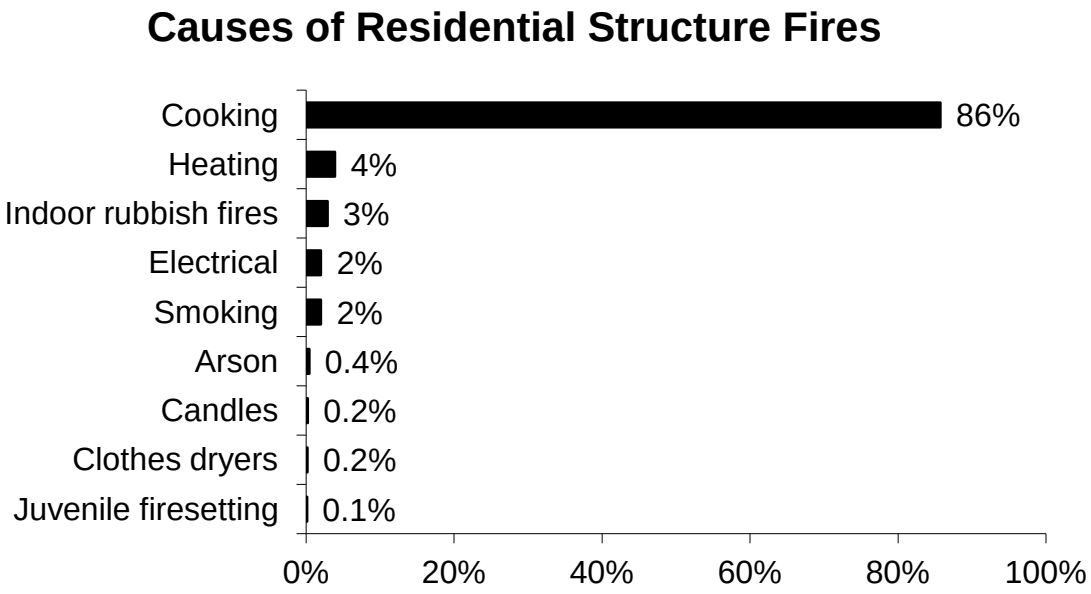
RESIDENTIAL FIRES

Residential Building Fires Caused 2 Deaths & $26.1 Million in Damages

In 2013, 3,555 or 83%, of Boston's 4,291 reported building fires occurred in residences. Fires in or on residential buildings caused two civilian fire deaths, 19 civilian injuries, 12 fire service injuries and an estimated dollar loss of $26.1 million. The total number of residential building fires increased by 94, or 3%, from the 3,461 reported in 2012.

Apartments Accounted for Over 2/3 of Residential Building Fires
The peak fixed property uses for residential building fires were apartments, accounting for 68% of the residential building fires in Boston. Eleven percent (11%) occurred in 1- or 2-family homes, 5% occurred in dormitories, 4% happened in rooming houses, 2% occurred in residential board and care facilities, less than 1% occurred in hotels or motels, and 10% happened in unclassified residential occupancies.

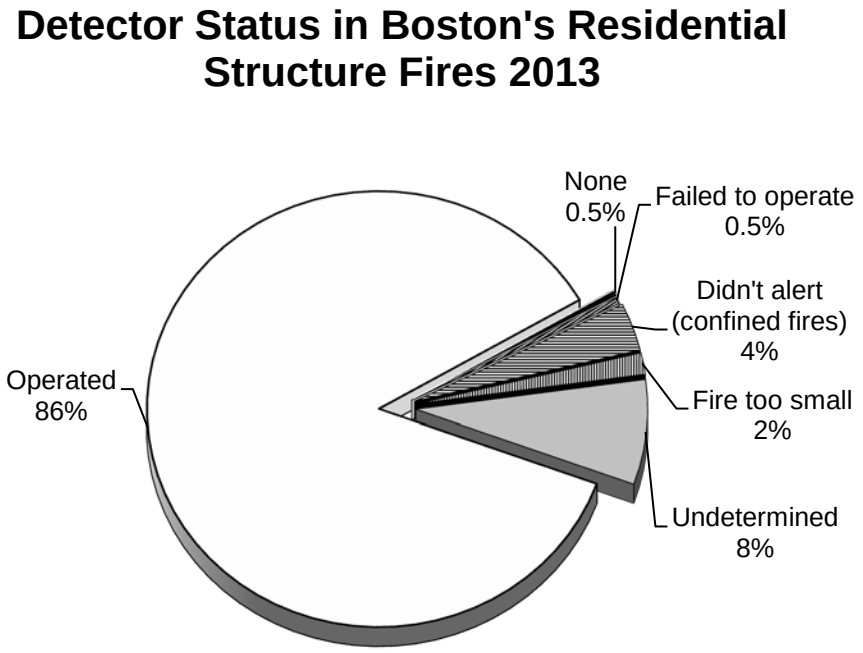
Cooking Caused 86% of Boston's Residential Fires
Cooking was the leading cause of the 3,555 fires in Boston residential buildings, accounting for 86% of these fires. Heating equipment was the cause of 4% of these fires. Indoor rubbish fires were responsible for 3%; and electrical problems and smoking each caused 2% of these fires. Arson, clothes dryers, candles and juvenile-set fires each accounted for less than 1% of the fires in Boston residences in 2013.



89% of Residential Building Fires Are Confined to Non-Combustible Containers[18]
Three thousand one hundred and sixty-nine (3,169), or 89% of all residential building fires, were reported as confined to non-combustible containers in 2013. Two thousand nine hundred and seventy-nine (2,979) of the reported fires were cooking fires contained to a non-combustible container, accounting for 84% of residential building fires. One hundred (100), or 3%, of these fires were contained rubbish fires. Sixty-nine (69), or 2%, were fires confined to a fuel burner or boiler malfunction. Twenty (20), or 1%, of all residential building fires reported in 2013 were fires confined to a chimney. One (1), or less than 1%, was a confined commercial compactor fire.

[18] 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.

Detectors Alerted Occupants in 86% of Fires
Smoke or heat detectors operated and alerted the occupants in 3,061, or 86%, of the residential building fires. In 4% of these fires[19], the detectors did not alert the occupants. Detectors were present but did not operate in less than 1% of these incidents. In less than 1% of these fires, no detectors were present at all. The fire was too small to trigger the detector in 2% of the residential fires. Smoke detector performance was undetermined in 275 incidents, or 8%, of Boston's residential building fires.



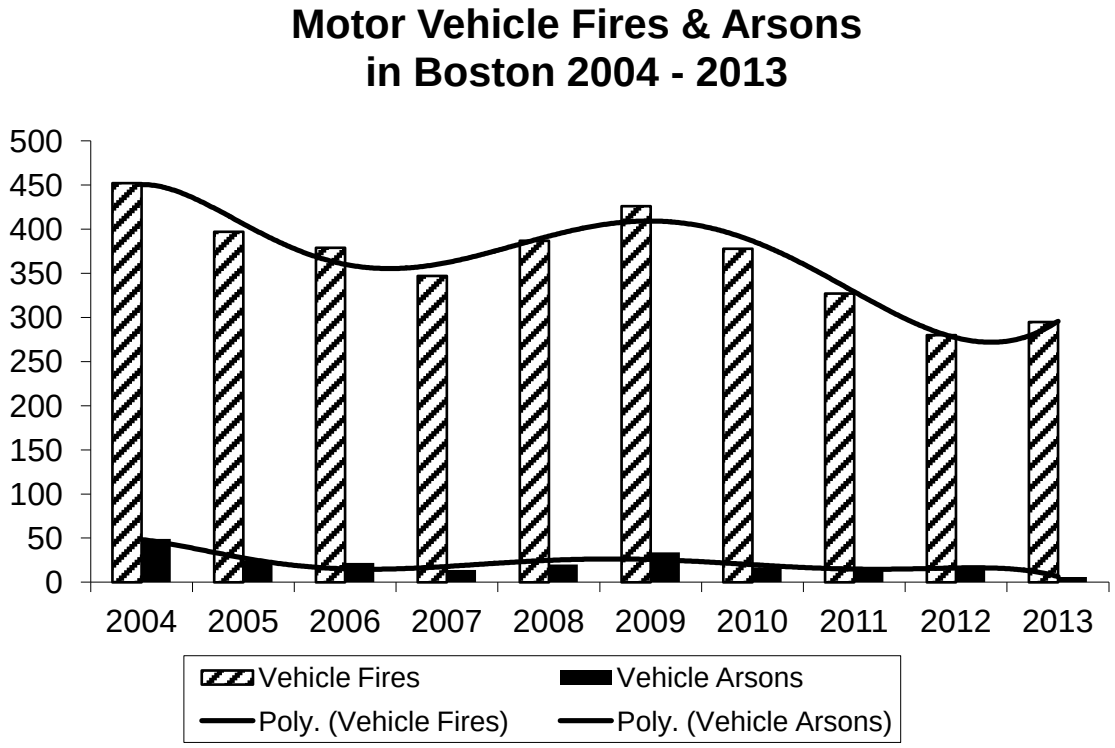
2 Detectors Failed from Lack of Maintenance
Of the 17 fires where smoke detectors were present but failed to operate, two (2), or 12%, failed from a lack of maintenance. One (1), or 6%, failed because of missing or disconnected batteries; and one, or 6%, did not operate because of dead batteries. For 13 cases, or 76%, the reason the detector failed was not determined or classified.

MOTOR VEHICLE FIRES

Motor Vehicle Fires Increase
The 295 motor vehicle fires caused an estimated dollar loss of $1.8 million. Motor vehicle fires comprised 5% of Boston's reported fires in 2013. The total number of motor vehicle fires increased by 15 from the 280 reported in 2012. This is the first increase in

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

motor vehicle fires since 2009 and goes against the decreasing trend in motor vehicle fires.



2% of Motor Vehicle Fires Considered Arson
Six (6), or 2%, of Boston's 295 motor vehicle fires were considered intentionally set, or for purposes of this report, arson. These six motor vehicle arsons caused an estimated dollar loss of $38,100. The total number of reported motor vehicle arsons decreased by 12, or 67% from the 18 reported in 2012.

Boston Fire Department Instrumental in Getting MV Fire Legislation Passed
The Boston Fire Department was instrumental in passing legislation requiring owners of burned motor vehicles to complete and sign a report which must also be signed by a fire official from the department in the community where the fire occurred before an insurance claim could be made. The Burned/Recovered Motor Vehicle Reporting Law was implemented in 1987. The Boston Fire Department has successfully used this legislation as a tool to aggressively investigate suspicious or questionable motor vehicle fires and has dramatically reduced the frequency of owners burning their cars to "sell" them back to the insurance companies.

Boston Fire Department Brought Vehicle Arson Down 99% Since 1986
The total number of motor vehicle fires reported annually has plunged 3,223 with a high of 3,601 in 1983 to 295 in 2013, a 90% decrease. The drop in vehicle arson was even more dramatic. Vehicle arson fell 3,043 from the 1986 high of 3,061 incidents to six in 2013 for a 99.8% decline.

Motor Vehicle Arsons Less Than Structure Arsons – Continues Downward Trend
There were fewer motor vehicle arsons than structure arsons in Boston in 2013. Motor vehicle arson represents 4% of the total arson problem while structure arson accounts for 16% of all 2013 arsons in Boston.

OUTSIDE AND OTHER FIRES

Outside Rubbish Fires Account for 21% of Boston's Fires
The 512 outside rubbish fires, 493 grass, tree or brush fires, 102 special outside fires, six cultivated vegetation or crop fires, and 120 unclassified fires are grouped together as 'outside or other fires.' These 1,233 outside and other fires caused three civilian deaths and an estimated dollar loss of $504,026. Outside and other fires comprised 21% of the 5,831 Boston fires reported in 2013.

108 Outside and Other Fires Considered Arson
The 108 identified outside and other arsons caused two civilian deaths and an estimated dollar loss of $12,684. Fifty-five (55) were grass, tree or brush fires. Thirty-eight (38) were special outside fires, and 15 were unclassified fires. Outside and other arsons accounted for 9% of Boston's outside and other fires, and 79% of Boston's total arson fires.

FATAL FIRES

- On February 2, 2013, at 8:19 p.m., the Boston Fire Department was called to a fatal outside fire in a backyard. The victim, a 34-year old man, poured gasoline on himself and lit his clothing on fire in a suicide attempt. He was transported to a local hospital where he later succumbed to his injuries. No one else was injured in this fire.

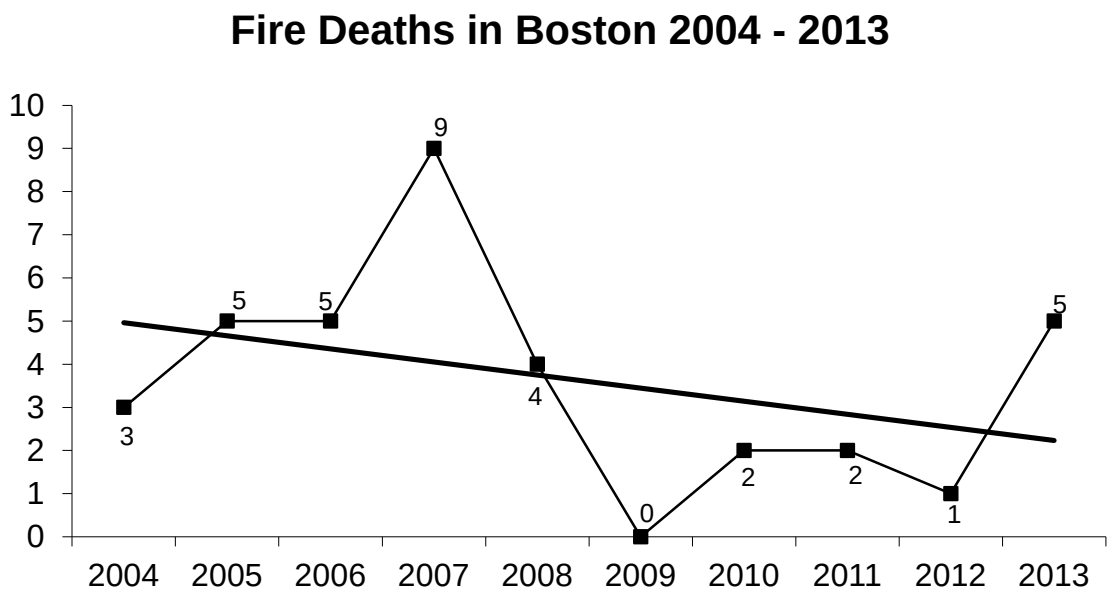
- On February 22, 2013, at 1:30 p.m., the Boston Fire Department was dispatched to an EMS call for a severely burned victim in a single-family home. Upon arrival they found an 18-year old woman with severe burns to her body. The victim's clothes ignited when she got too close to a candle. Her father heard her screams and extinguished the flames with his bare hands and a coat. Nothing else in the home ignited. She was transported to a local hospital where she succumbed to her injuries. The victim's father was also injured at this fire. It was undetermined if detectors and sprinklers were present. Damages from this fire were not estimated.

