Suffolk County

2012 Fire Data Analysis

MFIRS
Massachusetts Fire Incident Reporting System

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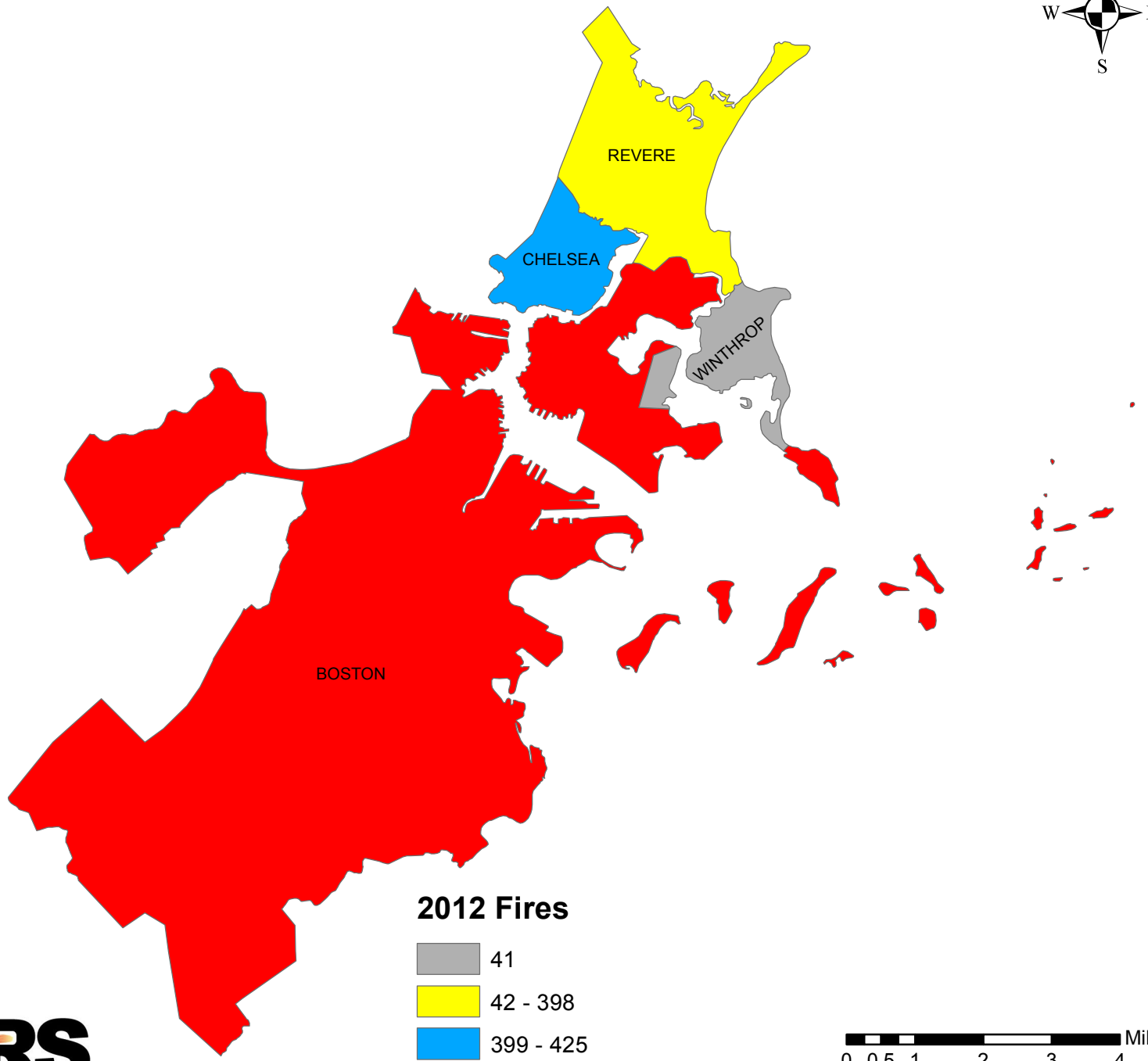
Suffolk County Fires 2012



MFIRS
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Massachusetts Fire Incident Reporting System 2012

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Suffolk County Fires in 2012

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.

6,678 Total Fires — 4,826 Structures, 325 Vehicles & 1,527 Other Fires

The four communities in Suffolk County reported a total of 6,678 fires to the Massachusetts Fire Incident Reporting System (MFIRS) in 2012[1]. The 4,826 structure fires, 325 motor vehicle fires, 678 outside rubbish fires, 593 brush, tree or lawn fires, 107 special outside fires, 11 cultivated vegetation or crop fire, and 138 other fires caused one civilian death, 17 civilian injuries, 52 fire service injuries and an estimated dollar loss of $64.5 million. Although 11% of Massachusetts residents live in Suffolk County, these four Suffolk County fire departments reported 21% of the state's 31,229 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 9.3 fires per 1,000 people in 2012, almost twice the statewide rate of 4.8 fires per 1,000 population. Chelsea had the highest rate at 12.1 fires per 1,000 people in 2012. Winthrop had the lowest rate, 2.3 fires per 1,000 people this year, less than the county average. Boston had the second highest rate of fires per population with 9.2. Revere's fire rate per 1,000 population was 7.7.

Structure Fires Per 1,000 Population

Suffolk County had a rate of 6.7 structure fires per 1,000 people in 2012. The community with the highest rate of structure fires per 1,000 population was Chelsea, having 8.7 structure fires per 1,000 people. Boston had 6.8 fires per 1,000 population. Revere had 5.8 structure fires per 1,000 people. Winthrop had the lowest rate of structure fires with 1.3 per 1,000 population. The rate of structure fires per 1,000 people in Massachusetts in 2012 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

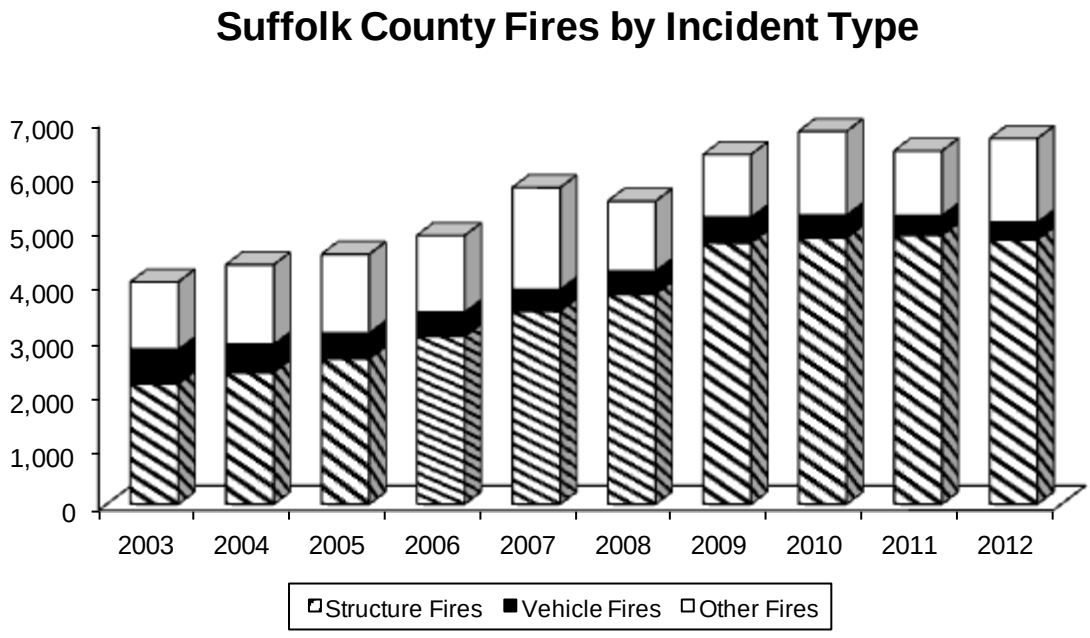
Suffolk County had 0.45 motor vehicle fires per 1,000 population in 2012. Chelsea had the highest rate in the county at a rate of 0.57 motor vehicle fires per 1,000 people. Boston had the next highest rate at 0.45 motor vehicle fires per 1,000 people. Revere experienced 0.31 motor vehicle fires per 1,000 population and Winthrop was at 0.11. The state's rate was 0.38 motor vehicle fires per 1,000 people in 2012. Revere and Winthrop were both below the state rate.

[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	9.22	6.79	0.45	1.98
Chelsea	12.08	8.73	0.57	2.79
Revere	7.69	5.80	0.31	1.58
Winthrop	2.34	1.26	0.11	0.97
Suffolk County	9.25	6.68	0.45	2.11
Massachusetts	4.77	2.68	0.38	1.78

Structure & Motor Vehicle Fires Down in 2012

The total number of reported fires in Suffolk County increased by 224, or 3%, from the 6,454 reported in 2011. Reported structure fires decreased by 81, or 2%, from 4,907 the previous year. Motor vehicle fires decreased by 44, or 12%, from 369 the year before. The total number of reported outside and other fires increased by 349, or 30%, from 1,178 in 2011.



SUFFOLK COUNTY FIRES FROM 2003 TO 2012

Year	Total Fires	Structure Fires	Vehicle Fires	Other Fires	Total Arsons	Structure Arsons	Vehicle Arsons	Other Arsons
2003	4,060	2,195	636	1,229	192	78	61	53
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	4,826	325	1,527	169	33	22	114

STRUCTURE FIRES

Reported Structure Fires Down
The 4,826 structure fires caused one civilian death, 17 civilian injuries, 48 fire service injuries and an estimated dollar loss of $61.3 million. These incidents represented 72% of Boston's reported fires in 2012. The average estimated dollar loss per structure fire was $12,712. The total number of reported structure fires decreased by 81, or 2%, from the 4,907 reported in 2011.

BUILDING FIRES

There were 4,800 building fires of different types in Suffolk County in 2012. These 4,800 building fires accounted for 99.5% of all structure fires in Suffolk County.

83% of Building Fires in Homes
The 4,800 building fires that occurred in Suffolk County in 2012 can be broken down by fixed property use as follows: 3,970, or 83%, of all reported building fires in 2012 were in residential properties; 214 fires occurred in public assembly properties; 205 fires took place in mercantile and office properties; 200 fires happened in institutional properties; 111 fires occurred in educational properties; 49 fires took place in special properties; 23 fires were in storage properties; 11 occurred in industrial, utility, defense, agricultural or mining facilities; and eight were reported in manufacturing properties; and nine 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 85% of Residential Building Fires

In 2012, 3,970, or 85%, of the 4,800 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 85% 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 2012.

88% of Residential Building Fires Are Confined to Non-Combustible Containers[2]

Three thousand five hundred and four (3,504), or 88% of all residential building fires, were reported as confined to non-combustible containers in 2012. Three thousand two hundred and seventy-four (3,274) of the reported fires were cooking fires contained to a non-combustible container accounting for 82% of residential building fires. One hundred and eight (108), or 3%, were fires confined to a fuel burner or boiler malfunction. There were 99 confined indoor rubbish fires, accounting for 2% of the residential building fires in 2012. Nineteen (19), or 0.5%, of all residential fires were confined to chimneys or flues. Three (3), or 0.1%, of the residential building fires in Suffolk County, were confined commercial compactor fires. One (1), or 0.03%, of the residential building fires in Suffolk County, was a confined incinerator overload or malfunction. The number of contained fires decreased by 62, or 2%, from the 3,566 reported in 2011.

Detectors Alerted Occupants in 78% of Fires

Smoke or heat detectors operated and alerted the occupants in 3,090, or 78%, 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 646 incidents, or 16%, of Suffolk County's residential building fires.