- On March 30, 2013, at 6:06 p.m., the Boston Fire Department was called to a brush fire adjacent to the Fenway. When the fire was knocked down, a civilian reported seeing the victim, a 50-year old man, floundering in the river. He was rescued by firefighters and transported to a local hospital with burns over 50% of his body surface area. He later succumbed to his injuries.

- On April 28, 2013, at 6:36 a.m., the Boston Fire Department was called to a fatal smoking fire in a two-family home. The 22-year old female victim was a college

student at Boston University living in off-campus housing in an attic apartment. Approximately 20 people also lived in this house. She was trapped above the fire and her exits were blocked by the flames. Abandoned smoking materials started the fire in an interior stairway. There were eight other civilian injuries and seven firefighter injuries at this fire. Heat detectors were present and alerted the occupants. There were no sprinklers. Damages from this fire were estimated to be $610,000.

- On July 25, 2013, at 9:07 p.m., the Boston Fire Department was called to a fatal outside fire in a backyard. The victim, a 58-year old man, lit his clothing on fire in a suicide attempt. He was transported to a local hospital where he later succumbed to his injuries. No one else was injured in this fire.



JUVENILE-SET FIRES

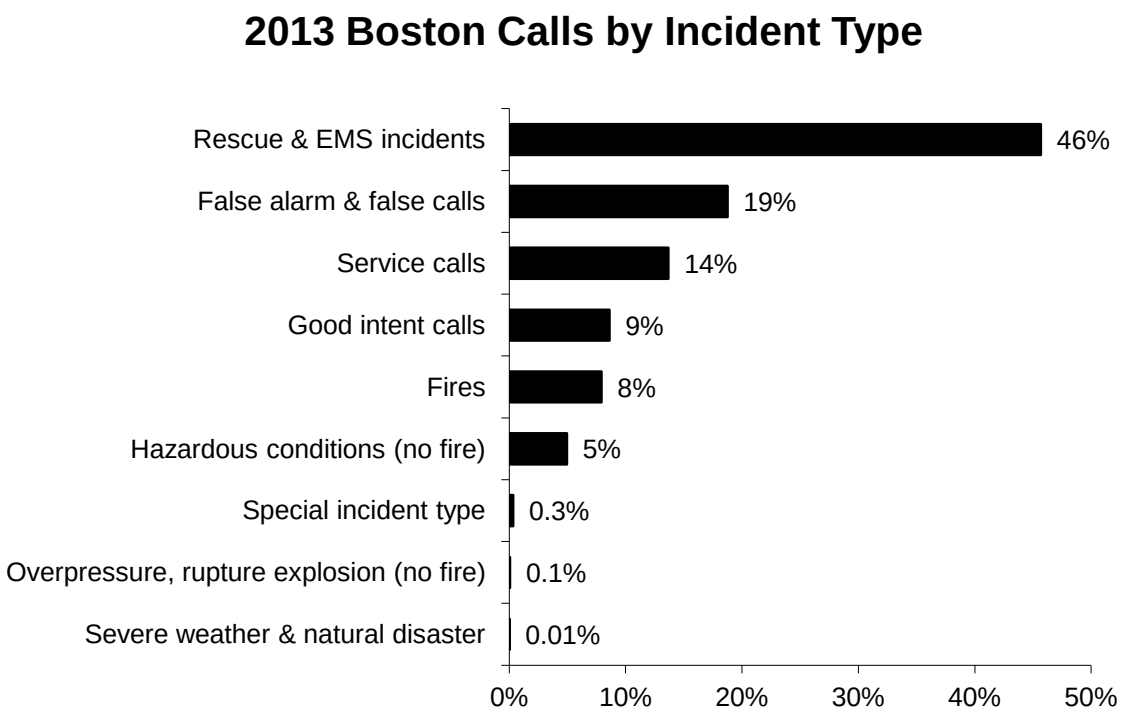
18 Juvenile-set Fires
There were 18 reported juvenile-set fires in Boston in 2013. The five structure fires, six brush fires, three special outside fires, and four unclassified fires caused $50,950 in estimated damages.

ALL CALLS

Rescue & EMS Calls Were 46% of All Reported Responses
In 2013, the Boston Fire Department reported 73,698 total responses to MFIRS. Of these 76,698 responses, 67,849 non-fire calls were voluntarily reported.

Of these 67,849 non-fire calls, 33,663, or 46% of all the responses reported in 2013, were reported rescue and emergency medical services (EMS) calls[20]; 13,817, or 19%, were reported false alarm or false calls; 10,069, or 14%, were reported service calls such as lock-outs, water or smoke problems, unauthorized burning or public service assistance; 6,349, or 9%, were reported good intent calls; 3,645, or 5%, were reported hazardous condition calls with no fire; 242, or 0.3%, were special incident type calls such as citizen complaints; 55, or 0.1%, were reported overpressure, rupture, explosion or overheat calls with no fire; and nine, or 0.01%, were severe weather calls..

Five thousand eight hundred and forty-nine (5,849), or 8%, of the total responses submitted by the Boston Fire Department were fires[21].



[20] The Boston Fire Department does not run any ambulances. Instead they dispatch their companies as first responders to all EMS calls.

[21] This includes the fires that Boston responded to outside of their jurisdiction as mutual aid given.

CONCLUSIONS

- **5 Civilian Died in Boston in 2013**

Five (5) civilians died in a Boston fire in 2013. This is the most fire deaths in Boston since nine in 2007 when nine people were killed in fires.

- **No Fire-Related Line of Duty Deaths**

There were no fire-related line of duty deaths in Boston in 2013.

- **All Fires Up**

All fires increased in 2013.

- **MV Arsons Decreased**

Motor vehicle arsons decreased by 67% from 18 reported in 2012 to six in 2013. Motor vehicle arson represents 4% of the total arson problem while structure arson accounted for 16% of the 2013 arsons in Boston.

- **Cooking Caused 86% of Residential Fires**

Cooking was the leading cause of Boston's residential buildings, accounting for 3,048, or 86%, of the 3,476 fires.

- **Smoke Detectors Operated in 86% of Residential Fires**

Smoke or heat detectors operated in 86% of residential building fires.

- **There Were No Working Detectors in 1% of Residential Building Fires**

There were no working detectors in 1% of Boston's residential building fires. Of these detectors that did not work, less than 1% of detectors failed to operate and in less than 1% of these fires detectors were not present.

- **Apartments Accounted for Over 2/3 of Residential Building Fires**

The peak fixed property uses for building fires were apartments, accounting for 68% of the building fires in Boston; 11% occurred in 1- or 2-family homes; 5% occurred in dormitories, 4% happened in rooming houses, 2% occurred in residential board and care facilities; and less than 1% occurred in hotels or motels.

Boston FDID: 25035 Population: 617,594

Total Fires 5,831 **$36,882,465**

9.4 Fires/1,000 Population

Situation Found	Fires	% of Fires	Dollar Loss
Structure Fires	4,303	74%	$34,565,461
Vehicle Fires	295	5%	1,812,978
Other Fires	1,233	21%	504,026

5 Fatal Fires 0.86 Civilian Deaths/1,000 Fires
5 Civilian Deaths 0.08 Civilian Deaths/10,000 population
19 Civilian Injuries 13 Fire Service Injuries

6.97 Structure fires/1,000 population
0.48 Vehicle fires /1,000 population
2.00 Other fires/1,000 population

Building Fires: 4,291

Residential Building Fires: 3,555

Residential Building Fires Confined to Non-Combustible Containers: 3,169

Unconfined Residential Building Fires: 386

2 Civilian Deaths 19 Civilian Injuries 12 Fire Service Injuries

Occupancy	Fires	%	Detector Status	Fires	%
Apartments	2,407	68%	Operated	3,061	86%
1- & 2-Family homes	400	11%	Didn't operate	17	0.5%
Dormitories	185	5%	None	18	0.5%
Rooming houses	143	4%	Fire too small	57	2%
Residential board & care	58	2%	Didn’t alert (confined)	127	4%
Hotel/motel	15	0.4%	Undetermined	275	8%

Area of Origin[22]	%	Heat Source	%	%Unconfined[23]
Kitchen	81%	Radiated heat from oper. eq.	2%	17%
Heating room or area	2%	Arcing	1%	12%
Bedroom	1%	Heat from oper. equip.	1%	10%
Exterior balcony/unencl. porch	1%	Cigarette	1%	10%

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

[23] 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 Heat Source from the fires contained to non-combustible containers (Incident Types 113 – 118). This field does not need to be completed for confined fires, but is sometimes voluntarily reported.

Item First Ignited[24]	**%**
Food, cooking materials	85%
Rubbish, trash, waste products	3%
Flammable, combustible liquid	2%
Structural member, framing	1%
Electrical wire, cable insulation	1%

Factor Contrib. to Ignit.	**%**	**%Unconfined**[25]
Abandoned materials	2%	17%
Too close to combustibles	1%	10%
Unspecified short-circuit arc	1%	9%
Equipment unattended	1%	8%
Misuse of material or prod.	1%	7%
Electrical failure, malfunc.	1%	6%

Equipment[26]	**%**
Cooking equipment	79%
None	6%
Boiler, furnace, cent. heat. unit	2%
Chimney, flue	1%
Fan	0.2%

Cause of Ignition	**%**	**%Unconfined**[27]
Unintentional	7%	62%
Failure of eq. or heat source	2%	16%
Intentional	0.4%	4%
Undetermined	1%	6%
Cause under investigation	1%	10%
Act of nature	0%	0%

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

Alerted occupants	90%
Didn't alert occupants	4%
Undetermined	6%

Mutual Aid Given	**# of Incidents**

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

[25] 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.

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

[27] 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.

Month	Total Fires	Structure Fires	Vehicle Fires	Other Fires
January	497	424	28	45
February	424	359	31	34
March	454	379	20	55
April	557	340	23	194
May	540	350	26	164
June	395	287	25	83
July	448	297	24	127
August	466	263	30	173
September	483	377	19	87
October	527	377	22	128
November	537	419	22	96
December	503	431	25	47

Day	Total Fires	Structure Fires	Vehicle Fires	Other Fires
Sunday	968	707	47	214
Monday	797	590	48	159
Tuesday	759	564	45	150
Wednesday	797	616	42	139
Thursday	794	562	39	193
Friday	808	588	40	180
Saturday	908	676	34	198

Time	Total Fires	Structure Fires	Vehicle Fires	Other Fires
00:01 - 04:00	446	286	39	121
04:01 - 08:00	380	280	31	69
08:01 - 12:00	960	766	55	139
12:01 - 16:00	1,335	958	57	320
16:01 - 20:00	1,575	1,211	58	306
20:01 - 00:00	1,135	802	55	278

Motor Vehicle Fires
Total: 295
Automobiles: 257 (87%)
6 (2%) of the automobile fires considered intentionally set.

Arson Fires

Total Arsons: 136 **$283,185**

	Arsons	% of Situation	% of Arson	Dollar Loss
Structure Arsons	22	1%	16%	$232,401
Vehicle Arsons	6	2%	4%	38,100
Other Arsons	108	9%	79%	12,684

2 Civilian Deaths

0.22 Arson fires/1,000 population
0.04 Structure arsons/1,000 population
0.01 Vehicle arsons /1,000 population
0.17 Other arsons/1,000 population

Peak Times of Day for Arson Fires

Structure Arsons	#	%
16:01 - 20:00	4	18%
00:01 - 04:00	3	14%
08:01 - 12:00	3	14%

Vehicle Arsons	#	%
00:01 - 04:00	3	50%
08:01 - 12:00	1	17%
12:01 - 16:00	1	14%
20:01 - 00:00	1	17%

Other Arsons	#	%
20:01 - 00:00	42	39%
16:01 - 20:00	29	27%
12:01 - 16:00	17	16%

Peak Fixed Property Uses for Structure Arsons

Occupancy	#	%
Apartments	13	59%
Mercantile, business, other	2	9%
Warehouse	1	5%
Residential, other	1	5%
Hospital	1	5%
High/junior high/middle school	1	5%
Elementary school	1	5%
Rooming house	1	5%
Adult education center, college classroom	1	5%

Chelsea Fires in 2013

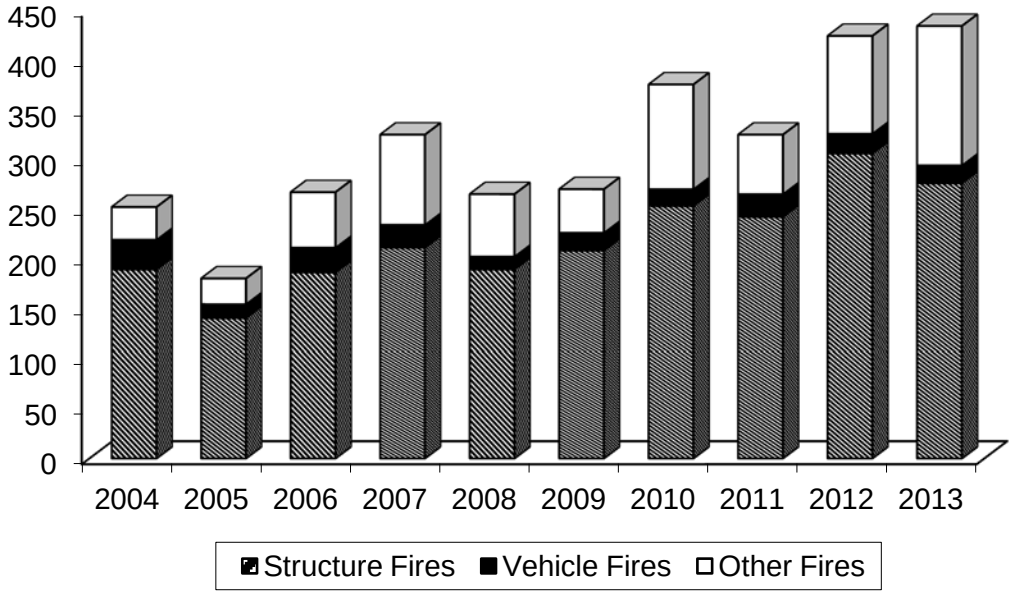
435 Fires — 277 Structure Fires, 18 Vehicle Fires and 140 Other Fires
The City of Chelsea reported 435 fires to the Massachusetts Fire Incident Reporting System (MFIRS) in 2013. The 277 structure fires, 18 motor vehicle fires, 107 grass, tree or brush fires, 14 outside rubbish fires, three special outside fires, and 16 unclassified fires caused four civilian injuries, 50 fire service injuries and an estimated dollar loss of $5 million. There were 12.4 fires for every 1,000 citizens in 2013.