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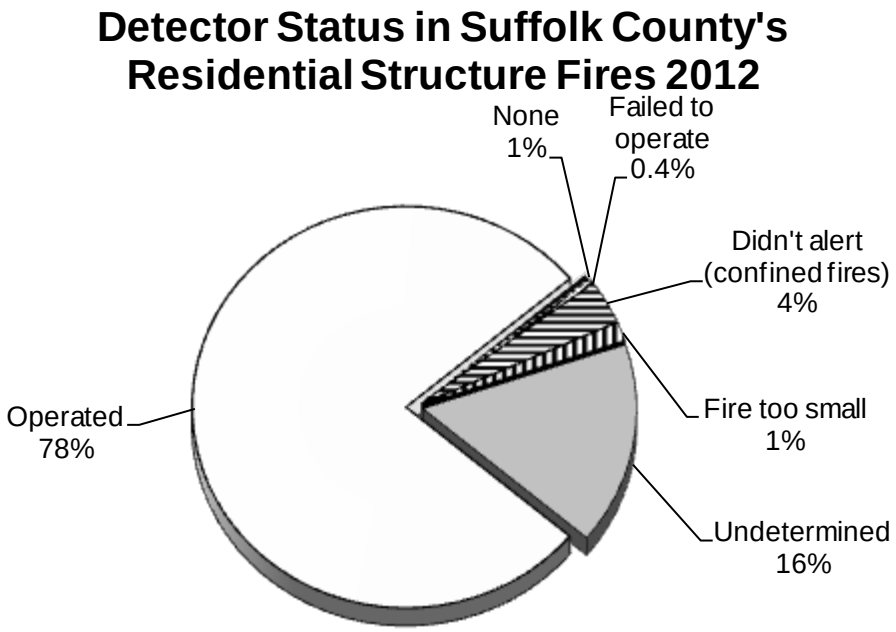
[2] In MFIRS v5 a fire in a building contained to a non-combustible container (Incident Type = 113-118) does not have to have a Fire Module completed. Therefore the following data fields do not need to be completed: Area of Origin, Detector Status, Item First Ignited, Heat Source, Factors Contributing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



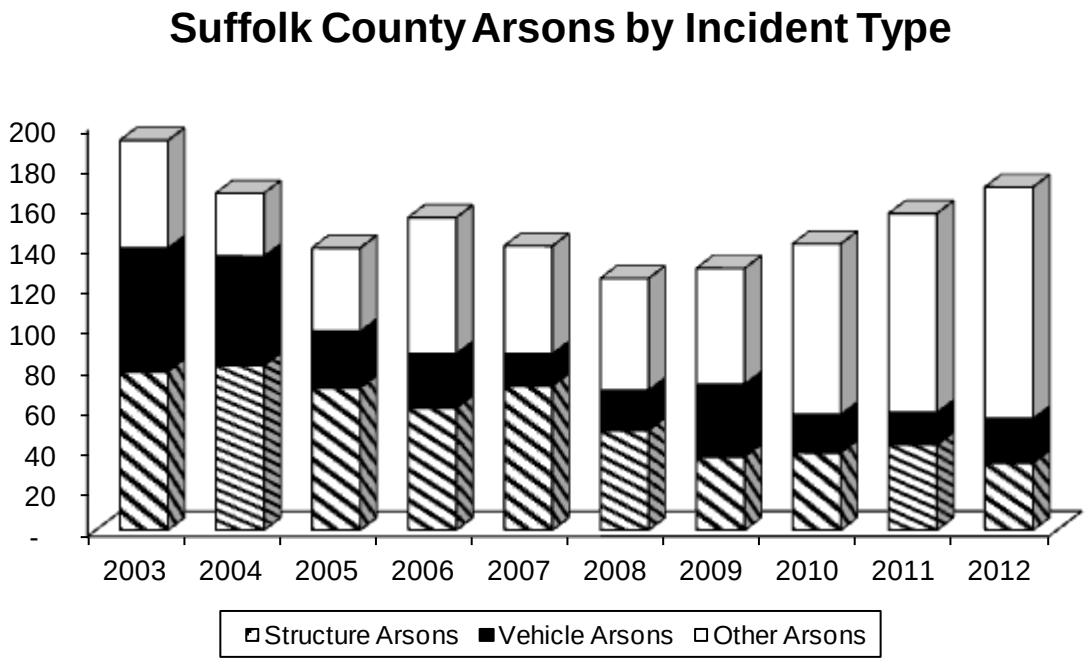
36% of Failed Detectors Had Missing or Dead Batteries
Of the 14 fires where smoke detectors were present but failed to operate, five, or 36%, failed because of missing or disconnected batteries. Two (2), or 14%, did not operate because of dead batteries. Another two detectors, or 14%, failed because of a lack of maintenance. Two (2) more detectors, or 14%, failed from power failures, shut-offs or disconnects. In three cases, or 29%, the reason the detector failed was not determined or classified.

JUVENILE-SET FIRES

14 Juvenile-set Fires
There were 14 reported juvenile-set fires in Suffolk County in 2012. The seven structure fires, two brush fires, one motor vehicle fire, and four unclassified fires caused one fire service injury and $557,812 in estimated damages.

ARSONS

169 Arsons —33 Structure Arsons, 22 Vehicle Arsons & 114 Other Arsons
One hundred and sixty-nine (169), or 3%, of Suffolk County's 6,678 fires were considered intentionally set, or for purposes of analysis, arson. The 33 structure arsons, 22 motor vehicle arsons and 114 outside and other arsons caused three fire service injuries and an estimated dollar loss of $575,890.



Structure Arson Decrease

The total number of reported arson fires increased by 12, or 8%, from the 157 reported in 2011. Structure arson decreased by 10 from the 43 reported a year earlier. Motor vehicle arsons increased by six from 16 the previous year. Identified outside and other arsons increased by 16 from 98 the year before. Structure arsons represented 20% of the total arson problem while motor vehicle arson only accounted for 13% of all the 2012 arsons in Suffolk County.

Arson Rates Per Population

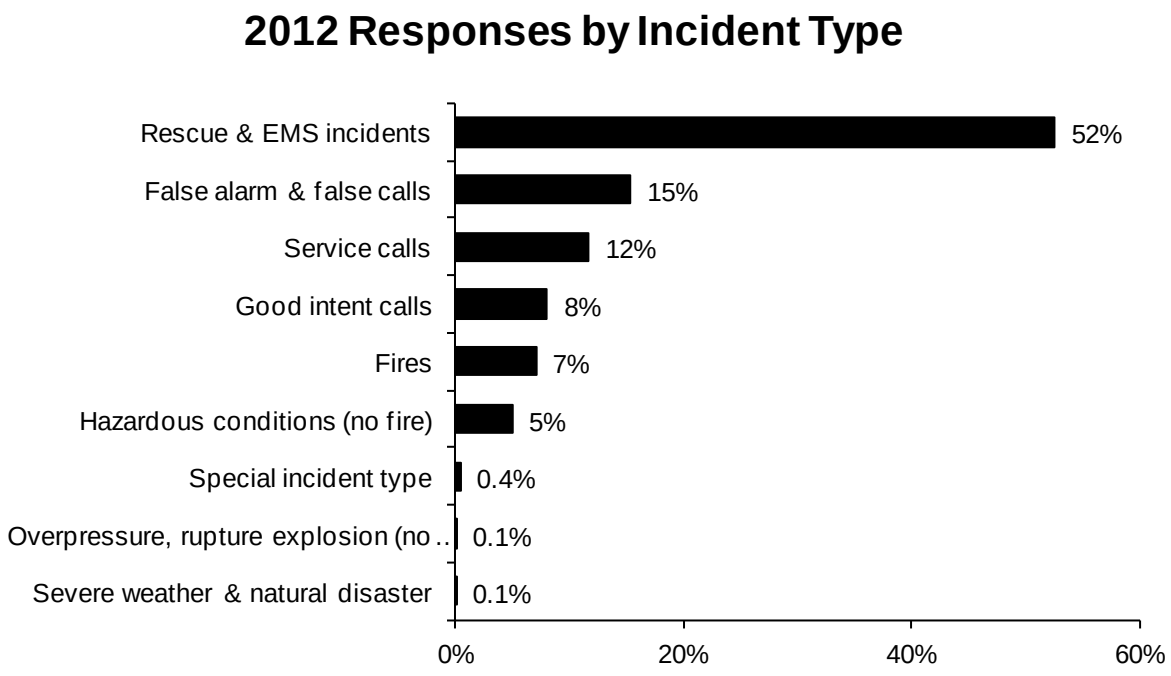
The community in Suffolk County with the highest rate of arson per population in 2012 was Chelsea with 0.34 arsons per 1,000 people. All of the communities, Suffolk County and the state in general had less than one arson per 1,000 population. For all of Suffolk County, the arson rate was 0.23 per 1,000 population; for the entire Commonwealth it was slightly lower at 0.17 per 1,000 population. Chelsea had the highest rate for structure arsons per 1,000 population with 0.11. Chelsea also had the highest rate for motor vehicle arsons per 1,000 population with 0.11.

ALL INCIDENTS

Rescue & EMS Calls Are Over 1/2 of All Reported Responses
In 2012, fire departments in Suffolk County reported 95,624 total responses to MFIRS. Of these 95,624 incidents, 88,934 non-fire calls were voluntarily reported.

Of these 88,934 non-fire calls, 50,185, or 52% of all the responses reported in 2012 were reported rescue and emergency medical services (EMS) calls[4]; 14,664, or 15%, were reported false alarm or false calls; 11,165, or 12%, were reported service calls such as lock-outs, water or smoke problem, unauthorized burning or public service assistance; 7,674, or 8%, were reported good intent calls; 4,718, or 5%, were reported hazardous condition calls with no fire; 403, or 0.4%, were special incident type calls such as citizen complaints; 74, or 0.1%, were reported overpressure, rupture, explosion or overheat calls with no fire; and 51, or 0.1%, were severe weather calls.

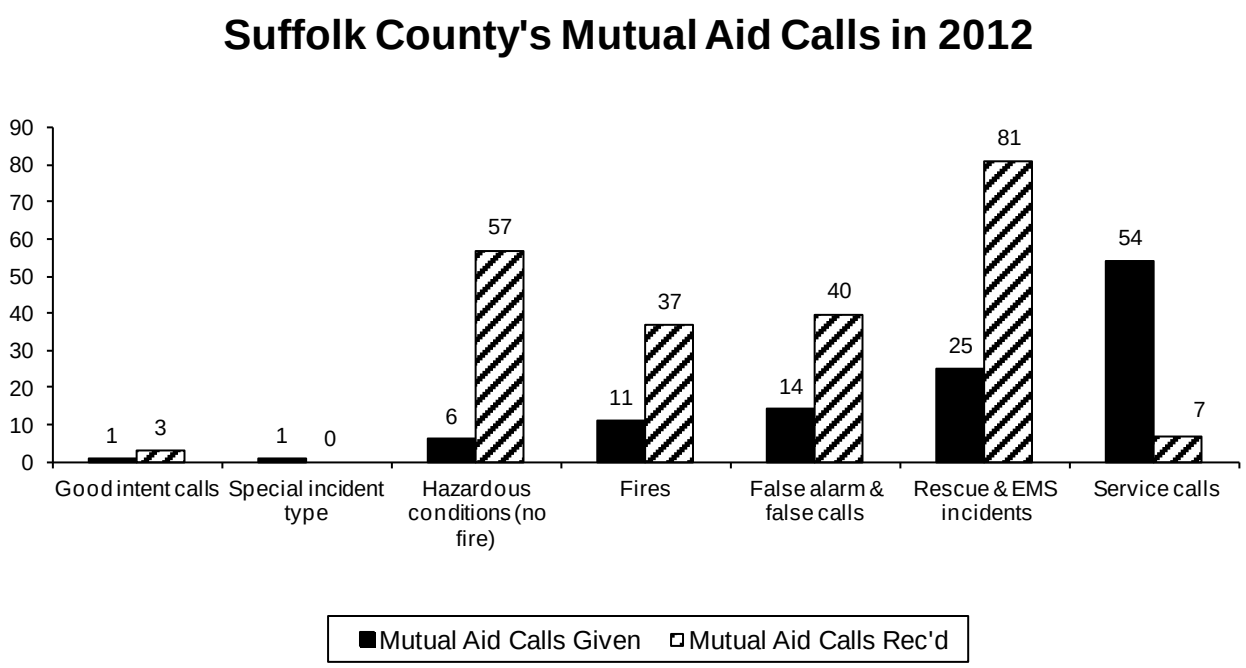
Six thousand six hundred and ninety (6,690), or 7%, of the total responses submitted by Suffolk County fire departments were fires[5].



[4] The Boston Fire Department does not run any ambulances. Instead they dispatch their companies as first responders to all EMS calls.
[5] This figure includes responses in which Suffolk County fire departments gave mutual aid to another fire department at a fire.

Suffolk County Fire Departments Reported Giving Mutual Aid 112 Times
In 2012, Suffolk County fire departments reported coming to the aid of other fire departments 112 times. Of these 112 responses, 54, or 48%, were for service calls such as cover assignments; 25, or 22%, were for rescue or EMS incidents; 14, or 13%, were for false alarms or false calls; 11, or 10%, were for fires; six, or 5%, were for hazardous condition calls with no fire; one, or 1%, was for a good intent call; and one, or 1%, of the mutual aid given calls was for a special incident type.

Suffolk County Fire Departments Reported Receiving Mutual Aid in 225 Incidents
In 2012, Suffolk County fire departments reported receiving aid from surrounding departments for 225 incidents. Of these 225 incidents, 57, or 25%, were hazardous conditions calls with no fire; 37, or 16%, were for fires; 81, or 36%, were rescue and emergency medical services calls; 40, or 18%, were false alarms or false calls; seven, or 3% were service calls; and another three calls, or 1%, were good intent calls.



The City of Boston

5,693 Fires — 4,192 Structure Fires, 280 Vehicle Fires & 1,221 Other Fires
The Boston Fire Department reported 4,192 structure fires, 280 motor vehicle fires, 563 outside rubbish fires, 459 grass, tree or brush fires, 97 special outside fires, two cultivated vegetation or crop fires, and 100 unclassified fires to the Massachusetts Fire Incident Reporting System (MFIRS) in 2012. These 5,693 incidents caused one civilian death, 12 civilian injuries, 13 fire service injuries and an estimated dollar loss of $53.1 million. There were 9.2 fires for every 1,000 residents in 2012. Although fewer than 10% of the state's residents live in the City of Boston, the Boston Fire Department reported 20% of the 31,229 fire incidents reported statewide in 2012.

Structure & Motor Vehicle Fires Down
The total number of Boston fires reported to the Massachusetts Fire Incident Reporting System decreased by 154 from the 5,539 reported in 2011 to 5,693 in 2012. Structure fires decreased by 57, motor vehicle fires decreased by 47, and outside and other fires increased by 258. For the first time in 10 years the number of structure fires decreased. Motor vehicle fires have been on a downward trend since 1986; increasing only twice since 1994. Outside and other fires continued their up and down trend over the past 10 years.

150 Arsons — 27 Structure Arsons, 18 Vehicle Arsons & 105 Other Arsons
One hundred and fifty (150), or 3%, of the 5,693 Boston fires were considered intentionally set, or, for purposes of this analysis, arson. The 27 structure arsons, 18 motor vehicle arsons and 105 outside and other arsons caused one fire service injury and an estimated dollar loss of $464,388.

Cooking Caused 85% of Boston's Residential Fires
Cooking was the leading cause of the 3,473 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 2012.

Detectors Alerted Occupants in 86% of Fires
Smoke or heat detectors operated and alerted the occupants in 2,981, or 86%, of the residential building fires. In 3% 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 1% of the residential fires. Smoke detector performance was undetermined in 293 incidents, or 9%, 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 Fire
The Boston Fire Department reported eight fires with over $1 million in estimated damages. These eight fires accounted for $32.6 million in total estimated damages, or 61% of all dollar loss reported in 2012.

- On March 13, 2012, at 6:30 p.m., the Boston Fire Department was called to an electrical fire in a six-story electrical distribution building at 40 Dalton St. It was undetermined if detectors were present. A partial automated extinguishing system was present, but it was not reported how it operated. The fire originated on the first floor in an electrical transformer. The fire caused a large area of Boston to be under black out conditions and the Hilton and Sheraton Hotels had to be evacuated. There were no injuries associated with this fire and damages were estimated to be $22 million.

The City of Chelsea

425 Fires — 307 Structure Fires, 20 Vehicle Fires and 98 Other Fires
The City of Chelsea reported 425 fires to the Massachusetts Fire Incident Reporting System (MFIRS) in 2012. The 307 structure fires, 20 motor vehicle fires, 60 grass, tree or brush fires, 10 outside rubbish fires, four special outside fires, and 24 unclassified fires caused five civilian injuries, 35 fire service injuries and an estimated dollar loss of $1.9 million. There were 12.1 fires for every 1,000 citizens in 2012.

Structure & Outside Fires Up
Total fires increased by 99, or 30%, from the 326 fires reported in 2011. Structure fires increased by 64 from the 243 reported in 2011. Motor vehicle fires decreased by three, from 23 the previous year. Outside and other fires increased by 38 from the 60 reported in 2011.

12 Arsons — 4 Structure Arsons, 4 Vehicle Arsons & 4 Outside & Other Arsons
Twelve (12), or 3%, of the 425 Chelsea fires were considered intentionally set, or, for purposes of this analysis, arson. The four structure arsons, four motor vehicle arsons and four outside and other arsons caused two fire service injuries, and an estimated dollar loss of $93,002.

Unsafe Cooking Practices Caused Over 3/4 of Residential Fires
Cooking was the leading cause of fires in Chelsea's residential properties in 2012, accounting for 78% of these fires. Heating was the second leading cause, accounting for 4% of the fires in people's homes in Chelsea in 2012. Electrical problems and indoor rubbish fires each accounted for 3% and smoking caused 2% of these fires. Candles and arson each caused 1% and clothes dryers caused of less than 1% of residential building fires in Chelsea.

Detectors Alerted Occupants in Only 27% of Fires
Smoke or heat detectors operated and alerted the occupants in 67, or 27%, of the residential building fires. In 10% of these fires[7], the detectors did not alert the occupants. Detectors were present but did not operate in 1% of residential fires. In less than 1% of these fires, no detectors were present at all. The fire was too small to trigger the detector in 3% of these fires. Smoke detector performance was undetermined in 149 incidents, or 59% of Chelsea's residential building fires.

Largest Loss Fire in Chelsea

- On November 10, 2012, at 4:16 a.m., the Chelsea Fire Department was dispatched to a clothes dryer fire at a health club. The fire started in the laundry room and spread to other parts of the floor. Three (3) firefighters were injured at this fire. Detectors were present and operated. The building was not sprinklered and damages were estimated to be $400,000.

The City of Revere

398 Fires — 300 Structure Fires, 16 Vehicle Fires and 82 Other Fires
The City of Revere reported 398 fires to the Massachusetts Fire Incident Reporting System (MFIRS) in 2012. The 300 structure fires, 16 motor vehicle fires, 53 outside rubbish fires, 24 grass, tree or brush fires, and five unclassified fires, caused four fire service injuries and an estimated dollar loss of $8.5 million. There were 7.7 fires for every 1,000 citizens in 2012.

Structure Fires Down
The total number of reported fires decreased by 48 from the 446 reported in 2011. Structure fires decreased by 70 from the 370 reported during the previous year. Motor vehicle fires increased by three from the 13 reported in 2011. Reported outside and other fires increased by 19 from 63 the year before.

4 Arsons — 2 Structure Arsons & 2 Outside Arsons
Four (4), or 1%, of Revere's 398 reported fires were considered intentionally set, or for purposes of this analysis, arson. Structure arsons remained the same with two reported in both 2011 and 2012. Motor vehicle arsons decreased by one from one reported the previous year. Outside and other arsons increased by two from none in 2011.

Unsafe Cooking Causes 88%of Residential Fires
Cooking was the leading cause of fires in Revere's residential properties in 2012, accounting for 88% of these fires. Heating equipment caused 4% of residential building fires in 2012. Indoor rubbish fires and smoking were each responsible for 2% of these fires. Electrical problems, arson and candles each caused 1% of the residential building fires in Revere in 2012.

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

Detectors Alerted Occupants in Only 16% of Fires
Smoke or heat detectors operated and alerted the occupants in 38, or 16%, of the residential building fires. In 1% of these fires[8], the detectors did not alert the occupants. There were no reported incidents where 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 1% of these fires. Smoke detector performance was undetermined in 191 incidents, or 80% of Revere's residential building fires.

Largest Loss Fire In Revere

- At 10:35 p.m., on October 5, 2012, the Revere Fire Department was called to an electrical fire at an electric generating plant. A spark from a malfunctioning electrical gas compressor ignited a filter. Two (2) firefighters were injured at this fire. Detectors were present and alerted the occupants. Sprinklers were present and contained the fire until fire personnel arrived. Damages from this blaze were estimated to be $7 million.

The Town of Winthrop

41 Fires — 22 Structure Fires, 2 Vehicle Fires & 17 Other Fires
The Town of Winthrop reported 41 fires to the Massachusetts Fire Incident Reporting System (MFIRS) in 2012. The 22 structure fires, two motor vehicle fires, five brush and grass fires, three special outside fires, two outside rubbish fires, and seven unclassified fires caused an estimated dollar loss of $960,850. There were 2.3 fires for every 1,000 citizens in 2012.

All Fires Down
The total number of fires reported in Winthrop decreased by 20 from 61 in 2011. Structure fires dropped by 15 from the 37 reported in 2011. Motor vehicle fires increased by one from one in 2011. Outside and other fires decreased by six from 23 in 2011.

2 Arsons – 2 Outside & Other Arsons
For the second year in a row there were only two arsons in Winthrop. These two, or 3%, of the 61 Winthrop fires were considered intentionally set, or, for purposes of this analysis, arson.

Unsafe Cooking Practices Caused 37% of Winthrop's Residential Fires
Cooking was the leading cause of fires in Winthrop residential properties in 2012, accounting for 37% of these fires. Heating equipment fires were the second leading cause, accounting for 21% of these fires; and smoking caused 11% of these fires. One (1) indoor rubbish fire caused 5% of the fires in Winthrop's homes in 2012

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

Detectors Alerted Occupants in Only 21% of Fires

Smoke or heat detectors operated and alerted the occupants in four, or 21%, 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 11% 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 13 incidents, or 68% of Winthrop's residential building fires.

Largest Loss Fire in Winthrop

- On February 23, 2012, at 8:15 a.m., the Winthrop Fire Department was called to a natural gas fire at a single-family home. There were no injuries associated with this fire. It was undetermined if detectors were present. The building was not sprinklered. Damages from this fire were estimated to be $700,000.

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

Suffolk County Population: 722,023

9.3 Fires/1,000 Population

Total Fires:	**6,678**		**$64,522,343**
Situation	**Fires**	**% of Fires**	**Dollar Loss**
Structure Fires	4,826	72%	$61,347,576
Vehicle Fires	325	5%	2,892,491
Other Fires	1,527	23%	282,276

1 Fatal Fire 0.15 Civilian Deaths/1,000 Fires
1 Civilian Death 0.01 Civilian Deaths/10,000 Population

17 Civilian Injuries 52 Fire Service Injuries

Building Fires: 4,800

Residential Building Fires: 3,970

Residential Building Fires Confined to Non-Combustible Containers: 3,504

Unconfined Residential Building Fires: 466

1 Civilian Death 16 Civilian Injuries 35 Fire Service Injuries

Occupancy	**Fires**	**%**
Apartments	2,692	68%
1- & 2-Family homes	503	13%
Dormitories	185	5%
Rooming houses	148	4%
Residential board & care	79	2%
Hotel/motel	39	1%

Detector Status	**Fires**	**%**
Operated	3,090	78%
Didn't operate	14	0.4%
None	22	1%
Fire too small	59	1%
Didn’t Alert (confined)	139	4%
Undetermined	646	16%

Area of Origin[10]	**%**
Kitchen	86%
Heating room or area	3%
Bedroom	1%
Exterior balcony/unencl. porch	1%
Exterior stairway	1%

Heat Source	**%**	**%Unconfined**[11]
Radiated heat from oper. eq.	2%	17%
Arcing	2%	13%
Cigarette	1%	8%
Heat from operating equip.	1%	8%
Hot or smoldering object	1%	7%

[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]	**%**
Food, cooking materials	84%
Rubbish, trash, waste	3%
Flammable, combustible liquid	3%
Structural member, framing	1%
Electrical wire, cable insulation	1%

Factor Contrib. to Ignit.	**%**	**%Unconfined**[13]
Abandoned materials	2%	15%
Misuse of materials	1%	9%
Too close to combustibles	1%	8%
Equipment unattended	1%	8%
Electrical failure/malfunc.	1%	7%

Equipment[14]	**%**
Cooking equipment	84%
None	7%
Boiler, furnace, cent. heat unit	3%
Electrical wiring	1%
Chimney or flue	1%

Cause of Ignition	**%**	**%Unconfined**[15]
Unintentional	7%	62%
Failure of eq. or heat source	1%	12%
Intentional	1%	4%
Act of nature	0.1%	1%
Undetermined	1%	8%
Cause under investigation	1%	9%

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

Alerted Occupants	81%
Didn't Alert Occupants	4%
Undetermined	15%

[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	581	499	23	59
February	493	403	22	68
March	566	383	32	151
April	800	415	25	360
May	505	377	31	97
June	474	341	29	104
July	563	309	37	217
August	444	287	25	132
September	511	374	25	112
October	536	456	22	58
November	649	506	29	114
December	556	476	25	55

Day	Total Fires	Structure Fires	Vehicle Fires	Other Fires
Sunday	1,056	786	44	229
Monday	953	657	46	250
Tuesday	985	702	46	237
Wednesday	857	652	40	165
Thursday	926	691	55	180
Friday	900	628	47	225
Saturday	1,001	713	47	241

Time	Total Fires	Structure Fires	Vehicle Fires	Other Fires
00:01 - 04:00	517	319	48	150
04:01 - 08:00	427	304	35	88
08:01 - 12:00	1,019	800	49	170
12:01 - 16:00	1,619	1,118	69	432
16:01 - 20:00	1,810	1,378	63	369
20:01 - 00:00	1,286	807	61	318

Motor Vehicle Fires

Total: 325
Automobiles: 280 (86%)
22 (8%) of the automobile fires considered intentionally set.