Structure & MV Fires Down
Total fires increased by 10, or 2%, from the 425 fires reported in 2012. Structure fires decreased by 30 from the 307 reported in 2012. Motor vehicle fires decreased by two from 20 the previous year. Outside and other fires increased by 42 from the 98 reported in 2012.

CHELSEA FIRES FROM 2004 TO 2013

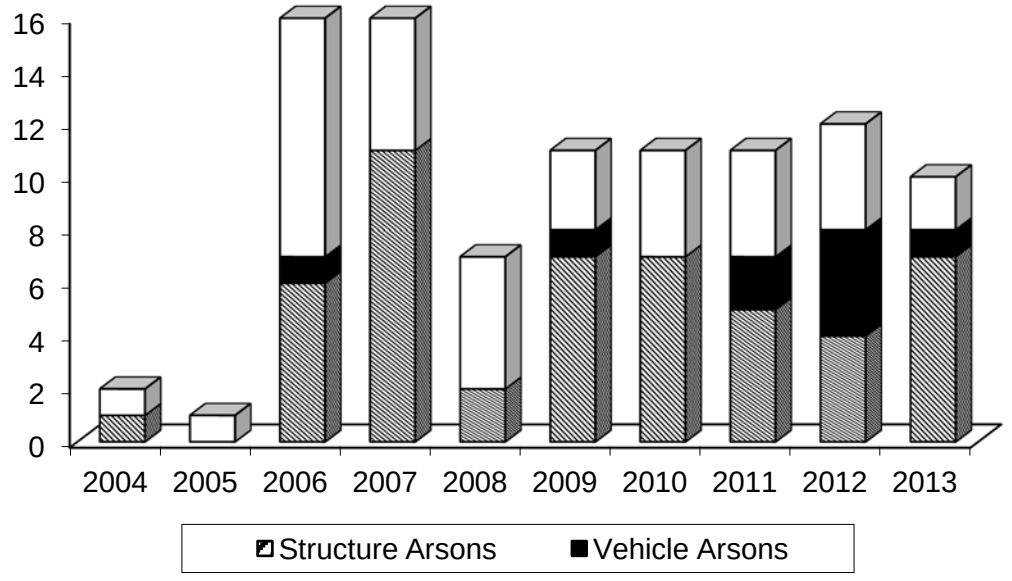
Year	Total Fires	Structure Fires	Vehicle Fires	Other Fires	Total Arsons	Structure Arsons	Vehicle Arsons	Other Arsons
2004	253	190	30	33	2	1	0	1
2005	181	141	14	26	1	0	0	1
2006	268	187	25	56	16	6	1	9
2007	326	212	23	91	16	11	0	5
2008	267	191	13	63	7	2	0	5
2009	271	209	18	44	11	7	1	3
2010	376	254	17	105	15	7	0	4
2011	326	243	23	60	11	5	2	4
2012	425	307	20	98	12	4	4	4
2013	435	277	18	140	10	7	1	2

Chelsea Fires by Incident Type



10 Arsons — 7 Structure Arsons, 1 Vehicle Arson & 2 Outside & Other Arsons
Ten (10), or 2%, of the 435 Chelsea fires were considered intentionally set, or, for purposes of this analysis, arson. The seven structure arsons, one motor vehicle arson, and two outside and other arsons caused eight fire service injuries and an estimated dollar loss of $420,325.

Chelsea Arsons by Incident Type



All Arsons Down Slightly

The total number of arson fires decreased by two from 12 the year before. Structure arsons increased by three from the four reported in 2012. Motor vehicle arsons decreased by three from four reported 2012. Outside and other arsons decreased by two from the four reported in 2012.

STRUCTURE FIRES

Structure Fires Down

The 277 structure fires caused four civilian injuries, 38 fire service injuries and an estimated dollar loss of $4.9 million. These fires represented 64% of Chelsea's reported fires in 2013. The total number of structure fires decreased by 30, or 10%, from the 307 structure fires reported in 2012.

Arson Caused 3% of Structure Fires

The seven structure arsons caused eight fire service injuries, and an estimated dollar loss of $418,075. Arson was indicated as the cause of 3% of the structure fires and accounted for 9% of Chelsea's structure fire dollar loss. The seven structure arsons represented 70% of Chelsea's arson fires reported in 2013. The total number of reported structure arsons increased by three from four reported in 2012.

BUILDING FIRES

There were 275 building fires of different types in Chelsea in 2013. These 275 building fires accounted for 99.3% of all structure fires in Chelsea.

80% of Building Fires in Homes

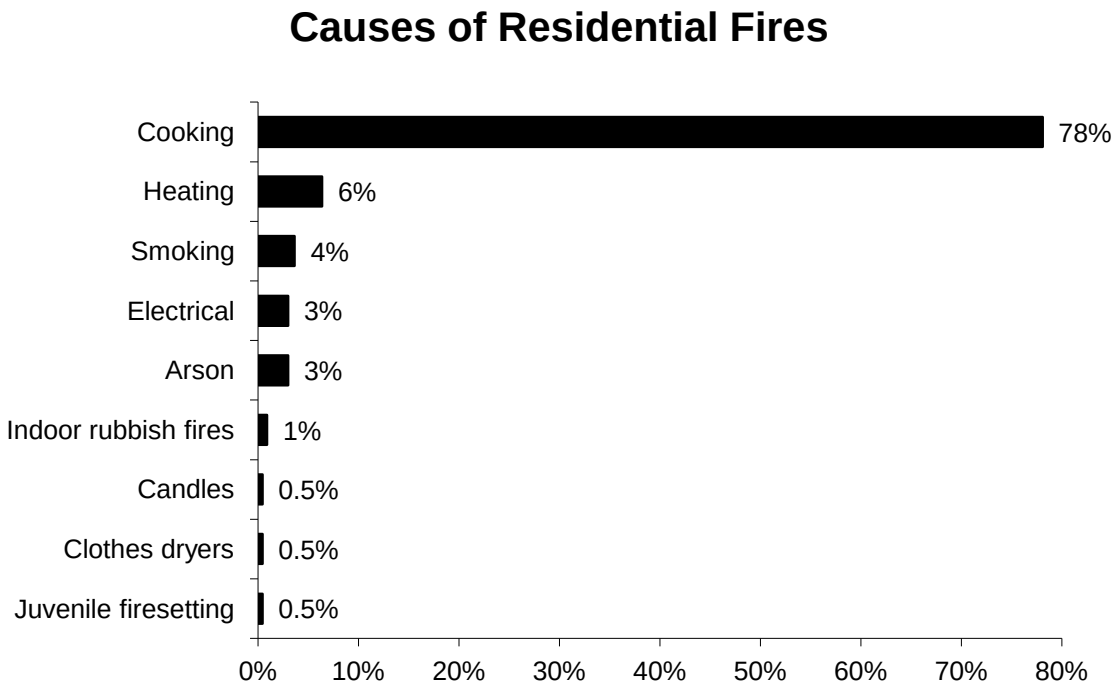
The 275 building fires that occurred in Chelsea in 2013 can be broken down by fixed property use as follows: 219 fires were in residential properties accounting for 80% of all building fires; 19 fires happened in mercantile or office properties; 10 fires occurred at institutional facilities; 10 fires occurred at educational facilities; nine fires occurred in public assembly properties; four fires occurred at storage facilities; and four fires happened at manufacturing facilities.

RESIDENTIAL BUILDING FIRES

Residential Building Fires Drop

Two hundred and nineteen (219), or 80%, of Chelsea's 275 building fires occurred in residential occupancies. This is a decrease of 32 over the 251 reported residential fires in 2012. The peak fixed property uses for residential building fires were apartments, accounting for 75% of the residential building fires in Chelsea; 9% occurred in one- or two-family homes; 6% happened in hotels or motels; 3% happened at residential board and care facilities; 2% occurred in rooming houses; 2% occurred in dormitories; and 2% occurred in unclassified residential properties.

Unsafe Cooking Practices Caused Over 3/4 of Residential Fires
Cooking was the leading cause of fires in Chelsea's residential properties in 2013, accounting for 78% of these fires. Heating equipment was the second leading cause, accounting for 6% of the fires in people's homes in Chelsea in 2013. Smoking caused 4% of these fires. Electrical problems and arsons each accounted for 3% and indoor rubbish fires caused 1% of these fires. Candles, clothes dryers and juvenile-set fires each caused less than 1% of residential building fires in Chelsea.



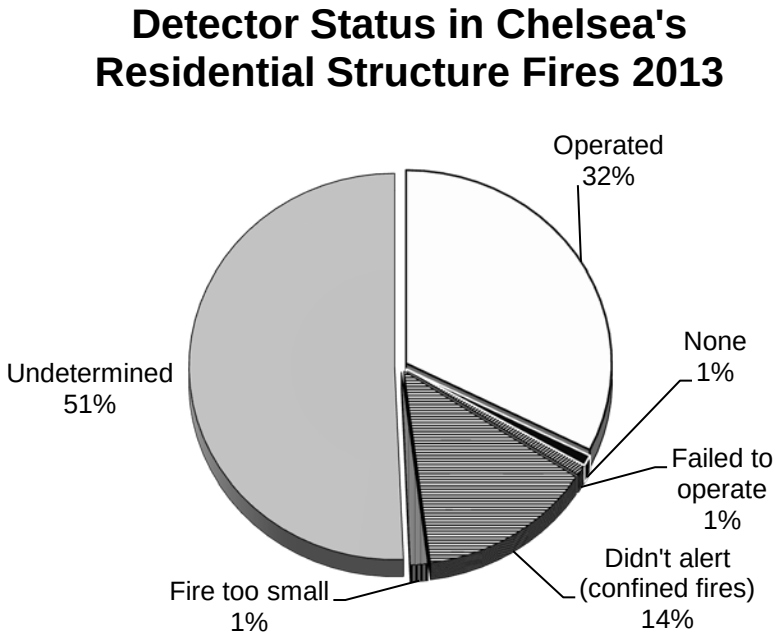
78% of Residential Building Fires Are Confined to Non-Combustible Containers[2]
One hundred and seventy-one (171), or 78%, of all residential building fires were reported as confined to non-combustible containers in 2013. Nearly all of the confined fires were cooking fires contained to a non-combustible container like a pot or a pan, and accounted for 163, or 74%, of all residential building fires. Five (5), or 2%, were fires confined to a fuel burner or boiler malfunction. Two, or 1%, of these fires were contained rubbish fires; and one, or less than 1%, was a confined chimney fire.

Detectors Alerted Occupants in Only 32% of Fires
Smoke or heat detectors operated and alerted the occupants in 71, or 32%, of the residential building fires. In 14% of these fires[28], the detectors did not alert the occupants.

[2] 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.

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

Detectors were present but did not operate in 1% of residential fires. In 1% of these fires, no detectors were present at all. The fire was too small to trigger the detector in 1% of these fires. Smoke detector performance was undetermined in 111 incidents, or 51% of Chelsea's residential building fires.



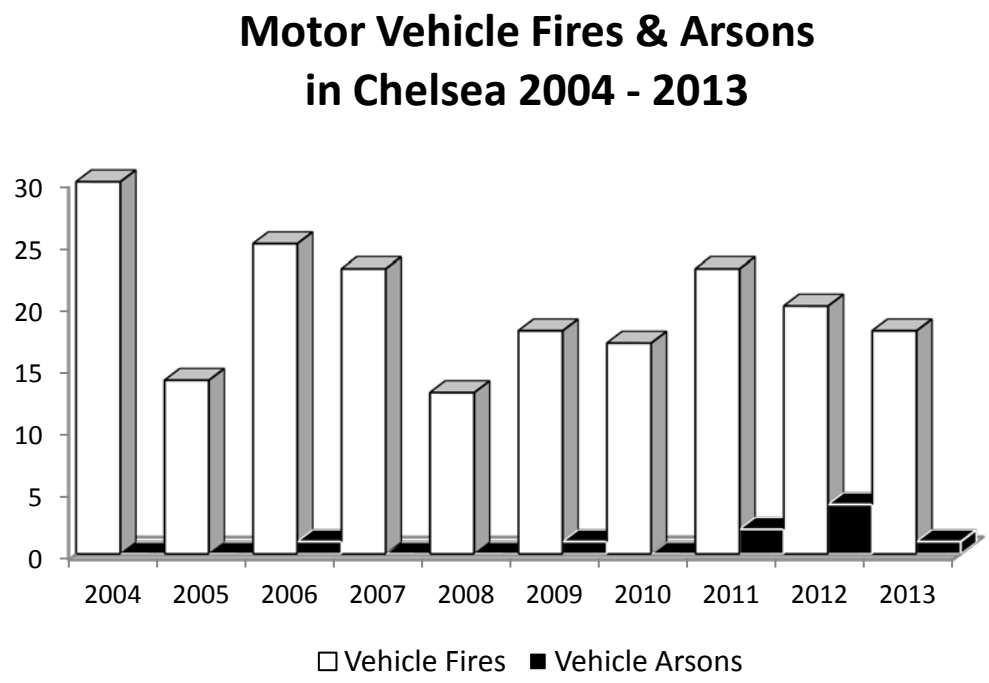
MOTOR VEHICLE FIRES

Vehicle Fires Down Slightly

The 18 motor vehicle fires caused two fire service injuries and an estimated dollar loss of $60,552. Motor vehicle fires comprised 4% of Chelsea's 435 reported fires in 2013. The total number of motor vehicle fires decreased by two from the 20 reported in 2012.

1 Motor Vehicle Fire Considered Arson

Chelsea reported one motor vehicle arson in 2013. This arsons caused an estimated dollar loss of $2,250. The reported arson is a decrease of three over the four motor vehicle arsons reported in 2012.



OUTSIDE AND OTHER FIRES

Reported Outside and Other Fires Up
The 140 outside and other fires caused 10 fire service injuries and an estimated dollar loss of $89,345. Outside and other fires comprised 32% of the 435 fires Chelsea reported in 2013. The 140 outside and other fires included 107 grass, tree or brush fires, 14 outside rubbish fires, three special outside fires, and 16 unclassified fires. The total number of outside and other fires increased by 42, from the 98 reported in 2012.

2 Outside and Other Fires Considered Arson
There were two identified outside and other arsons. One (1) was a brush fire and the other was an unclassified fire. Outside and other arsons accounted for 1% of Chelsea's outside and other fires, and 20% of Chelsea's total arson fires.

FATAL FIRES

0 Chelsea Fatal Fires in 2013
There were no fatal fires in Chelsea in 2013.

JUVENILE-SET FIRES

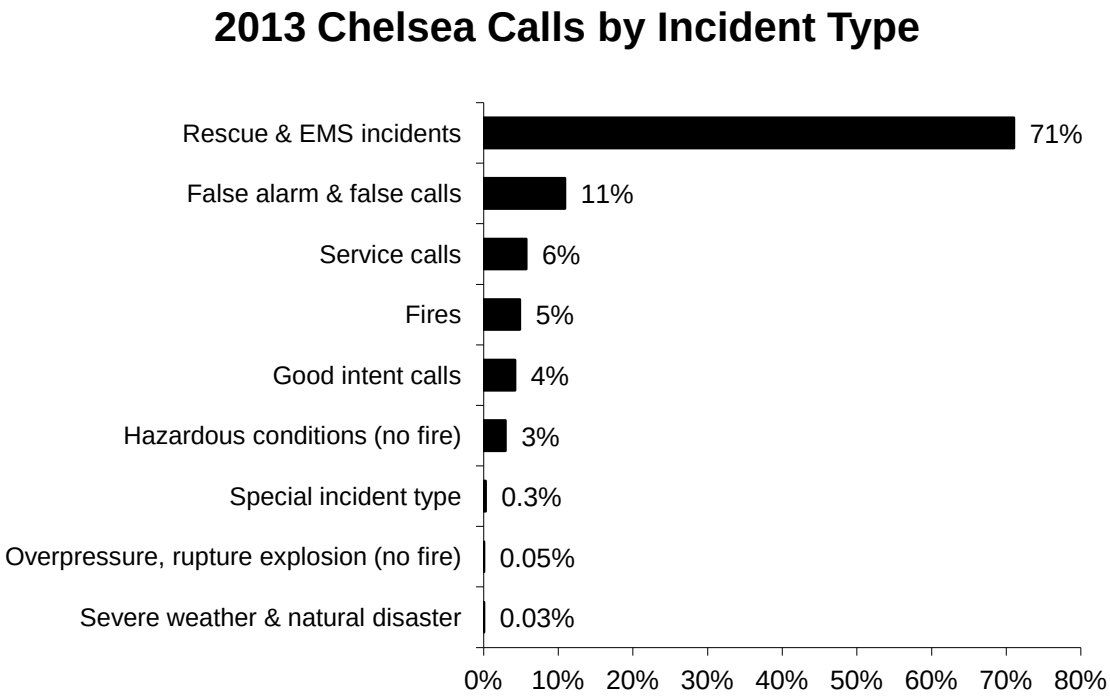
2 Juvenile-set Fires
Chelsea reported two juvenile-set fires in 2013. Both of these were building fires.

ALL CALLS

Rescue & EMS Calls Are 71% of All Reported Responses
In 2013, the Chelsea Fire Department reported 9,178 total responses to MFIRS. Of these 9,178 responses, 8,731 non-fire calls were voluntarily reported.

Of these 8,731 non-fire calls, 6,519, or 71% of all the responses reported in 2013, were reported rescue and emergency medical services (EMS) calls; 999, or 11%, were reported false alarm or false calls; 525, or 6%, were reported service calls such as lock-outs, water or smoke problems, unauthorized burning or public service assistance; 386, or 4%, were reported good intent calls; 269, or 3%, were reported hazardous condition calls with no fire; 25, or 0.3%, were special incident type calls such as citizen complaints; five, or 0.05%, were reported overpressure, rupture, explosion or overheat calls with no fire; and three, or 0.03%, were severe weather calls.

Four hundred and forty-seven (447), or 5%, of the total responses submitted by the Chelsea Fire Department were fires.



Chelsea Reported Giving Mutual Aid 3 Times
In 2013, the Chelsea Fire Department reported coming to the aid of other fire departments three times. All three were for service calls, most likely station coverages.

Chelsea Received Mutual Aid in 62 Incidents
In 2013, the Chelsea Fire Department reported receiving aid from surrounding departments for 62 incidents. Of these 62 incidents, 23, or 37%, were for fires; 19, or 31%, were for rescue or EMS calls; 14, or 23%, were false alarms or false calls; four, or 6%, were for service calls; one, or 2%, was for a hazardous condition call with no ensuing fire; and one, or 2%, was for a good intent call.

CONCLUSIONS

- **0 Civilian Fire Deaths in 2013**

In 2013 Chelsea did not have any fire deaths.

- **Cooking Caused Over 3/4 of Residential Fires**

Over three-fourths, or 78%, of Chelsea's residential building fires were caused by unattended cooking or other unsafe cooking practices. Prevention and education of community members may help this issue.

- **Heating Equipment Fires Were the Second Leading Cause of Residential Fires**

Heating equipment fires were the second leading cause of residential building fires.

- **Structure & MV Fires Decrease**

Reported structure fires decreased by 30 from 307 fires reported in 2012. Motor vehicle fires decreased by two and outside and other fires increased by 42 in 2013.

- **Confined Fires Account for 78% of All Residential Building Fires in Chelsea**

Residential building fires contained to non-combustible containers accounted for 171, or 78%, of the 219 residential building fires in Chelsea in 2013. Of these 171 fires, 133, or 74%, were confined cooking fires.

- **Undetermined if Smoke Detectors Operated in Over 1/2 of Residential Fires**

Smoke alarm performance was unreported in a significant number of fires. It was undetermined in 51% of Chelsea homes where fires occurred if they were protected by smoke detectors. Detectors sounded the alarm in only 32% of the residential fires. The majority of these were confined fires. Data collection in this area has improved in the past few years, but there is still room for improvement.

Chelsea FDID: 25057 Population: 35,177

Total Fires **435** **$5,036,743**

12.4 Fires/1,000 Population

Situation Found	Fires	% of Fires	Dollar Loss
Structure Fires	277	64%	4,886,846
Vehicle Fires	18	4%	60,552
Other Fires	140	32%	89,345

No Fire Deaths
4 Civilian Injuries 50 Fire Service Injuries

7.87 Structure fires/1,000 population
0.51 Vehicle fires /1,000 population
3.98 Other fires/1,000 population

Building Fires: 275

Residential Building Fires: 219

Residential Building Fires Confined to Non-Combustible Containers: 171

Unconfined Residential Building Fires: 48

3 Civilian Injuries 28 Fire Service Injuries

Occupancy	Fires	%
Apartments	165	75%
1- & 2-Family homes	20	9%
Hotels/motels	14	6%
Residential board & care	7	3%
Rooming houses	4	2%
Dormitories	4	2%

Detector Status	Fires	%
Operated	71	32%
Didn't operate	2	1%
None	2	1%
Fire too small	3	1%
Didn’t alert (confined)	30	14%
Undetermined	111	51%

Area of Origin[29]	%
Kitchen	82%
Exterior balcony/unencl. porch	4%
Heat equipment room	3%
Bedroom	1%
Living room	1%
Exterior stairway	1%

Heat Source	%	%Unconfined[30]
Heat from operating eq.	4%	19%
Heat open flame/smok. mat.	4%	17%
Cigarette	1%	6%
Arcing	1%	4%
Rad./cond. heat from op. eq.	1%	4%

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

[30] 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 Heat Source from the fires contained to non-combustible containers (Incident Types 113 – 118). This field does not need to be completed for confined fires, but is sometimes voluntarily reported.

Item First Ignited[31]	**%**	**Factor Contrib. to Ignit.**	**%**	**%Unconfined**[32]
Food, cooking materials	78%	Abandoned materials	1%	6%
Electrical wire/cable insulation	3%	Too close to combustibles	1%	6%
Multiple items	3%	Electrical failure, malfunc.	1%	6%
Flammable or combustible liq.	2%	Misuse of mater. or product	1%	4%

Equipment[33]	**%**	**Cause of Ignition**	**%**	**%Unconfined**[34]
Kitchen & cooking equipment	76%	Unintentional	14%	73%
None	16%	Fail of equip. or heat source	1%	7%
Boiler, furnace, cent. heat. unit	2%	Intentional	3%	15%
Stove, heating	1%	Undetermined	1%	5%
		Cause under investigation	0%	0%
		Act of Nature	0%	0%

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

Alerted occupants	26%
Didn't alert occupants	18%
Undetermined	57%

Mutual Aid Given	**# of Incidents**
Lynn	1
Revere	1
Everett	1

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

[32] 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.

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

[34]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.

Month	Total Fires	Structure Fires	Vehicle Fires	Other Fires
January	32	26	1	5
February	21	21	0	0
March	26	23	0	3
April	38	12	1	25
May	52	22	1	29
June	37	23	0	14
July	43	26	4	13
August	48	20	2	26
September	31	19	2	10
October	38	28	3	7
November	31	22	2	7
December	38	35	2	1

Day	Total Fires	Structure Fires	Vehicle Fires	Other Fires
Sunday	57	40	3	14
Monday	51	37	1	13
Tuesday	51	30	3	18
Wednesday	71	40	2	29
Thursday	77	48	4	25
Friday	57	36	2	19
Saturday	71	46	3	22

Time	Total Fires	Structure Fires	Vehicle Fires	Other Fires
00:01 - 04:00	27	20	2	5
04:01 - 08:00	14	8	3	3
08:01 - 12:00	81	58	4	19
12:01 - 16:00	141	70	2	69
16:01 - 20:00	130	89	5	36
20:01 - 00:00	42	32	2	8

Motor Vehicle Fires

Total: 18
Automobiles: 12 (67%)
1 (8%) of the automobile fires considered intentionally set.

Arson Fires

Total Arsons: 10 **$420,235**

Situation	Arsons	% of Situation	% of Arson	Dollar Loss
Structure Arsons	7	3%	70%	$418,075
Vehicle Arsons	1	6%	10%	2,250
Other Arsons	2	1%	20%	0

8 Fire Service Injuries

0.28 Arson fires/1,000 population
0.20 Structure arsons/1,000 population
0.03 Vehicle arsons /1,000 population
0.06 Other arsons/1,000 population

Peak Times of Day for Arson Fires

Structure Arsons	#	%
16:01 - 20:00	3	43%
00:01 - 04:00	2	29%
12:01 - 16:00	1	14%
20:01 - 00:00	1	14%

Vehicle Arsons	#	%
00:01 – 04:00	1	100%

Other Arsons	#	%
12:01 - 00:00	2	50%
16:01 - 20:00	1	50%

Peak Fixed Property Uses for Structure Arsons

Apartments	4	57%
1- or 2-Family homes	1	14%
Residential, other	1	14%
High/junior high/middle school	1	14%

Revere Fires in 2013

469 Fires — 345 Structure Fires, 23 Vehicle Fires and 101 Other Fires
The City of Revere reported 469 fires to the Massachusetts Fire Incident Reporting System (MFIRS) in 2013. The 345 structure fires, 23 motor vehicle fires, 63 outside rubbish fires, 33 grass, tree or brush fire, one special outside fires, and four unclassified fires caused two civilian injuries, three fire service injuries and an estimated dollar loss of $1.5 million. There were 9.1 fires for every 1,000 citizens in 2013.