Arson Fires

Total Arsons: 169 **Dollar loss: $575,890**

0.23 Arson Fires/1,000 Population

Situation	Arsons	% Situation	% Arson	Dollar Loss
Structure Arsons	33	1%	20%	$363,803
Vehicle Arsons	22	7%	13%	192,553
Other Arsons	114	7%	67%	19,534

0.05 Structure arsons/1,000 population
0.03 Vehicle arsons /1,000 population
0.16 Other arsons/1,000 population

3 Fire Service Injuries

Peak Times of Day for:

Structure Arsons	#	%	Vehicle Arsons	#	%
12:01 - 16:00	7	21%	08:01 - 12:00	6	27%
16:01 - 20:00	7	21%	12:01 - 16:00	6	27%
20:01 - 00:00	7	21%	20:01 - 00:00	5	23%

Other Arsons	#	%
16:01 - 20:00	35	31%
20:01 - 00:00	34	30%
12:01 - 16:00	20	18%

Peak Fixed Property Uses for Structure Arsons	#	%
Apartments	16	48%
1- & 2-Family homes	7	21%
Parking garage (detached residential garage)	2	6%

BOSTON FIRES FROM 2008 TO 2012 **POPULATION: 617,594**

	Total	Structure	Vehicle	Other	Total	Structure	Vehicle	Other
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

CHELSEA FIRES FROM 2008 TO 2012 **POPULATION: 35,177**

Year	Total Fires	Structure Fires	Vehicle Fires	Other Fires	Total Arsons	Structure Arsons	Vehicle Arsons	Other Arsons
2008	266	190	13	63	7	2	0	5
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

REVERE FIRES FROM 2008 TO 2012 **POPULATION: 51,755**

Year	Total Fires	Structure Fires	Vehicle Fires	Other Fires	Total Arsons	Structure Arsons	Vehicle Arsons	Other Arsons
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	445	369	13	63	2	1	1	0
2012	398	300	16	82	4	2	0	2

WINTHROP FIRES FROM 2008 TO 2012 **POPULATION: 17,497**

Year	Total Fires	Structure Fires	Vehicle Fires	Other Fires	Total Arsons	Structure Arsons	Vehicle Arsons	Other Arsons
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

Suffolk County Fire Experience by Community for 2012

	Boston	Chelsea	Revere	Winthrop	Suffolk County*	State
Total Fires	**5,693**	**425**	**398**	**41**	**6,450**	**31,229**
Population	617,594	35,177	51,755	17,497	722,023	6,549,639
Rate/1K Pop.	9.2	9.3	8.6	2.3	8.9	4.8
Civilian Deaths	1	0	0	0	1	39
Civ. Deaths/10K Pop.	0.03	0	0.19	0	0.04	0.06
Fire Service Deaths	0	0	0	0	0	0
Civilian Injuries	12	4	0	0	17	322
Civ. Inj./1K Pop.	0.02	0.14	0	0	0.02	0.05
Fire Service Injuries	9	32	0	0	42	531
Est. $ Loss	$53,135,883	1,884,284	8,478,356	960,850	64,522,343	257,094,872
Structure Fires	**4,192**	**307**	**300**	**22**	**4,826**	**17,536**
Structure Fires/ 1,000 Population	6.8	12.1	5.8	1.3	6.7	2.7
Structure Fires Dollar Loss	$50,510,199	1,598,327	8,314,100	924,950	61,347,576	237,016,367
Residential Building Fires	3,461	251	238	19	3,970	14,534
Residential Confined Fires	3,068	207	217	11	3,504	11,577
Vehicle Fires	**280**	**20**	**16**	**2**	**325**	**2,502**
Vehicle Fires 1,000 Population	0.5	0.6	0.3	0.1	0.5	0.4
Vehicle Fire Dollar Loss	$2,491,191	171,550	161,250	21,000	2,892,491	15,385,019
Other Fires	**1,221**	**98**	**82**	**17**	**1,527**	**11,191**
Other Fires Dollar Loss	$134,493	114,407	3,006	14,900	282,276	4,693,486

*This figure includes 119 incidents reported by Massport Fire-Rescue. There were 5 structure fires, 7 vehicle fires and 107 outside and other fires.

Suffolk County Arson Experience by Community for 2012

	Boston	Chelsea	Revere	Winthrop	Suffolk County*	State
Total Arsons	**150**	**12**	**4**	**2**	**169**	**1,135**
Population	617,594	35,177	51,755	17,497	722,023	6,549,639
Rate/1,000 Population	0.24	0.34	0.04	0.11	0.23	0.17
Civilian Deaths	0	0	0	0	0	12
Fire Service Deaths	0	0	0	0	0	0
Civilian Injuries	0	0	0	0	0	16
Fire Service Injuries	1	2	0	0	3	27
Est. $ Loss	$464,388	93,002	8,500	0	575,890	13,418,232
Structure Arsons	**27**	**4**	**2**	**0**	**33**	**271**
Structure Arsons/ 1,000 Population	0.04	0.11	0.04	0.00	0.05	0.04
Structure Arson Dollar Loss	$350,301	5,002	8,500	0	363,803	12,196,749
% of Structure Fires Caused by Arson	1%	1%	1%	0%	1%	2%
% of Structure Fire Dollar Loss Caused by Arson	1%	0.3%	0.1%	0%	1%	5%
Residential Building Arsons	16	3	2	0	21	168
Vehicle Arsons	**18**	**4**	**0**	**0**	**22**	**114**
Vehicle Arsons/ 1,000 Population	0.03	0.11	0.00	0.00	0.03	0.02
Vehicle Arson Dollar Loss	$104,553	88,000	0	0	192,553	1,162,154
% of Vehicle Fires Caused by Arson	6%	20%	0%	0%	7%	5%
% of Vehicle Fire Dollar Loss Caused by Arson	4%	51%	0%	0%	7%	5%
Other Arsons	**105**	**4**	**2**	**2**	**114**	**750**
Other Arson Dollar Loss	$9,534	0	0	0	19,534	59,329

*There were no intentionally set fires reported by Massport Fire-Rescue.

2012 Suffolk County Structure Fires by Property Use

Property Use	Boston	Chelsea	Revere	Winthrop	Suffolk County[16]
Assembly	**159**	**4**	**13**	**0**	**182**
Assembly, other	9	1	0	0	10
Fixed use recreation places, other	2	0	0	0	2
Electronic amusement center	2	0	0	0	2
Ice rink: indoor, outdoor	1	0	0	0	1
Variable use amusement, rec. places	1	0	0	0	1
Ballroom, gymnasium	1	0	0	0	1
Places of worship, funeral parlors	4	0	0	0	4
Church, mosque, synagogue, temple	19	1	0	0	20
Clubs, other	3	0	0	0	3
Athletic/health club	2	0	0	0	2
Clubhouse	0	0	2	0	2
Public or government, other	1	0	0	0	1
Library	1	0	0	0	1
Museum	2	0	0	0	2
Eating, drinking places	19	0	3	0	22
Restaurant or cafeteria	71	1	6	0	78
Bar or nightclub	9	1	2	0	12
Passenger terminal, other	5	0	0	0	5
Airport passenger terminal	0	0	0	0	6
Rapid transit station	6	0	0	0	6
Film/movie production studio	1	0	0	0	1
Educational	**105**	**2**	**3**	**1**	**111**
Educational, other	22	0	0	0	22
Schools, non-adult	2	0	0	0	2
Preschool	10	0	0	0	10
Elementary school,	13	1	0	1	15
High /junior high/middle school	18	1	1	0	20
Adult education, college classroom	16	0	1	0	17
Day care, in commercial property	16	0	1	0	17
Day care, in residence, licensed	8	0	0	0	8
Institutional	**233**	**11**	**5**	**0**	**249**
Health care, detention, & corr, other	39	0	0	0	39
Nursing homes, 4+ persons	22	4	2	0	28
Mental retard./dev. disability facility	37	2	0	0	39
Alcohol/substance abuse recov. ctr.	34	0	0	0	34
Asylum, mental institution	0	4	0	0	4
Hospital - medical or psychiatric	73	0	0	0	73

[16] Suffolk County includes the 6 structure fires at airport terminals reported by Massport at Logan Airport.

2012 Suffolk County Structure Fires by Property Use

Property Use	Boston	Chelsea	Revere	Winthrop	Suffolk County
Institutional (cont'd)					
Clinics, Dr. offices, hemodialysis ctrs.	10	0	0	0	10
Clinic, clinic-type infirmary	2	0	0	0	2
Doctor, dentist or oral surgeon's office	1	1	2	0	4
Jail, prison (not juvenile)	4	0	0	0	4
Reformatory, juvenile detention center	5	0	0	0	5
Police station	6	0	1	0	7
Residential	**3,476**	**195**	**321**	**30**	**4,023**
Residential, other	341	2	0	0	343
1 or 2 family dwelling	382	30	125	13	550
Multifamily dwellings	2,331	151	193	14	2,689
Boarding/rooming house	127	6	0	0	133
Hotel/motel, commercial	36	0	2	2	41
Residential board and care	61	6	1	1	69
Dormitory type residence, other	181	0	0	0	181
Sorority house, fraternity house	5	0	0	0	5
Barracks, dormitory	12	0	0	0	12
Mercantile, business	**181**	**15**	**16**	**4**	**216**
Mercantile, business, other	49	0	0	0	49
Convenience store	8	0	5	0	13
Food & beverage sales, grocery store	38	7	2	1	48
Textile, wearing apparel sales	3	0	0	0	3
Household goods, sales, repairs	0	1	0	0	1
Specialty shop	12	0	0	0	12
Pers. serv., incl. Barber, beauty shops	10	0	2	0	12
Recreational, hobby, home repair	1	0	0	0	1
Laundry, dry cleaning	10	1	0	1	12
Professional supplies, services	2	0	0	0	2
Service station, gas station	1	0	0	0	1
MV or boat sales, services, repair	4	0	0	0	4
General retail, other	3	0	2	0	5
Department or discount store	1	0	0	0	1
Bank	1	1	1	0	3
Office: veterinary or research	3	0	0	0	3
Post office or mailing firms	4	0	0	0	4
Business office	31	5	4	2	42
Utility, defense, agriculture, mining	**8**	**0**	**0**	**0**	**8**
Energy production plant, other	1	0	0	0	1
Electric generating plant	1	0	0	0	1

2012 Suffolk County Structure Fires by Property Use

Property Use	Boston	Chelsea	Revere	Winthrop	Suffolk County
Utility, defense, agriculture, mining (cont'd)					
Laboratory or science laboratory	4	0	0	0	4
Communications center	1	0	0	0	1
Sanitation utility	1	0	0	0	1
Manufacturing, processing	**1**	**3**	**0**	**0**	**4**
Storage	**22**	**12**	**1**	**1**	**37**
Storage, other	3	0	0	0	3
Outbuilding or shed	4	0	1	0	5
Vehicle storage, other	0	0	0	1	1
Parking garage, (det. res. garage)	1	0	0	0	1
Parking garage, general vehicle	7	11	0	0	18
Fire station	2	0	0	0	2
Warehouse	3	1	0	0	5
Dock, marina, pier, wharf	2	0	0	0	2
Outside or special property	**55**	**1**	**10**	**1**	**67**
Property Use, other	**3**	**0**	**0**	**0**	**3**
Total Structure Fires	**4,243**	**307**	**300**	**37**	**4,900**

2012 Suffolk County Reponses[17] by Incident Type

Incident Type	Boston	Chelsea	Revere	Winthrop	Massport Fire Rescue	Suffolk County
Fires	5,710	428	401	42	132	6,713
Overpressure, rupture, explosion (no fire)	49	9	3	1	12	74
Rescue & EMS calls	33,950	6,504	5,806	1,715	2,210	50,185
Hazardous conditions (no fire)	3,797	280	195	127	319	4,718
Service calls	9,210	559	820	486	90	11,165
Good intent calls	6,463	447	492	184	88	7,674
False alarm & false calls	12,460	813	891	237	263	14,664
Severe weather & natural disaster	18	7	20	0	6	51
Special incident type	309	17	59	11	7	403

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

Boston Fires in 2012

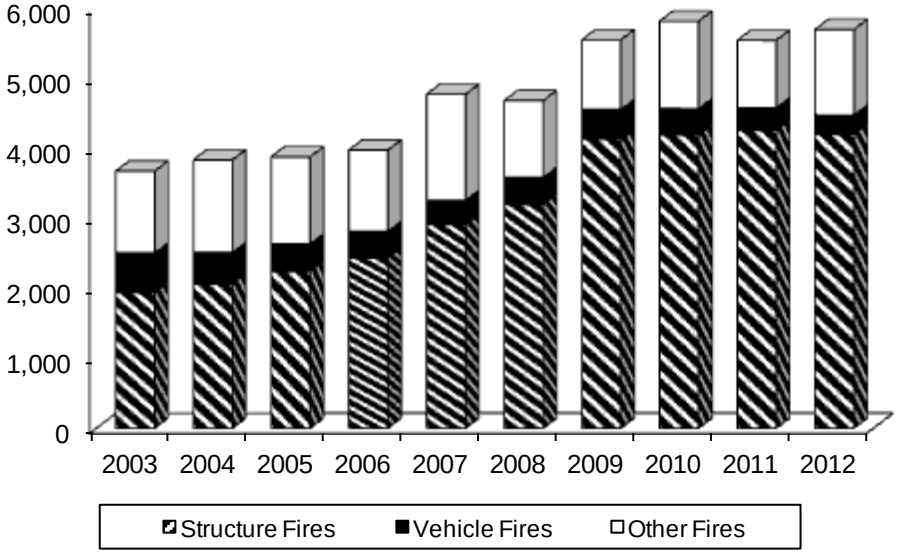
5,693 Fires — 4,192 Structure Fires, 280 Vehicle Fires & 1,221 Other Fires
The Boston Fire Department reported 4,192 structure fires, 280 motor vehicle fires, 563 outside rubbish fires, 459 grass, tree or brush fires, 97 special outside fires, two cultivated vegetation or crop fires, and 100 unclassified fires to the Massachusetts Fire Incident Reporting System (MFIRS) in 2012. These 5,693 incidents caused one civilian death, 12 civilian injuries, 13 fire service injuries and an estimated dollar loss of $53.1 million. There were 9.2 fires for every 1,000 residents in 2012. Although fewer than 10% of the state's residents live in the City of Boston, the Boston Fire Department reported 20% of the 31,229 fire incidents reported statewide in 2012.