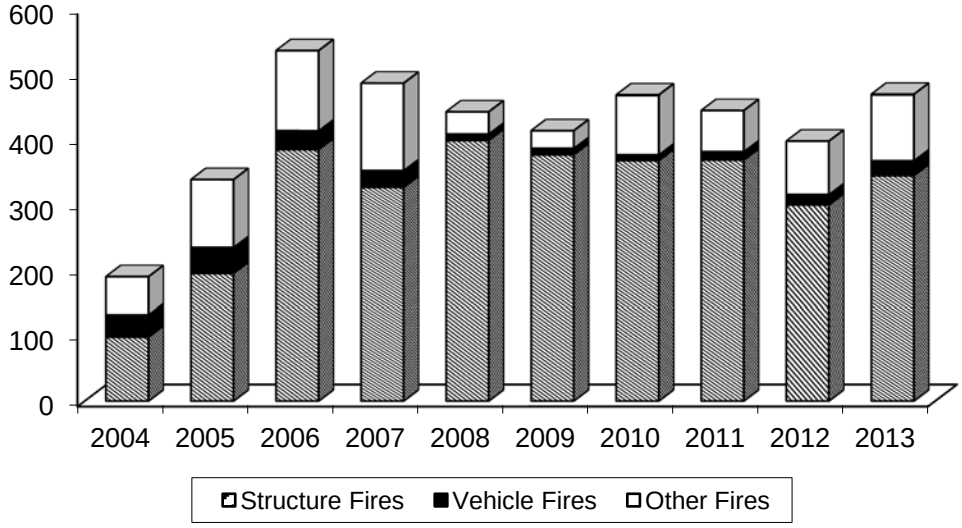
All Fires Up
The total number of reported fires increased by 71 from the 398 reported in 2012. Structure fires increased by 45 from the 300 reported during the previous year. Motor vehicle fires increased by seven from 16 reported in 2012. Reported outside and other fires increased by 19 from 82 the year before.

REVERE FIRES FROM 2004 TO 2013

Year	Total Fires	Structure Fires	Vehicle Fires	Other Fires	Total Arsons	Structure Arsons	Vehicle Arsons	Other Arsons
2003	80	34	23	23	2	0	2	0
2004	188	96	34	58	6	1	4	1
2005	339	195	40	104	13	7	4	2
2006[35]	536	395	29	122	31	6	4	21
2007	486	327	26	133	6	4	2	0
2008	443	399	10	34	1	1	0	0
2009	414	377	10	27	3	3	0	0
2010	468	368	9	91	1	0	1	0
2011	446	370	13	63	3	2	1	0
2012	398	300	16	82	4	2	0	2
2013	469	345	23	101	3	2	0	1

[35] The majority of this increase in reported fires was a dramatic increase in the reporting of the number of confined structure fires. In 2005 Revere reported 133 confined structure fires; and in 2006 they reported 319 of these types of fires for an increase of 140%. This increase of 186 confined fires represents 94% of the increase in all reported fires from 2005 to 2006.

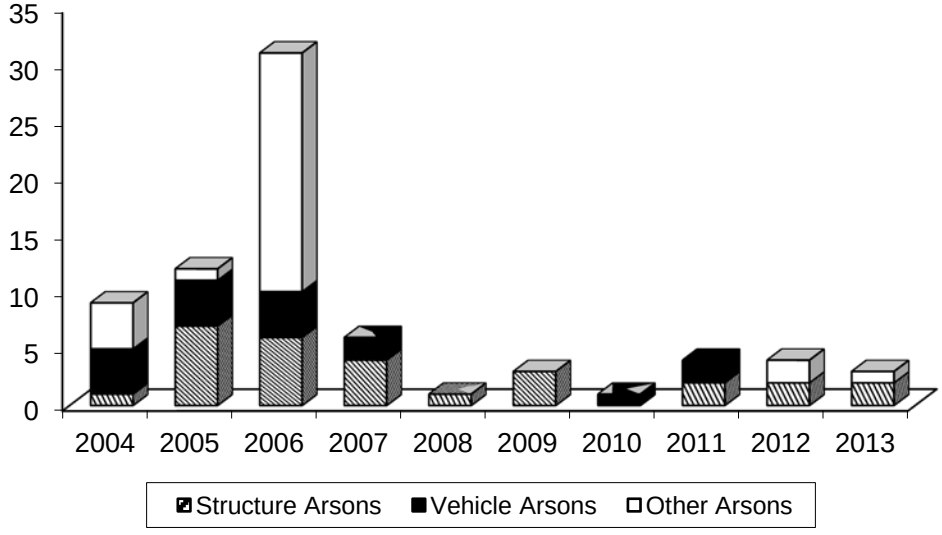
Revere Fires by Incident Type



3 Arsons — 2 Structure Arson & 1 Outside Arson
Three (3), or 1%, of Revere's 469 reported fires were considered intentionally set, or for purposes of this analysis, arson. These three arsons caused two fire service injuries and an estimated dollar loss of $230,500.

All Arson Down Slightly
The total number of reported arson fires decreased by one from the four reported in 2012. Structure arsons remained the same with two reported in both 2012 and 2013. The two outside arsons were a decrease of one over the two reported the previous year.

Revere Arsons by Incident Type



STRUCTURE FIRES

Structure Fires Up

The 345 structure fires caused two civilian injuries, three fire service injuries and an estimated dollar loss of $1.4 million. These fires accounted for 74% of the fires Revere reported in 2013. Structure fires increased by 45 from the 300 reported during 2012.

2 Structure Arsons in 2013

The two structure arsons caused two fire service injuries and an estimated dollar loss of $230,500. Arson was indicated as the cause of 1% of the structure fires and accounted for 17% of Revere's structure fire dollar loss. The two structure arsons represented 67% of the Revere's arson fires reported in 2013. The total number of reported structure arsons remained the same with two reported in both 2012 and 2013.

BUILDING FIRES

There were 345 building fires of different types in Revere in 2013. These 354 building fires accounted for all of the structure fires in Revere.

88% of Building Fires in Homes

The 345 building fires that occurred in Revere in 2013 can be broken down by fixed property use as follows: 304, or 88%, of all the building fires were in residential properties; 27 fires took place in mercantile and office properties; nine fires occurred in public assembly properties; three fires occurred in educational facilities; one fire happened in an institutional facility; and one fire took place in a storage facility.

RESIDENTIAL BUILDING FIRES

88% of Building Fires Occurred in Residences

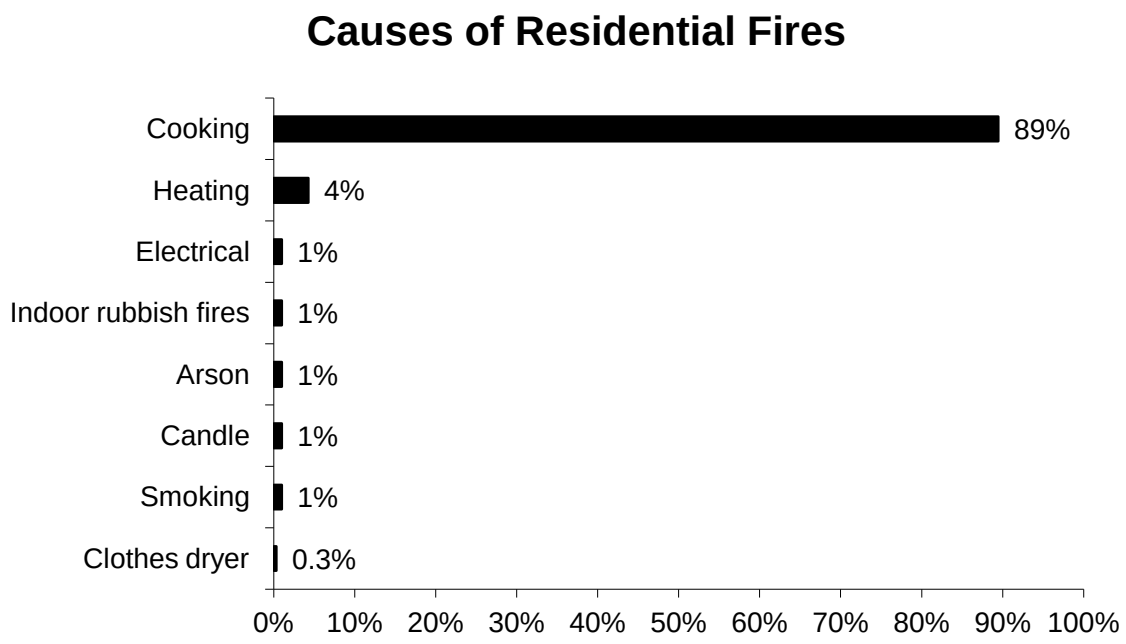
Three hundred and four (304), or 88%, of the 345 building fires occurred in residences. The 304 residential building fires reported in 2013 caused two civilian injuries, three fire service injuries and an estimated dollar loss of $1.3 million.

Apartments Accounted for 66% of Residential Building Fires

The peak fixed property uses for residential building fires were apartments accounting for 66% of the residential building fires in Revere; 24% occurred in 1- or 2-family homes; 5% took place in hotels or motels; 3% occurred in residential board and care facilities; and 2% occurred in rooming houses.

Unsafe Cooking Causes 89% of Residential Fires

Cooking was the leading cause of fire in Revere's residential properties in 2013, accounting for 89% of these fires. Heating equipment caused 4% of residential building fires in 2013. Indoor rubbish fires, smoking, electrical problems, arsons, and candles were each the cause of 1%. Clothes dryers were the cause of less than 1% of the residential building fires in Revere in 2013.

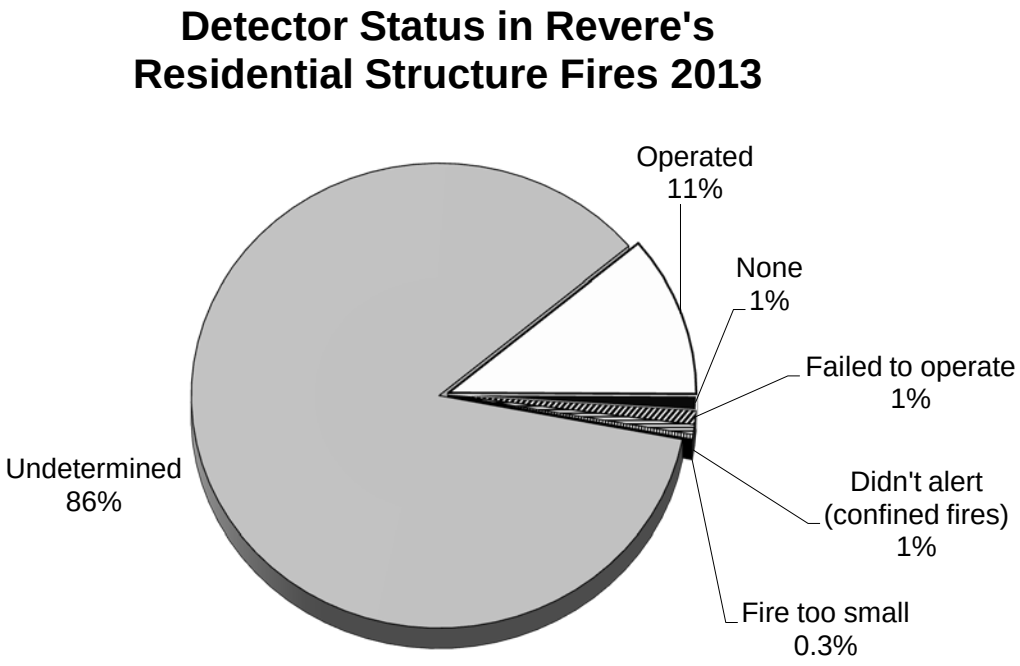


94% of Residential Building Fires Are Confined to Non-Combustible Containers[2]
Two hundred and eighty-five (285), or 94% of all residential building fires were reported as confined to non-combustible containers in 2013. Two hundred and seventy (270) of the confined fires were cooking fires contained to a non-combustible container and accounted for 89% of residential building fires. Eleven (11), or 4%, of the confined fires were fires confined to a fuel burner or boiler malfunction. Three (3), or 1%, were confined indoor rubbish fires; and one, or less than 1%, was a confined chimney fire.

Detectors Alerted Occupants in Only 11% of Fires
Smoke or heat detectors operated and alerted the occupants in only 34, or 11%, of the residential building fires. In 1% of these fires[36], the detectors did not alert the occupants. In 1% of these fires detectors were present but did not operate. In 1% of these fires, no detectors were present at all. The fire was too small to trigger a detector in less than 1% of these fires. Smoke detector performance was undetermined in 261 incidents, or 86% of Revere's residential building fires.

[2] 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.

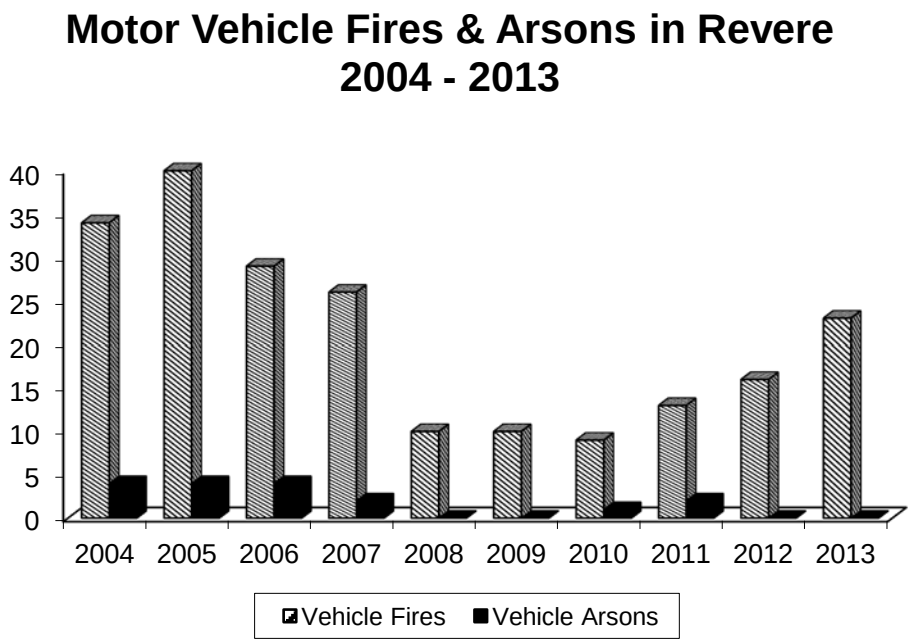
[36] These represent confined fires where it was reported that the detector did not alert the occupants.



MOTOR VEHICLE FIRES

Motor Vehicle Fires Up Slightly
There were 23 motor vehicle fires in Revere in 2013 that caused an estimated $90,780 in damages. Motor vehicle fires comprised 5% of Revere's reported fires in 2013. The total number of motor vehicle fires increased by seven from the 16 reported in 2012.

0 Motor Vehicle Arson
There were no reported motor vehicle fires that were considered intentionally set. This was the same amount reported in 2012.



OUTSIDE AND OTHER FIRES

Outside and Other Fires Up
There were 101 outside and other fires reported to MFIRS in 2013. These 101 fires included 63 outside rubbish fires, 33 brush fires one special outside fire, and four unclassified fires. Outside and other fires comprised 22% of the 469 Revere fires reported in 2013. These 101 incidents are a 23% increase in the number of outside and other fires in Revere from the 82 reported in 2012.

1 Outside and Other Arson
There was one reported unclassified fire that was coded as an arson. This fire was a decrease of one from the two reported in 2012.

FATAL FIRES

0 Fire Deaths in 2013
There were no fatal fires in Revere in 2013.

JUVENILE-SET FIRES

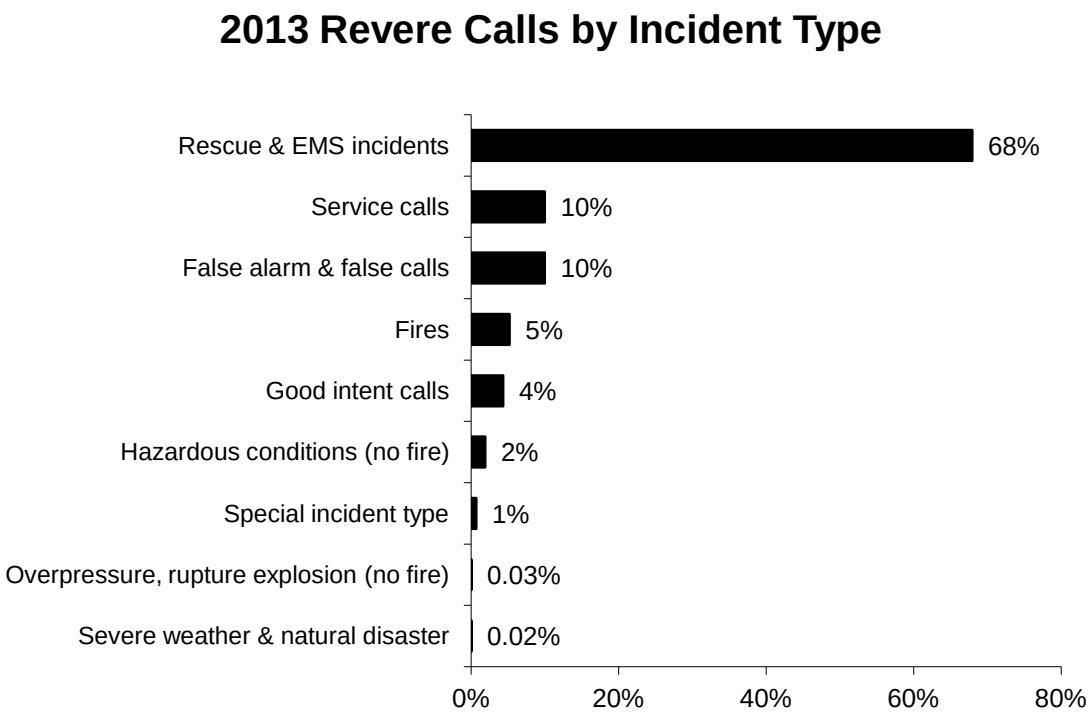
1 Juvenile-set Fires
In 2013, Revere reported one juvenile-set fire. The outside rubbish fire caused an estimated dollar loss of $1,000.

ALL CALLS

Rescue & EMS Calls Are Over 2/3 of All Reported Responses
In 2013, the Revere Fire Department reported 9,058 total responses to MFIRS. Of these 9,058 responses, 8,585 non-fire calls were voluntarily reported.

Of these 8,585 non-fire calls, 6,156, or 68%, of all the responses reported in 2013 were reported rescue and emergency medical services (EMS) calls; 914, or 10%, were reported service calls such as lock-outs, water or smoke problems, unauthorized burning or public service assistance; 883, or 10%, were reported false alarm or false calls; 392, or 4%, were reported good intent calls; 172, or 2%, were reported hazardous condition calls with no fire; 63, or 1%, were special incident type calls such as citizen complaints; three, or 0.03%, were reported overpressure, rupture, explosion or overheat calls with no fire; and two, or 0.2%, were reported severe weather calls.

Four hundred and seventy-three (473), or 5%, of the total responses submitted by the Revere Fire Department were fires.



Revere Reported Giving Mutual Aid 35 Times
In 2013, the Revere Fire Department reported coming to the aid of other fire departments 35 times. Of these 35 responses, 34, or 97%, were for service calls such as cover assignments; and one, or 3%, was a good intent call.

Revere Received Mutual Aid in 19 Incidents
In 2013, the Revere Fire Department reported receiving aid from surrounding departments in 19 incidents. Of these 19 incidents, 11, or 58%, were for rescue or EMS calls; six, or 32%, were for fires; one, or 5%, was for a hazardous condition call with no fire; and one, or 5%, was for a false alarm or false call.

CONCLUSIONS

- **All Fires Were Up**

Structure fires increased 45, or 15%, from the 300 reported in 2012. Motor Vehicle fires increased by seven from the 16 reported in 2012. Outside and other fires increased by 19.

- **Cooking Caused 89% of Residential Fires**

The leading cause of Revere's residential building fires was unattended cooking and other unsafe cooking practices. This is where the department should focus its education and other prevention efforts. Two hundred and seventy-two (272), or 89%, of Revere's residential building fires were attributed to cooking. Two hundred and seventy (270) of these were confined cooking fires.

- **Heating Equipment Fires Second Leading Cause**

The second leading cause of residential fires in Revere was heating equipment fires accounting for 4% of the residential fires. This is the 10th year in a row that heating equipment was the second leading cause of residential fires in Revere.

- **94% of Residential Building Fires Were Confined Fires**

The overwhelming majority of residential fires in 2013 were confined fires. Two hundred and eighty-five (285), or 94%, of the 304 residential building fires in Revere in 2013 were confined to their non-combustible containers.

- **Only 3 Arsons in Revere in 2013**

In 2013, Revere reported two structure arsons and one other arson.

- **Smoke Detectors Operated in Just 11% Residential Fires**

Smoke or heat detectors operated in 34, or 11%, of the 304 residential fires. Unfortunately in 261 incidents, or 86% of residential fires, it was undetermined if smoke detectors were present or if they operated. Improved data collection would be helpful in order to better understand the relationship between fire casualties and smoke detector performance.

Revere FDID: 25248 Population: 51,755

Total Fires **469** **$1,453,236**

7.7 Fires/1,000 Population

Situation Found	Fires	% of Fires	Dollar Loss
Structure Fires	345	74%	$1,359,871
Vehicle Fires	23	5%	90,780
Other Fires	101	22%	2,585

2 Civilian Injuries 3 Fire Service Injuries

6.67 Structure fires/1,000 population
0.44 Vehicle fires /1,000 population
1.95 Other fires/1,000 population

Building Fires: 345

Residential Building Fires: 304

Residential Building Fires Confined to Non-Combustible Containers: 285

Unconfined Residential Building Fires: 19

2 Civilian Injuries 3 Fire Service Injuries

Occupancy	Fires	%
Apartments	201	66%
1- & 2-Family homes	74	24%
Hotels/motels	14	5%
Residential board & care	8	3%
Rooming houses	7	2%

Detector Status	Fires	%
Operated	34	11%
Didn't operate	3	1%
None	3	1%
Fire too small	1	0.3%
Didn’t alert (confined)	2	1%
Undetermined	261	86%

Area of Origin[37]	%
Kitchen	91%
Heating room or area	4%
Bedroom	1%
Living room	1%

Heat Source	%	%Unconfined[38]
Arcing	1%	1%
Lighter	1%	1%
Heat open flame/smok. mat.	1%	1%

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

[38] 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 Heat Source from the fires contained to non-combustible containers (Incident Types 113 – 118). This field does not need to be completed for confined fires, but is sometimes voluntarily reported.

Item First Ignited[39]	**%**	**Factor Contrib. to Ignit.**	**%**	**%Unconfined**[40]
Food, cooking materials	89%			
Flammable, combustible liquid	4%			
Rubbish, trash, waste	1%			
Structural member, framing	1%			
Mattress, pillow	1%			

Equipment[41]	**%**	**Cause of Ignition**	**%**	**%Unconfined**[42]
Cooking equipment	89%	Unintentional	2%	37%
None	4%	Failure of eq./heat source	1%	21%
Boiler, furnace, cent. heat. unit	4%	Intentional	1%	11%
		Undetermined	1%	16%
		Cause under investigation	1%	16%

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

Alerted occupants	9%
Didn't alert occupants	1%
Undetermined	90%

Mutual Aid Given	**# of Incidents**
Chelsea	22
Everett	4
Malden	2
Saugus	2
Chelmsford	1
Winthrop	1
Melrose	1

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

[40] 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.

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

[42]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.

Month	Total Fires	Structure Fires	Vehicle Fires	Other Fires
January	34	29	2	3
February	27	23	3	1
March	28	27	0	1
April	66	42	0	24
May	54	38	0	16
June	41	31	3	8
July	36	14	3	19
August	23	13	3	7
September	41	34	3	4
October	39	29	3	7
November	38	28	1	9
December	42	37	3	2

Day	Total Fires	Structure Fires	Vehicle Fires	Other Fires
Sunday	80	65	5	10
Monday	57	42	2	13
Tuesday	74	54	2	18
Wednesday	64	51	1	12
Thursday	54	34	5	15
Friday	71	46	4	21
Saturday	69	53	4	12

Time	Total Fires	Structure Fires	Vehicle Fires	Other Fires
00:01 - 04:00	21	13	5	3
04:01 - 08:00	28	20	3	5
08:01 - 12:00	95	77	4	14
12:01 - 16:00	140	97	3	40
16:01 - 20:00	117	88	5	24
20:01 - 00:00	68	50	3	15

Motor Vehicle Fires

Total: 23
Automobiles: 20 (87%)
None of the automobile fires were considered to be intentionally set.

Arson Fires

Total Arsons: 3 **$230,500**

Situation	Arsons	% of Situation	% of Arson	Dollar Loss
Structure Arsons	2	1%	67%	$230,500
Vehicle Arsons	0	0%	0%	0
Other Arsons	1	1%	33%	0

2 Fire Service Injuries

0.06 Arson fires/1,000 population
0.04 Structure arsons/1,000 population
0.00 Vehicle arsons /1,000 population
0.02 Other arsons/1,000 population

Peak Times of Day for Arson Fires

Structure Arsons	#	%	Vehicle Arsons	#	%
12:01 - 16:00	2	100%			

Other Arsons	#	%
20:01 - 00:00	1	100%

Occupancy	#	%
Apartments	1	50%
Residential board & care	1	50%

Winthrop Fires in 2013

82 Fires — 59 Structure Fires, 3 Vehicle Fire & 20 Other Fires
The Town of Winthrop reported 82 fires to the Massachusetts Fire Incident Reporting System (MFIRS) in 2013. The 59 structure fires, three motor vehicle fires, 13 brush and grass fires, one outside rubbish fire, three special outside fires, and three unclassified fires caused one civilian injury and an estimated dollar loss of $357,280. There were 4.7 fires for every 1,000 citizens in 2013.

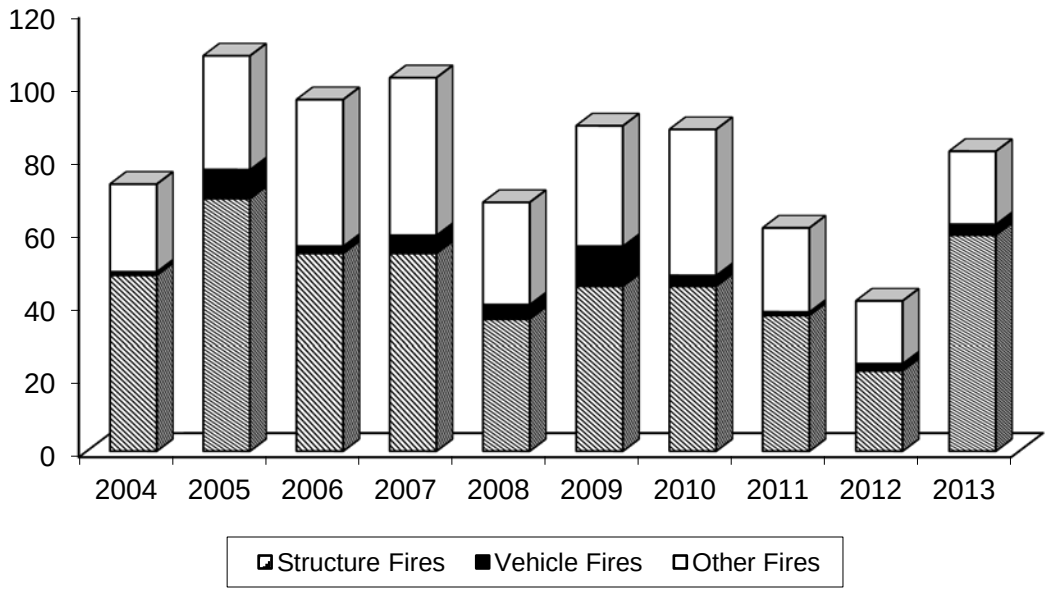
No Fire Deaths in 2013
In 2013, the Town of Winthrop did not have any fire-related deaths.

All Fires Up
The total number of fires reported in Winthrop increased by 41 from 41 in 2012. Structure fires increased by 37 from the 22 reported in 2012. Motor vehicle fires increased by one from two in 2012. Outside and other fires increased by three from 17 in 2012.