Structure & Motor Vehicle Fires Down
The total number of Boston fires reported to the Massachusetts Fire Incident Reporting System decreased by 154 from the 5,539 reported in 2011 to 5,693 in 2012. Structure fires decreased by 57, motor vehicle fires decreased by 47, and outside and other fires increased by 258. For the first time in 10 years the number of structure fires decreased. Motor vehicle fires have been on a downward trend since 1986; increasing only twice since 1994. Outside and other fires continued their up and down trend of the past 10 years.

BOSTON FIRES FROM 2003 TO 2012

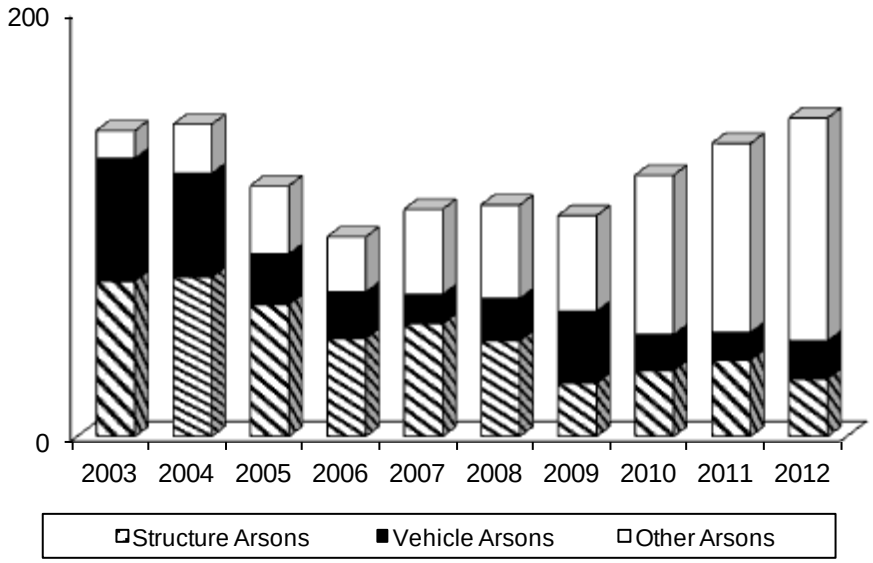
Year	Total Fires	Structure Fires	Vehicle Fires	Other Fires	Total Arsons	Structure Arsons	Vehicle Arsons	Other Arsons
2003	3,676	1,938	570	1,168	163	73	58	32
2004	3,833	2,030	452	1,321	141	75	43	23
2005	3,874	2,238	397	1,239	118	62	24	32
2006	3,971	2,432	379	1,160	94	46	22	26
2007	4,768	2,910	347	1,511	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

Boston Fires by Incident Type



150 Arsons — 27 Structure Arsons, 18 Vehicle Arsons & 105 Other Arsons
One hundred and fifty (150), or 3%, of the 5,693 Boston fires were considered intentionally set, or, for purposes of this analysis, arson. The 27 structure arsons, 18 motor vehicle arsons and 105 outside and other arsons caused one fire service injury and an estimated dollar loss of $464,388.

Boston Arsons by Incident Type



STRUCTURE FIRES

Reported Structure Fires Down

The 4,192 structure fires caused one civilian death, 12 civilian injuries, 13 fire service injuries and an estimated dollar loss of $50.5 million. These incidents represented 74% of Boston's reported fires in 2012. The average estimated dollar loss per structure fire was $12,049. The total number of reported structure fires decreased by 57, or 1%, from the 4,249 reported in 2011.

Arson Caused 1% of Structure Fires

The 27 structure arsons caused an estimated dollar loss of $350,301. Arson was indicated as the cause of 1% of the structure fires and 1% of Boston's structure fire dollar loss. The 27 structure arsons accounted for 18% of the Boston arson fires reported in 2012. The total number of reported structure arsons decreased by nine, or 25%, from 36 in 2011.

Almost 2/3 of Structure Arsons Occurred in Residences

Sixty-three percent (63%) of Boston's 27 structure arsons occurred in residential occupancies; 11% each occurred in educational buildings, storage facilities and special properties; and 4% happened in mercantile facilities.

BUILDING FIRES

There were 4,178 building fires of different types in Boston in 2012. These 4,178 building fires accounted for 99.7% of all structure fires in Boston.

83% of Building Fires in Homes

The 4,178 building fires that occurred in Boston in 2012 can be broken down by fixed property use as follows: 3,461, or 83%, of all the building fires reported in 2012 were in residential properties; 177 fires occurred in public assembly properties; 174 fires took place in mercantile and office properties; 170 fires happened in institutional facilities; 109 fires occurred in educational properties; 46 took place in special properties; 17 fires were in storage facilities; 10 happened in industrial, utility, defense, agricultural or mining facilities; and six were reported in manufacturing or processing facilities. Eight (8) fires occurred in buildings where the property use was unclassified or not reported.

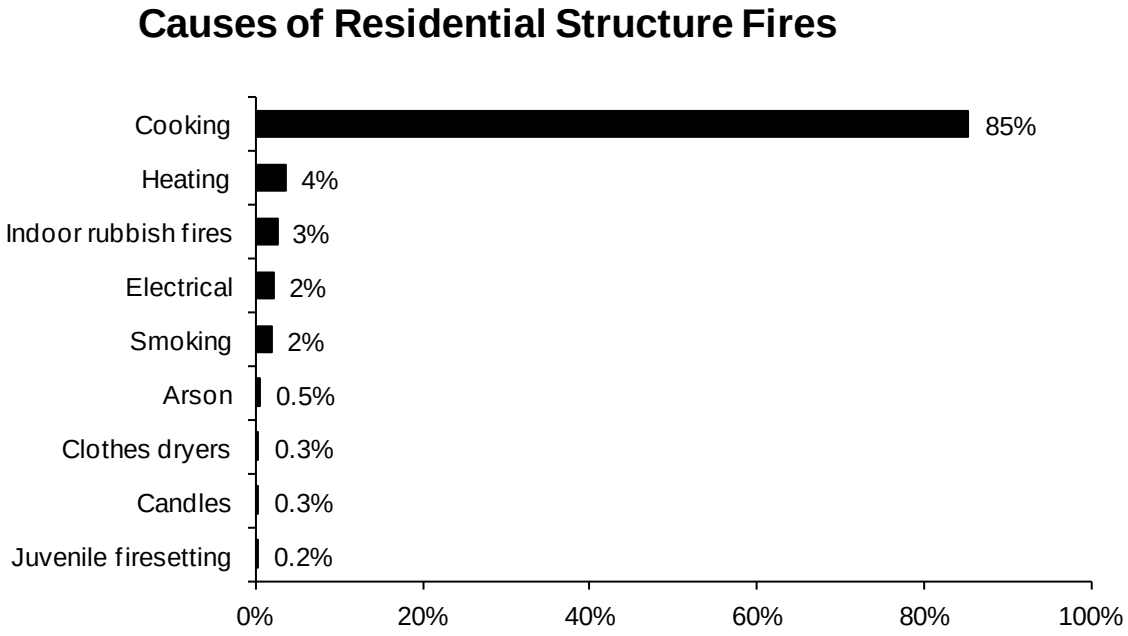
RESIDENTIAL FIRES

Residential Building Fires Caused 1 Death & $17.8 Million in Damages

In 2012, 3,461 or 83%, of Boston's 4,235 reported building fires occurred in residences. Fires in or on residential buildings caused one civilian fire death, 12 civilian injuries, nine fire service injuries and an estimated dollar loss of $17.8 million. The total number of residential building fires decreased by 12, or less than 1%, from the 3,473 reported in 2011.

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, 1% occurred in hotels or motels, and 9% happened in unclassified residential occupancies.

Cooking Caused 85% of Boston's Residential Fires
Cooking was the leading cause of the 3,461 fires in Boston residential buildings, accounting for 85% 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 2012.



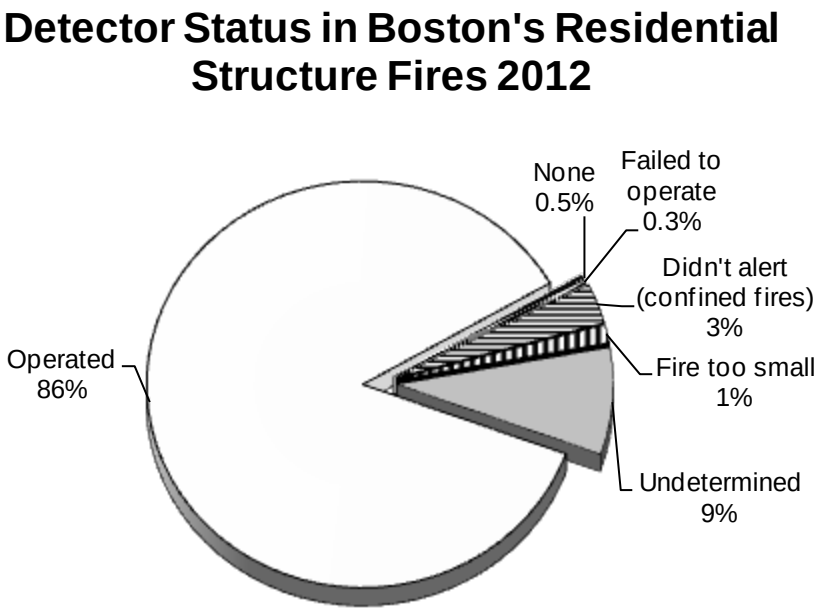
89% of Residential Building Fires Are Confined to Non-Combustible Containers[18]
Three thousand and sixty-eight (3,068), or 85% of all residential building fires, were reported as confined to non-combustible containers in 2012. Two thousand eight hundred and seventy-two (2,878) of the reported fires were cooking fires contained to a non-combustible container, accounting for 83% of residential building fires. Eighty-seven (87), or 3%, were fires confined to a fuel burner or boiler malfunction. Eighty-six (86), or 2%, of these fires were contained rubbish fires. Nineteen (19), or 1%, of all residential

[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.

building fires reported in 2012 were fires confined to a chimney. Three (3), or less than 1%, were confined commercial compactor fires. One (1) incinerator overload or malfunction caused less than 1% of residential building fires in Boston in 2012.

Detectors Alerted Occupants in 86% of Fires

Smoke or heat detectors operated and alerted the occupants in 2,981, or 86%, of the residential building fires. In 3% 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 1% of the residential fires. Smoke detector performance was undetermined in 293 incidents, or 9%, of Boston's residential building fires.