WINTHROP FIRES FROM 2004 TO 2013

Year	Total Fires	Structure Fires	Vehicle Fires	Other Fires	Total Arsons	Structure Arsons	Vehicle Arsons	Other Arsons
2004	73	48	1	24	11	4	1	6
2005	108	69	8	31	7	1	0	6
2006	96	54	2	40	13	2	0	11
2007	102	54	5	43	11	3	0	8
2008	68	36	4	28	7	1	0	6
2009	89	45	11	33	8	1	1	6
2010	88	45	3	40	6	0	0	6
2011	61	37	1	23	2	0	0	2
2012	41	22	2	17	2	0	0	2
2013	82	59	3	20	1	0	1	0

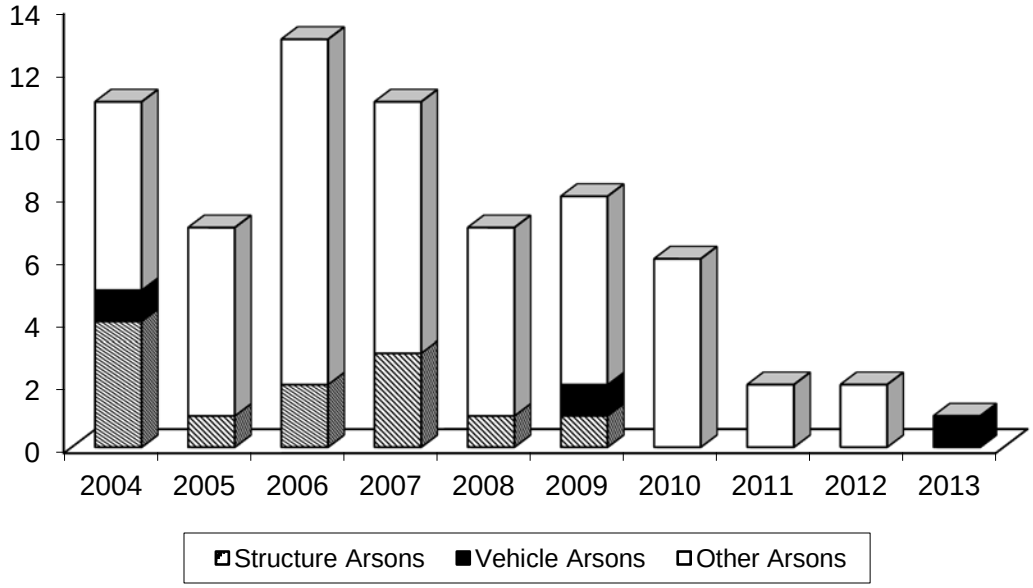
Winthrop Fires by Incident Type



1 Arson – 1 MV Arson

One (1), or 1%, of the 82 Winthrop fires was considered intentionally set, or, for purposes of this analysis, arson. The one motor vehicle arson caused $4,400 in damages.

Winthrop Arsons by Incident Type



STRUCTURE FIRES

Structure Fires Up

The 59 structure fires caused one civilian injury and an estimated dollar loss of $318,680. These incidents represented 72% of Winthrop's reported fires in 2013. Structure fires increased by 37, or 168%, from the 22 reported in 2012.

No Structure Arsons

For the fourth year in a row there were no reported structure arsons in Winthrop in 2013.

BUILDING FIRES

There were 59 building fires of different types in Winthrop in 2013. These 59 building fires accounted for all of the structure fires in Winthrop.

3/4 of Building Fires in Homes

The 59 building fires that occurred in Winthrop in 2013 can be broken down by fixed property use as follows: 44, or 75%, of all the building fires reported in 2013 were in residential properties; six fires, or 10% occurred at public assembly properties; four fires, or 7%, happened at a mercantile or business properties; three fires, or 5%, happened at institutional facilities; one fire, or 2%, occurred at an educational facility; and another fire, or 2%, happened at a storage facility.

RESIDENTIAL BUILDING FIRES

75% of Winthrop's Building Fires Occurred in Residences

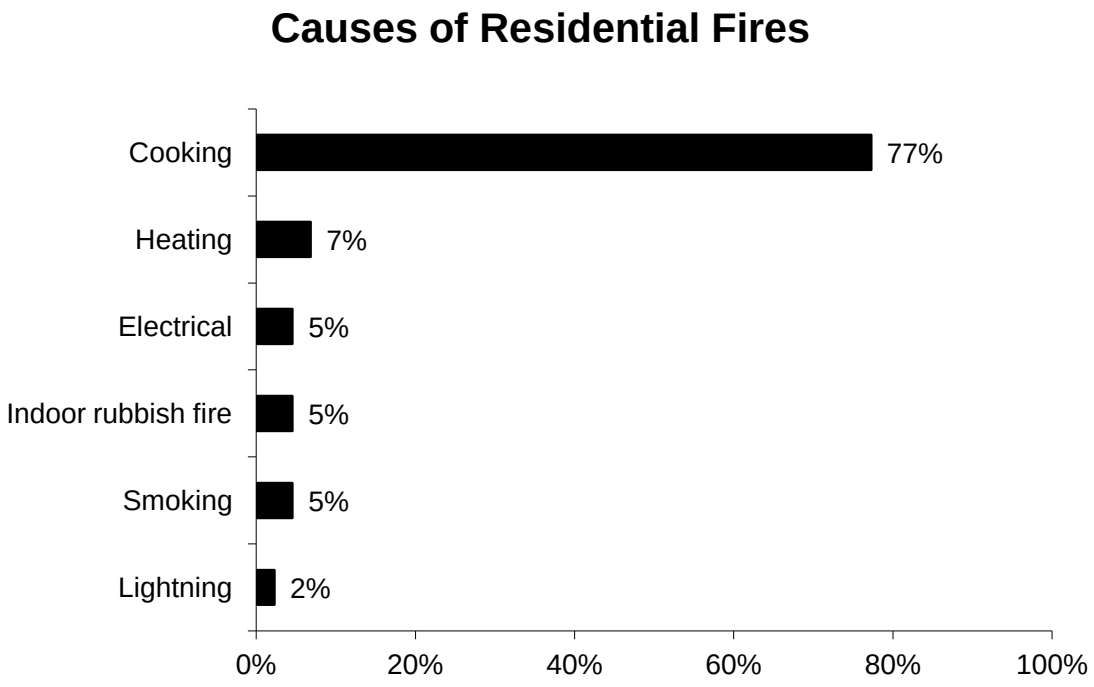
Forty-four (44), or 75%, of Winthrop's 59 reported building fires occurred in residential occupancies. There were no reported residential building arsons in 2013. The 44 residential building fires reported in 2013 caused one civilian injury and an estimated dollar loss of $271,500.

Apartments Accounted for 55% of Residential Building Fires

The peak fixed property uses for residential building fires were apartments, accounting for 55% of the residential building fires in Winthrop. Forty-one percent (41%) occurred in one- and two-family homes, and 5% occurred in hotels or motels.

Unsafe Cooking Practices Caused Over 3/4 of Winthrop's Residential Fires

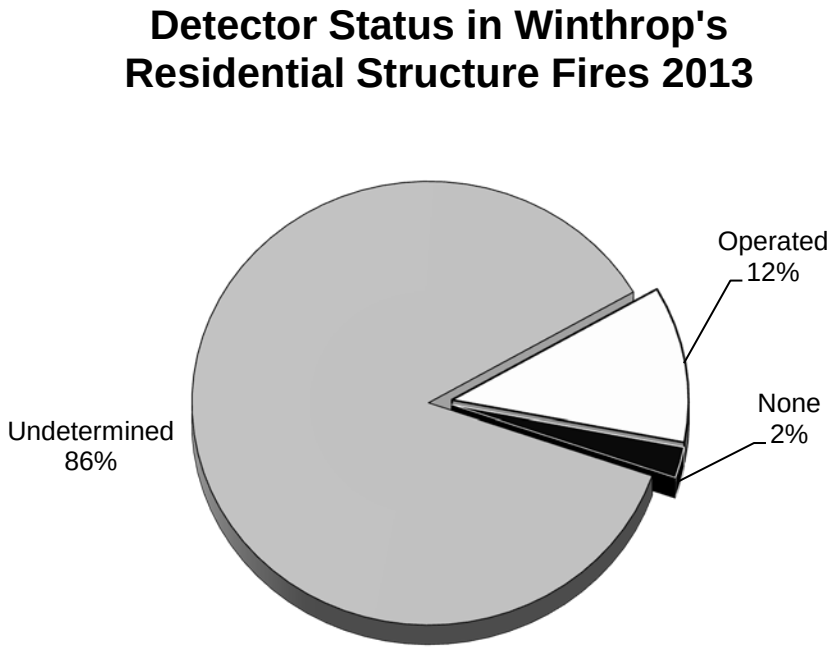
Cooking was the leading cause of fires in Winthrop residential properties in 2013 accounting for 77% of these fires. Heating equipment fires were the second leading cause, accounting for 7% of these fires. Electrical problems, smoking and indoor rubbish fires each caused 5%; and lightning accounted for 2% of the fires in Winthrop's homes in 2013.



77% of Residential Building Fires Are Confined to Non-Combustible Containers[43]
Thirty-four (34), or 77% of all residential building fires, were reported as confined to non-combustible containers in 2013. Thirty (30) of the reported fires were cooking fires contained to a non-combustible container accounting for 68% of residential building fires. Two (2), or 5%, were fires confined to a fuel burner or boiler malfunction. Two (2), or 5% of these fires were confined indoor rubbish fires.

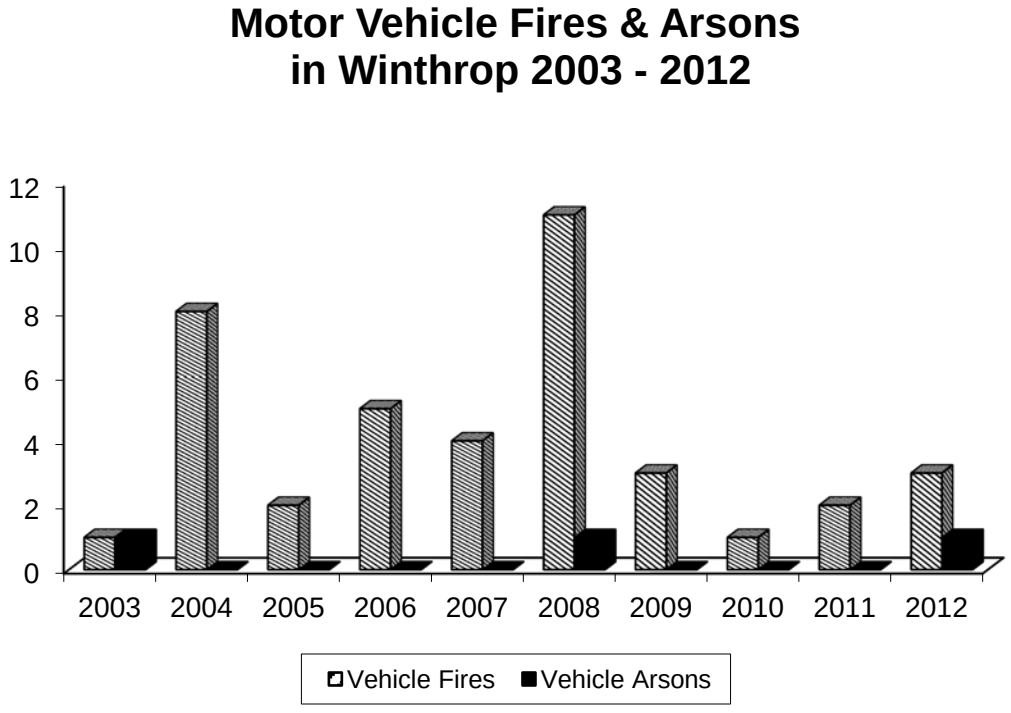
Detectors Alerted Occupants in Only 12% of Fires
Smoke or heat detectors operated and alerted the occupants in five, or 12%, of the residential building fires. There were no reported fires[44] where the detectors did not alert the occupants. There were no reported fires where detectors were present but did not operate. There was one reported fire where no detectors were present at all accounting for 2% of these fires. There were no reported fires where the fire was too small to trigger the detector. Smoke detector performance was undetermined in 38 incidents, or 86% of Winthrop's residential building fires.

[43] 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.
[44] These represent confined fires where it was reported that the detector did not alert the occupants.



MOTOR VEHICLE FIRES

3 Motor Vehicle Fires Reported in 2013
The three motor vehicle fires caused an estimated dollar loss of $30,150. Motor vehicle fires comprised 4% of Winthrop's 82 reported fires in 2013. Motor vehicle fires increased by one, or 50%, from the two fires reported in 2012.



1 Motor Vehicle Fire Considered Arson
One (1), or 33%, of Winthrop's motor vehicle fires was determined to be intentionally set. This is the first time in four years with a reported motor vehicle arson. This arson caused $4,400 in damages.

OUTSIDE AND OTHER FIRES

Outside and Other Fires Account for 24% of Winthrop Fires
The Winthrop Fire Department reported 20 outside and other fires to the Massachusetts Fire Incident Reporting System in 2013, an increase of three from 17 in 2012. The 13 brush and grass fires, three special outside fires, one outside rubbish fire, and three unclassified fires caused estimated dollar loss of $8,450. Outside and other fires comprised 24% of the 82 Winthrop fires reported in 2013.

No Outside & Other Fires considered Arson
None of the 20 outside and other fires were considered intentionally set.

JUVENILE-SET FIRES

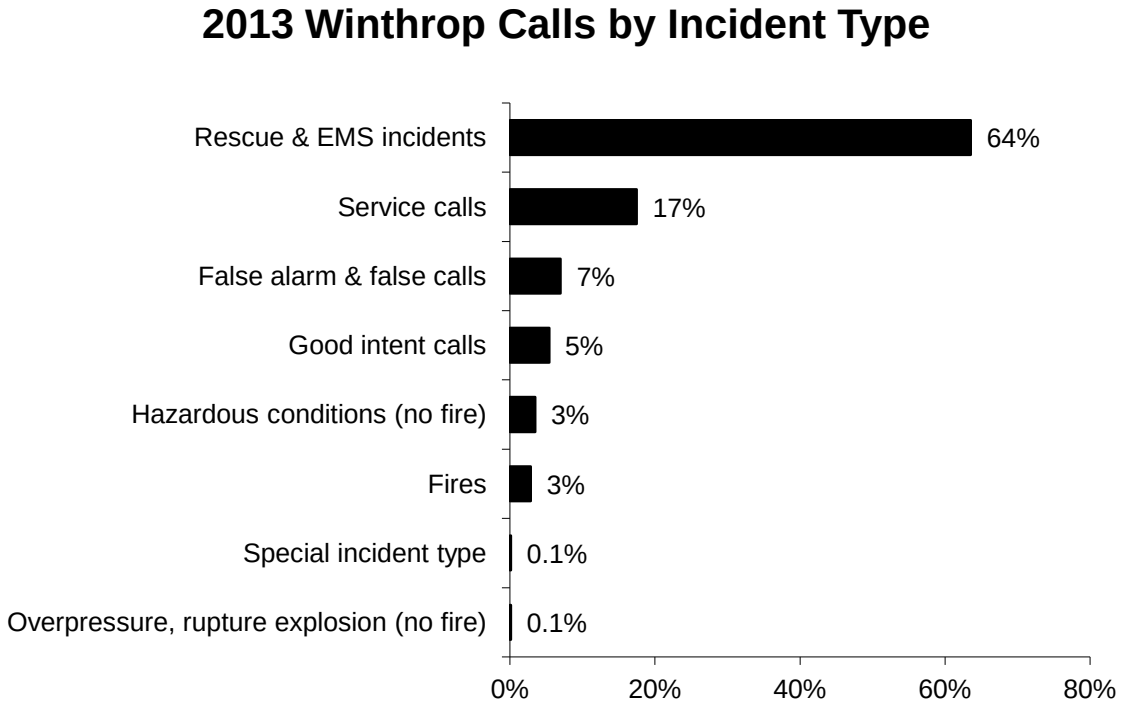
0 Juvenile-set Fire
There were no reported juvenile-set fires in Winthrop in 2013.

ALL CALLS

Rescue & EMS Calls Were 64% of All Reported Responses
In 2013, the Winthrop Fire Department reported 2,851 total responses to MFIRS. Of these 2,851 responses, 2,769 non-fire calls were voluntarily reported.

Of these 2,769 non-fire calls, 1,812, or 64% of all the responses reported in 2013, were reported rescue and emergency medical services (EMS) calls; 498, or 17%, were reported service calls such as lock-outs, water or smoke problem, unauthorized burning or public service assistance; 199, or 7%, were reported false alarm or false calls; 154, or 5%, were reported good intent calls; 99, or 3%, were reported hazardous condition calls with no fire; four, or 0.1%, were special incident type calls such as citizen complaints; and three, or 0.1%, were reported overpressure, rupture, explosion or overheat calls with no fire.

Eighty-two (82), or 3%, of the total responses submitted by the Winthrop Fire Department were fires.



Winthrop Reported Receiving Mutual Aid 2 Times
In 2013, the Winthrop Fire Department reported receiving aid from surrounding departments two times. One (1) was for a rescue or EMS incident and one was for a service call.

Winthrop Reported Giving Mutual Aid 2 Times
Winthrop reported coming to the aid of other fire departments three times in 2013. Both of these were service calls such as station coverage.

CONCLUSIONS

- **Most Building Fires in Homes**

76% of building fires occurred in residences.

- **Cooking Caused 77% of Residential Fires**

Cooking caused 77% of Winthrop's residential building fires. Education and other prevention efforts should help address this problem.

- **Heating Caused 7% of Residential Fires**

Heating was the second leading cause of residential fires in Winthrop. Fires started by heating equipment caused 7% of residential building fires.

- **Smoke Detectors Status Undetermined in 86% Residential Fires**

It was undetermined if smoke detectors sounded the alarm in 86% of the residential fires. This could be an area of focus for improved data collection and reporting. This would help to better understand the relationship between fire casualties and smoke detector performance. Detector performance was not collected in any of the 33 confined fires in 2013.

Winthrop FDID: 25346 Population: 17,497

Total Fires **82** **$357,280**

4.7 Fires/1,000 Population

Situation Found	Fires	% of Fires	Dollar Loss
Structure Fires	59	72%	$318,680
Vehicle Fires	3	4%	30,150
Other Fires	20	24%	8,450

1 Civilian Injury

3.37 Structure fires/1,000 population
0.17 Vehicle fires /1,000 population
1.14 Other fires/1,000 population

Building Fires: 59

Residential Building Fires: 44

Residential Building Fires Confined to Non-Combustible Containers: 34

Unconfined Residential Building Fires: 10

Occupancy	Fires	%
Apartments	24	55%
1- & 2-Family homes	18	41%
Hotels or motels	2	5%

Detector Status	Fires	%
Operated	5	11%
Didn't operate	0	0%
None	1	2%
Fire too small	0	0%
Didn't alert (confined)	0	0%
Undetermined	38	86%

Area of Origin[45]	%
Kitchen	80%
Heating room or area	7%

Heat Source	%	%Unconfined[46]
Rad./cond. heat from op. eq.	9%	40%
Lightning	2%	10%
Cigarette	2%	10%
Arcing	2%	10%

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

[46] 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 Heat Source from the fires contained to non-combustible containers (Incident Types 113 – 118). This field does not need to be completed for confined fires, but is sometimes voluntarily reported.

Item First Ignited[47]	**%**
Food, cooking materials	73%
Rubbish, trash, waste	7%
Flammable, combustible liquid	5%

Factor Contrib. to Ignit.	**%**	**%Unconfined**[48]
Too close to combustibles	2%	10%

Equipment[49]	**%**
Cooking equipment	73%
None	9%
Boiler, furnace, cent. heat. unit	5%

Cause of Ignition	**%**	**%Unconfined**[50]
Unintentional	16%	70%
Failure of eq. or heat source	2%	10%
Intentional	0%	0%
Act of Nature	2%	10%
Undetermined	2%	10%
Cause under investigation	0%	0%

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

Alerted occupants	3%
Didn't alert occupants	0%
Undetermined	97%

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

[48] 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.

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

[50] 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.

Month	Total Fires	Structure Fires	Vehicle Fires	Other Fires
January	3	1	0	2
February	3	2	1	0
March	5	3	0	2
April	8	7	0	1
May	8	6	0	2
June	7	4	0	3
July	10	5	0	5
August	5	3	0	2
September	5	4	0	1
October	6	5	0	1
November	10	9	0	1
December	12	10	2	0

Day	Total Fires	Structure Fires	Vehicle Fires	Other Fires
Sunday	19	13	1	5
Monday	13	11	0	2
Tuesday	11	8	0	3
Wednesday	16	14	0	2
Thursday	9	7	1	1
Friday	6	4	1	1
Saturday	8	2	0	6

Time	Total Fires	Structure Fires	Vehicle Fires	Other Fires
00:01 - 04:00	7	4	0	3
04:01 - 08:00	8	4	1	3
08:01 - 12:00	16	13	0	3
12:01 - 16:00	23	14	0	9
16:01 - 20:00	17	16	0	1
20:01 - 00:00	11	8	2	1

Motor Vehicle Fires

Total: 3
Automobiles: 3 (100%)
1 (33%) of the automobile fires considered intentionally set.

Arson Fires

Total Arsons: 1 **$4,400**

Situation	Arsons	% of Situation	% of Arson	Dollar Loss
Structure Arsons	0	0%	0%	$0
Vehicle Arsons	1	33%	100%	4,400
Other Arsons	0	0%	0%	0

No Injuries

0.06 Arson fires/1,000 population
0.00 Structure arsons/1,000 population
0.06 Vehicle arsons /1,000 population
0.00 Other arsons/1,000 population

Peak Times of Day for Arson Fires

Structure Arsons	#	%	Vehicle Arsons	#	%
			20:01 - 00:00	1	100%

Other Arsons	#	%

Peak Fixed Property Uses for Structure Arsons

Occupancy	#	%

Appendix

2013 Fires By County

County	Total Fires	Structure Fires	Vehicle Fires	Other Fires	Civilian Deaths	Civilian Injuries	Fire Service Deaths	Fire Service Injuries	Dollar Loss
Barnstable	788	390	89	309	0	43	0	9	$7,503,850
Berkshire	480	294	38	148	0	11	0	18	6,616,515
Bristol	2,006	897	269	840	4	36	0	26	16,459,841
Dukes	38	15	7	16	0	0	0	0	64,750
Essex	2,950	1,511	268	1,171	6	35	0	73	21,987,364
Franklin	287	140	32	115	5	2	0	2	2,017,070
Hampden	2,056	1,087	240	729	8	33	0	53	19,258,956
Hampshire	511	244	42	225	1	9	0	19	6,194,238
Middlesex	5,052	2,999	428	1,625	5	41	0	71	45,147,639
Nantucket	43	36	0	7	0	0	0	1	2,636,900
Norfolk	2,883	1,799	238	846	1	13	0	41	15,564,682
Plymouth	1,891	823	230	838	2	36	0	32	17,793,818
Suffolk	6,886	4,992	349	1,545	5	26	0	66	54,178,816
Worcester	3,957	2,126	357	1,474	7	38	0	67	29,173,500
Total	**29,828**	**17,353**	**2,587**	**9,888**	**44**	**323**	**0**	**478**	**$244,597,939**

2013 Arsons By County

County	Total Arsons	Structure Arsons	Vehicle Arsons	Other Arsons	Civilian Deaths	Civilian Injuries	Fire Service Deaths	Fire Service Injuries	Dollar Loss
Barnstable	44	7	0	37	0	3	0	0	$109,350
Berkshire	13	6	0	7	0	2	0	1	561,050
Bristol	90	31	4	55	0	0	0	4	1,003,500
Dukes	1	0	0	1	0	0	0	0	0
Essex	110	21	10	79	0	1	0	2	151,986
Franklin	20	1	0	19	0	1	0	1	550,000
Hampden	60	13	19	28	1	0	0	6	687,930
Hampshire	33	5	0	28	0	1	0	0	252
Middlesex	109	33	11	65	0	0	0	2	1,117,798
Nantucket	0	0	0	0	0	0	0	0	0
Norfolk	59	6	4	49	0	0	0	0	421,354
Plymouth	73	12	8	59	0	0	0	3	376,751
Suffolk	151	31	8	112	2	0	0	10	938,410
Worcester	139	29	11	99	1	1	0	1	690,279
Total	**902**	**195**	**75**	**632**	**4**	**9**	**0**	**30**	**$6,608,710**

2013 Fires, Arsons and Deaths By County and By Population*

County	Population	Total Fires	Fires per 1,000 Pop.	Fire Deaths	Deaths per 1,000 Fires	Deaths per 10,000 Pop.	Total Arsons	Arsons per 1,000 Pop.
Barnstable	215,888	788	3.7	0	0.0	0.00	44	0.2
Berkshire	131,219	480	3.7	0	0.0	0.00	13	0.1
Bristol	548,285	2,006	3.7	4	2.0	0.07	90	0.2
Dukes	16,535	38	2.3	0	0.0	0.00	1	0.1
Essex	743,159	2,950	4.0	6	2.0	0.08	110	0.1
Franklin	71,372	287	4.0	5	17.4	0.70	20	0.3
Hampden	463,490	2,056	4.4	8	3.9	0.17	60	0.1
Hampshire	158,080	511	3.2	1	2.0	0.06	33	0.2
Middlesex	1,503,085	5,052	3.4	5	1.0	0.03	109	0.1
Nantucket	10,172	43	4.2	0	0.0	0.00	0	0.0
Norfolk	670,850	2,883	4.3	1	0.3	0.01	59	0.1
Plymouth	494,919	1,891	3.8	2	1.1	0.04	73	0.1
Suffolk	722,023	6,886	9.5	5	0.7	0.07	151	0.2
Worcester	798,552	3,957	5.0	7	1.8	0.09	139	0.2
Massachusetts	**6,547,629**	**29,828**	**4.6**	**44**	**1.5**	**0.07**	**902**	**0.1**

*Population statistics based on 2010 U.S. Census Bureau data.

2013 Non-Fire Responses By County and By Incident Type

County	Total Non-Fire Responses	Overpressure Rupt. & Explos. (No-fire)	Rescue EMS Incidents	Hazardous Conditions (No-fire)	Service Calls	Good Intent Calls	False Alarm Calls	Severe WX[51] & Natural Disaster	Special Incident Type
Barnstable	36,527	41	24,258	1,942	3,105	1,464	5,471	130	116
Berkshire	11,606	14	6,672	698	1,444	603	2,101	17	57
Bristol	55,808	44	35,690	2,721	3,592	3,645	9,646	90	380
Dukes	436	0	47	54	40	55	238	0	2
Essex	93,111	94	52,560	4,000	12,790	6,341	16,456	65	805
Franklin	4,836	15	2,571	498	488	408	810	22	24
Hampden	44,621	88	26,466	1,837	3,376	5,152	7,492	13	197
Hampshire	13,389	47	8,497	641	807	787	2,504	11	95
Middlesex	148,831	132	85,239	8,876	14,966	9,283	25,153	90	5,092
Nantucket	2,673	3	1,244	251	174	83	911	1	6
Norfolk	82,242	131	49,398	4,857	7,878	5,394	12,634	93	1,857
Plymouth	76,851	94	48,638	5,276	7,061	5,354	9,744	403	281
Suffolk	91,097	76	50,489	4,480	12,114	7,399	16,180	15	344
Worcester	80,144	89	51,717	3,690	6,358	5,354	11,739	62	1,135
Massachusetts	**742,172**	**868**	**443,486**	**39,821**	**74,193**	**51,322**	**121,079**	**1,012**	**10,391**

[51] WX is the abbreviation for Weather.