1/2 of Failed Detectors Had Missing or Dead Batteries

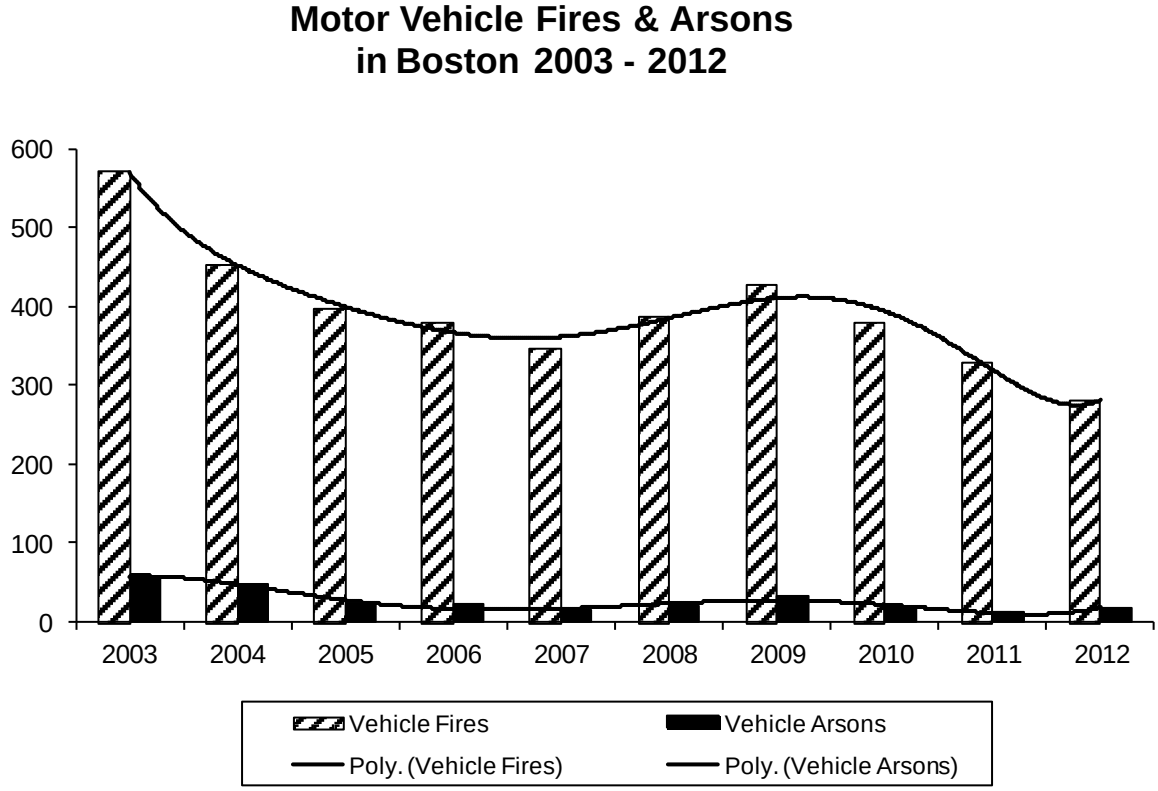
Of the 12 fires where smoke detectors were present but failed to operate, four, or 33%, failed because of missing or disconnected batteries; and two, or 17%, did not operate because of dead batteries. Two (2), or 17%, failed from a lack of maintenance; and another two, or 17%, failed because of power failure, shut-off or disconnect. For two cases, or 17%, the reason the detector failed was not determined or classified.

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

MOTOR VEHICLE FIRES

Motor Vehicle Fires Decrease

The 280 motor vehicle fires caused an estimated dollar loss of $2.5 million. Motor vehicle fires comprised 5% of Boston's reported fires in 2012. The total number of motor vehicle fires decreased by 47 from the 327 reported in 2011. This is a continuation of the trend only interrupted in 2009 of decreasing motor vehicle fires. Since 2003, motor vehicle fires have decreased by 51% and motor vehicle arsons have decreased by 69%.



6% of Motor Vehicle Fires Considered Arson

Eighteen (18), or 6%, of Boston's 280 motor vehicle fires were considered intentionally set, or for purposes of this report, arson. These 18 motor vehicle arsons caused an estimated dollar loss of $104,553. The total number of reported motor vehicle arsons increased by five, or 38% from the 13 reported in 2011.

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 from 3,214 with a high of 3,601 in 1983 to 280 in 2012, a 92% decrease. The drop in vehicle arson was even more dramatic. Vehicle arson fell 3,043 from the 1986 high of 3,061 incidents to 18 in 2012 for a 99% decline.

Motor Vehicle Arsons Less Than Structure Arsons – Continues Downward Trend
There were fewer motor vehicle arsons than structure arsons in Boston in 2012. Motor vehicle arson represents 12% of the total arson problem while structure arson accounts for 18% of all 2012 arsons in Boston.

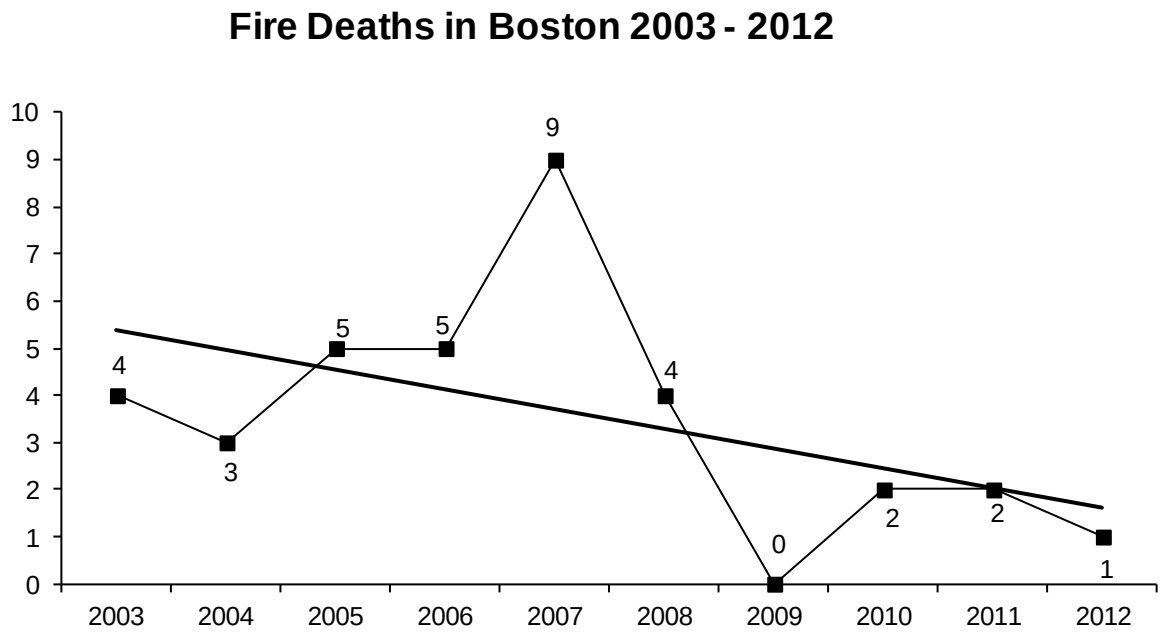
OUTSIDE AND OTHER FIRES

Outside Rubbish Fires Account for 21% of Boston's Fires
The 563 outside rubbish fires, 459 grass, tree or brush fires, 97 special outside fires, two cultivated vegetation or crop fires, and 100 unclassified fires are grouped together as 'outside or other fires.' These 1,221 outside and other fires caused an estimated dollar loss of $134,493. Outside and other fires comprised 21% of the 5,693 Boston fires reported in 2012. Ten percent (10%) were outside rubbish or dumpster fires. The total number of outside and other fires increased by 258, or 27%, from the 963 reported in 2011. The increase was mainly due to the 75% increase in brush fires between 2011 and 2012. This rise in outside fires was a statewide trend.

105 Outside and Other Fires Considered Arson
The 105 identified outside and other arsons caused an estimated dollar loss of $9,534. Forty-five (45) were grass, tree or brush fires. Thirty-seven (37) were special outside fires; two were outside rubbish fires, and 21 were unclassified fires. Outside and other arsons accounted for 9% of Boston's outside and other fires, and 70% of Boston's total arson fires.

FATAL FIRES

- On January 3, 2012, at 3:02 a.m., the Boston Fire Department was called to a fatal electrical fire in a 45-unit apartment building. The fire started in a fourth floor bedroom. It is believed that an electrical arc ignited the bedding. The victim, an 80-year old man, was trapped in his bedroom. No one else was injured at this fire. Detectors were present but it was undetermined if they operated. There were no sprinklers. The fire caused an estimated $250,000 worth of damage.



JUVENILE-SET FIRES

13 Juvenile-set Fires
There were 13 reported juvenile-set fires in Boston in 2012. The seven structure fires, two brush fires, one motor vehicle fire, and three unclassified fires caused one fire service injury and $557,812 in estimated damages.

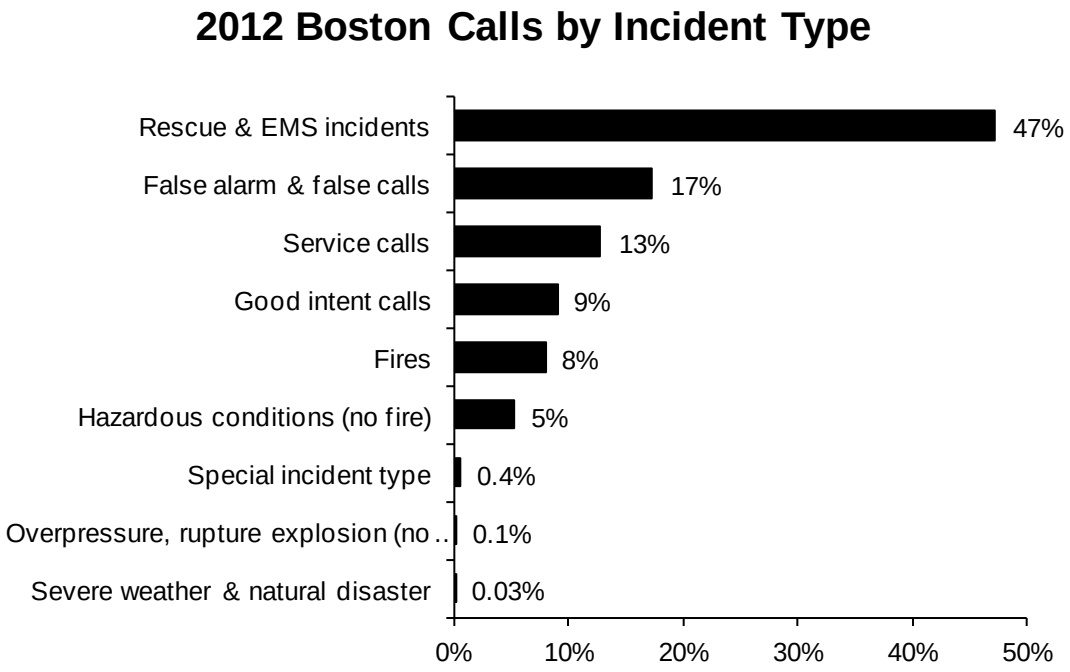
ALL CALLS

Rescue & EMS Calls Were 47% of All Reported Responses
In 2012, the Boston Fire Department reported 71,966 total responses to MFIRS. Of these 71,966 responses, 66,256 non-fire calls were voluntarily reported.

Of these 66,256 non-fire calls, 33,950, or 47% of all the responses reported in 2012, were reported rescue and emergency medical services (EMS) calls[20]; 12,460, or 17%, were reported false alarm or false calls; 9,210, or 13%, were reported service calls such as lock-outs, water or smoke problems, unauthorized burning or public service assistance; 6,463, or 9%, were reported good intent calls; 3,797, or 5%, were reported hazardous condition calls with no fire; 309, or 0.4%, were special incident type calls such as citizen complaints; 49, or 0.1%, were reported overpressure, rupture, explosion or overheat calls with no fire; and 18, or 0.03%, were severe weather calls..

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

Five thousand seven hundred and ten (5,710), or 8%, of the total responses submitted by the Boston Fire Department were fires[21].



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

CONCLUSIONS

- **1 Civilian Died in Boston in 2012**

One (1) civilian died in a Boston fire in 2012.

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

There were no fire-related line of duty deaths in Boston in 2012.

- **Structure Fires & Motor Vehicle Fires Drop**

Structure fires and motor vehicle fires decreased.

- **MV Arsons Increased Slightly**

Motor vehicle arsons increased by 38% from 13 reported in 2011 to 18 in 2012. Motor vehicle arson represents 12% of the total arson problem while structure arson accounted for 18% of the 2012 arsons in Boston.

- **Cooking Caused 85% of Residential Fires**

Cooking was the leading cause of the 2,951 fires in Boston's residential buildings, accounting for 85%.

- **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 1% occurred in hotels or motels.

Boston FDID: 25035 Population: 617,594

Total Fires 5,693 $53,135,883

9.2 Fires/1,000 Population

Situation Found	Fires	% of Fires	Dollar Loss
Structure Fires	4,192	74%	$50,510,199
Vehicle Fires	280	5%	2,491,191
Other Fires	1,221	21%	134,493

1 Fatal Fire
1 Civilian Death
12 Civilian Injuries
0.18 Civilian Deaths/1,000 Fires
0.02 Civilian Deaths/10,000 population
13 Fire Service Injuries

6.79 Structure fires/1,000 population
0.45 Vehicle fires /1,000 population
1.98 Other fires/1,000 population

Building Fires: 4,178

Residential Building Fires: 3,461

Residential Building Fires Confined to Non-Combustible Containers: 3,068

Unconfined Residential Building Fires: 393

1 Civilian Death 12 Civilian Injuries 9 Fire Service Injuries

Occupancy	Fires	%	Detector Status	Fires	%
Apartments	2,352	68%	Operated	2,981	86%
1- & 2-Family homes	381	11%	Didn't operate	12	0.3%
Dormitories	181	5%	None	15	0.5%
Rooming houses	130	4%	Fire too small	49	1%
Residential board & care	66	2%	Didn’t alert (confined)	110	3%
Hotel/motel	31	1%	Undetermined	293	9%

Area of Origin[22]	%	Heat Source	%	%Unconfined[23]
Kitchen	86%	Radiated heat from oper. eq.	2%	20%
Heating room or area	3%	Arcing	2%	14%
Bedroom	1%	Hot or smoldering object	1%	8%
Exterior balcony/unencl. porch	1%	Cigarette	1%	8%

[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	84%
Rubbish, trash, waste products	3%
Flammable, combustible liquid	3%
Structural member, framing	1%
Electrical wire, cable insulation	1%

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

Equipment[26]	**%**
Cooking equipment	84%
None	7%
Boiler, furnace, cent. heat. unit	3%
Chimney, flue	1%
Electrical wiring, other	1%

Cause of Ignition	**%**	**%Unconfined**[27]
Unintentional	7%	64%
Failure of eq. or heat source	1%	12%
Intentional	0.5%	4%
Undetermined	1%	7%
Cause under investigation	1%	9%
Act of nature	0.03%	0.3%

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	501	431	19	51
February	417	344	17	56
March	484	337	28	119
April	637	354	23	260
May	432	322	27	83
June	407	305	26	76
July	471	266	31	174
August	379	249	20	110
September	446	334	22	90
October	480	406	21	53
November	561	434	24	103
December	478	410	22	46

Day	Total Fires	Structure Fires	Vehicle Fires	Other Fires
Sunday	904	684	38	182
Monday	809	575	40	194
Tuesday	830	603	41	186
Wednesday	722	561	30	131
Thursday	806	604	52	150
Friday	768	550	40	178
Saturday	854	615	39	200

Time	Total Fires	Structure Fires	Vehicle Fires	Other Fires
00:01 - 04:00	461	283	40	138
04:01 - 08:00	364	259	29	76
08:01 - 12:00	876	704	41	131
12:01 - 16:00	1,324	957	63	304
16:01 - 20:00	1,536	1,187	53	296
20:01 - 00:00	1,132	802	54	276

Motor Vehicle Fires
Total: 280
Automobiles: 246 (88%)
18 (7%) of the automobile fires considered intentionally set.

Arson Fires

Total Arsons: 150 **$469,388**

	Arsons	% of Situation	% of Arson	Dollar Loss
Structure Arsons	27	1%	18%	$350,301
Vehicle Arsons	18	6%	12%	104,553
Other Arsons	105	9%	70%	9,534

1 Fire Service Injury

0.24 Arson fires/1,000 population
0.04 Structure arsons/1,000 population
0.03 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	7	26%
12:01 - 16:00	6	22%
08:01 - 12:00	6	19%

Vehicle Arsons	#	%
12:01 - 16:00	6	33%
08:01 - 12:00	5	28%
20:01 - 00:00	4	22%

Other Arsons	#	%
16:01 - 20:00	33	31%
20:01 - 00:00	32	30%
12:01 - 16:00	18	17%

Peak Fixed Property Uses for Structure Arsons

Occupancy	#	%
Apartments	11	41%
1- & 2-Family homes	6	22%
Garage, detached residential	2	7%

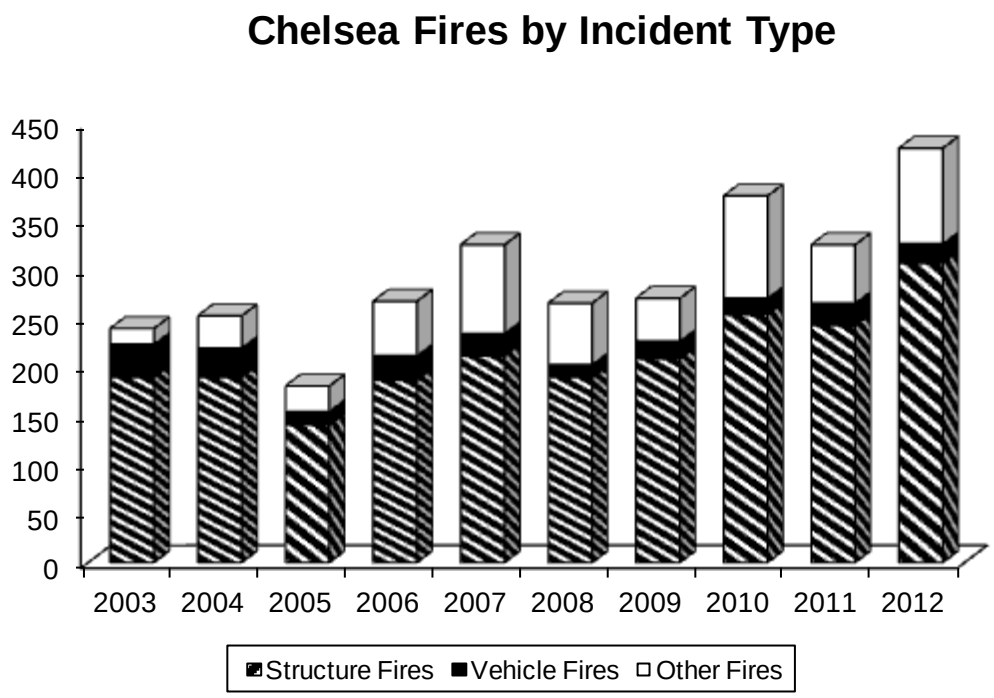
Chelsea Fires in 2012

425 Fires — 307 Structure Fires, 20 Vehicle Fires and 98 Other Fires
The City of Chelsea reported 425 fires to the Massachusetts Fire Incident Reporting System (MFIRS) in 2012. The 307 structure fires, 20 motor vehicle fires, 60 grass, tree or brush fires, 10 outside rubbish fires, four special outside fires, and 24 unclassified fires caused five civilian injuries, 35 fire service injuries and an estimated dollar loss of $1.9 million. There were 12.1 fires for every 1,000 citizens in 2012.

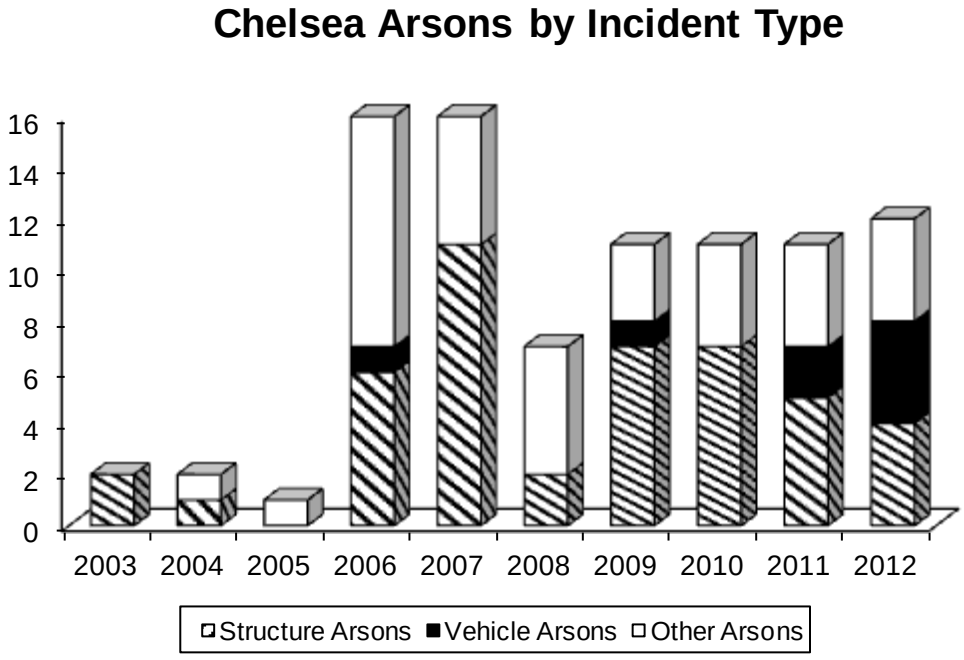
Structure & Outside Fires Up
Total fires increased by 99, or 30%, from the 376 fires reported in 2011. Structure fires increased by 64 from the 243 reported in 2011. Motor vehicle fires decreased by three, from 23 the previous year. Outside and other fires increased by 38 from the 60 reported in 2011.

CHELSEA FIRES FROM 2003 TO 2012

Year	Total Fires	Structure Fires	Vehicle Fires	Other Fires	Total Arsons	Structure Arsons	Vehicle Arsons	Other Arsons
2003	240	190	34	16	2	2	0	0
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



12 Arsons — 4 Structure Arsons, 4 Vehicle Arsons & 4 Outside & Other Arsons
Twelve (12), or 3%, of the 425 Chelsea fires were considered intentionally set, or, for purposes of this analysis, arson. The four structure arsons, four motor vehicle arsons, and four outside and other arsons caused two fire service injuries and an estimated dollar loss of $93,002.



All Arsons Up Slightly

The total number of arson fires increased by one from 11 the year before. Structure arsons decreased by one from the five reported in 2011. Motor vehicle arsons increased by two from two reported 2011. Outside and other arsons remained the same with four reported in both 2011 and 2012.

STRUCTURE FIRES

Structure Fires Up

The 307 structure fires caused five civilian injuries, 32 fire service injuries and an estimated dollar loss of $2.6 million. These fires represented 72% of Chelsea's reported fires in 2012. The total number of structure fires increased by 64, or 26%, from the 243 structure fires reported in 2011.

Arson Caused 1% of Structure Fires

The four structure arsons caused one fire service injury, and an estimated dollar loss of $5,002. Arson was indicated as the cause of 1% of the structure fires and accounted for 0.3% of Chelsea's structure fire dollar loss. The four structure arsons represented 33% of Chelsea's arson fires reported in 2012. The total number of reported structure arsons decreased by one from five reported in 2011.

BUILDING FIRES

There were 296 building fires of different types in Chelsea in 2012. These 296 building fires accounted for 96.4% of all structure fires in Chelsea.

85% of Building Fires in Homes

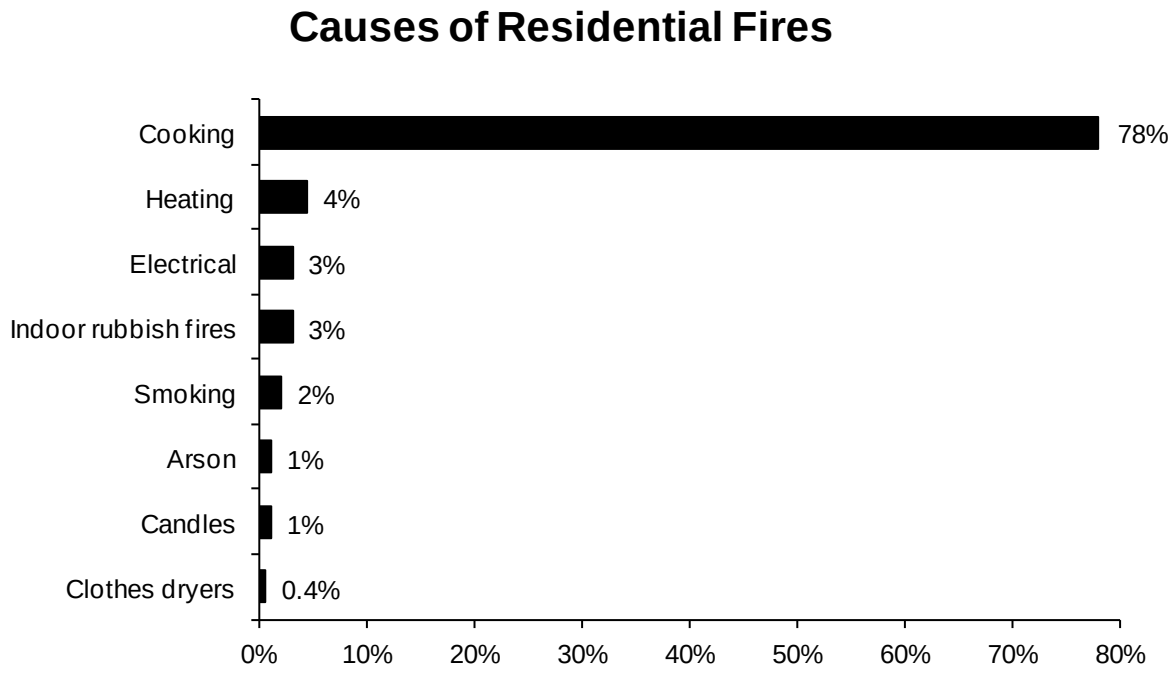
The 296 building fires that occurred in Chelsea in 2012 can be broken down by fixed property use as follows: 251 fires were in residential properties accounting for 85% of all building fires; 24 fires occurred at institutional facilities; 10 fires happened in mercantile or office properties; six fires occurred in public assembly properties; four fires occurred at storage facilities; and one fire happened at a manufacturing facility.

RESIDENTIAL BUILDING FIRES

Residential Building Fires Rise

Two hundred and fifty-one (251), or 85%, of Chelsea's 296 building fires occurred in residential occupancies. This is an increase of 57 over the 194 reported residential fires in 2011. The peak fixed property uses for residential building fires were apartments, accounting for 71% of the residential building fires in Chelsea; 16% occurred in one- or two-family homes; 4% occurred in rooming houses; another 4% happened at residential board and care facilities; 2% occurred in dormitories; another 2% happened in hotels or motels; 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 2012, accounting for 78% of these fires. Heating equipment was the second leading cause, accounting for 4% of the fires in people's homes in Chelsea in 2012. Electrical problems and indoor rubbish fires each accounted for 3% and smoking caused 2% of these fires. Arson and candles each caused 1%, and clothes dryers caused less than 1% of residential building fires in Chelsea.



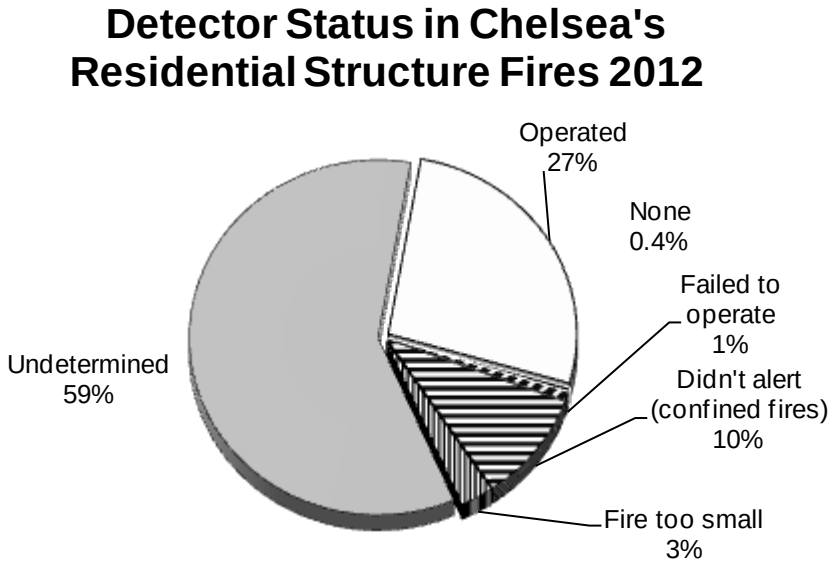
82% of Residential Building Fires Are Confined to Non-Combustible Containers[2]
Two hundred and seven (207), or 82%, of all residential building fires were reported as confined to non-combustible containers in 2012. Nearly all of the confined fires were cooking fires contained to a non-combustible container like a pot or a pan, and accounted for 193, or 77%, of all residential building fires. Seven (7), or 3%, were fires confined to a fuel burner or boiler malfunction. Another seven, or 3%, of these fires were contained rubbish fires.

Detectors Alerted Occupants in Only 27% of Fires
Smoke or heat detectors operated and alerted the occupants in 67, or 27%, of the residential building fires. In 10% 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 less than 1% of these fires, no detectors were present at all. The fire was too small to trigger the detector in 3% of these fires. Smoke detector performance was undetermined in 149 incidents, or 59% of Chelsea's residential building fires.



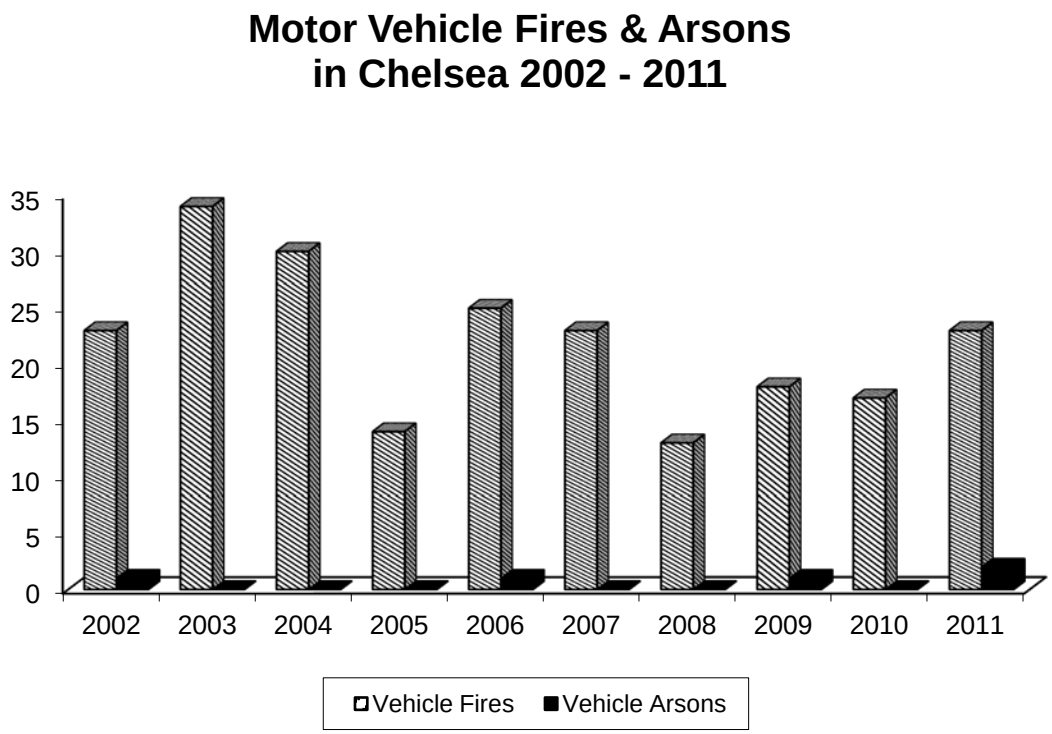
MOTOR VEHICLE FIRES

Vehicle Fires Down

The 20 motor vehicle fires caused an estimated dollar loss of $171,550. Motor vehicle fires comprised 5% of Chelsea's 425 reported fires in 2012. The total number of motor vehicle fires decreased by three from the 23 reported in 2011.

4 Motor Vehicle Fires Considered Arson

Chelsea reported four motor vehicle arsons in 2012. These four arsons caused an estimated dollar loss of $88,000. The four reported arsons are an increase of two over the two motor vehicle arsons reported in 2011.



OUTSIDE AND OTHER FIRES

Reported Outside and Other Fires Up
The 98 outside and other fires caused three fire service injuries and an estimated dollar loss of $114,407. Outside and other fires comprised 23% of the 425 fires Chelsea reported in 2012. The 98 outside and other fires included 60 grass, tree or brush fires, 10 outside rubbish fires, four special outside fires, and 24 unclassified fires. The total number of outside and other fires increased by 38, from the 60 reported in 2011. This was a statewide trend.

4 Outside and Other Fires Considered Arson
There were four identified outside and other arsons. One (1) was a special outside fire and three were unclassified fires. Outside and other arsons accounted for 4% of Chelsea's outside and other fires, and 33% of Chelsea's total arson fires.

FATAL FIRES

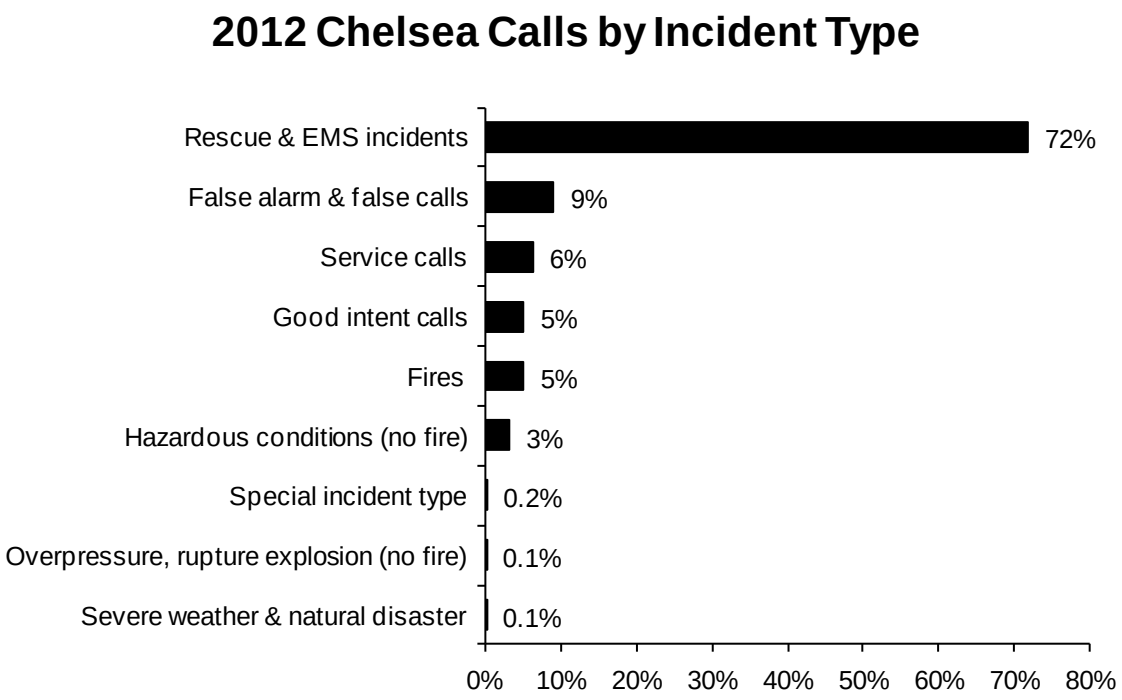
0 Chelsea Fatal Fires in 2012
There were no fatal fires in Chelsea in 2012.

JUVENILE-SET FIRES

1 Juvenile-set Fires
Chelsea reported one juvenile-set fire in 2012. This fire was an unclassified fire.

ALL CALLS

Rescue & EMS Calls Are Almost 3/4 of All Reported Responses
In 2012, the Chelsea Fire Department reported 9,064 total responses to MFIRS. Of these 9,064 responses, 8,636 non-fire calls were voluntarily reported.



Of these 8,636 non-fire calls, 6,504, or 72%, of all the responses reported in 2012, were reported rescue and emergency medical services (EMS) calls; 813, or 9%, were reported false alarm or false calls; 559, or 6%, were reported service calls such as lock-outs, water or smoke problems, unauthorized burning or public service assistance; 447, or 5%, were reported good intent calls; 280, or 3%, were reported hazardous condition calls with no fire; 17, or 0.2%, were special incident type calls such as citizen complaints; nine, or 0.1%, were reported overpressure, rupture, explosion or overheat calls with no fire; and another seven, or 0.1%, were severe weather calls.

Four hundred and twenty-eight (428), or 5%, of the total responses submitted by the Chelsea Fire Department were fires.

Chelsea Reported Giving Mutual Aid 3 Times
In 2012, the Chelsea Fire Department reported coming to the aid of other fire departments three times. Two (2), or 67%, were for service calls, most likely station coverages. The other mutual aid given call by Chelsea in 2012 was for a fire, accounting for 33% of these calls.

Chelsea Received Mutual Aid in 62 Incidents
In 2012, the Chelsea Fire Department reported receiving aid from surrounding departments for 62 incidents. Of these 62 incidents, 28, or 45%, were false alarms or false calls; 22, or 35%, were for fires; seven, or 11%, were for rescue or EMS calls; one, or 6%, was for a service call; three, or 5%, were for hazardous condition calls with no ensuing fire; one or 2% was for a service call and one, or 2%, was for a good intent call.

CONCLUSIONS

- **0 Civilian Fire Deaths in 2012**

In 2012 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 & Outside Fires Increase**

Reported structure fires increased by 64, from 243 fires reported in 2011. Outside and other fires increased by 38 from the 105 reported in 2011.

- **Confined Fires Account for 82% of All Residential Building Fires in Chelsea**

Residential building fires contained to non-combustible containers accounted for 207, or 82%, of the 251 residential building fires in Chelsea in 2012. Of these 207 fires, 193, or 77%, were confined cooking fires.

- **Undetermined if Smoke Detectors Operated in 59% of Residential Fires**

Smoke alarm performance was unreported in a significant number of fires. It was undetermined in 59% of Chelsea homes where fires occurred if they were protected by smoke detectors. Detectors sounded the alarm in only 27% 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 **425** **$1,884,284**

12.1 Fires/1,000 Population

Situation Found	Fires	% of Fires	Dollar Loss
Structure Fires	307	72%	1,598,327
Vehicle Fires	20	5%	171,550
Other Fires	98	23%	114,407

No Fire Deaths
5 Civilian Injuries 35 Fire Service Injuries

8.73 Structure fires/1,000 population
0.57 Vehicle fires /1,000 population
2.79 Other fires/1,000 population

Building Fires: 296

Residential Building Fires: 521

Residential Building Fires Confined to Non-Combustible Containers: 207

Unconfined Residential Building Fires: 44

4 Civilian Injuries 25 Fire Service Injuries

Occupancy	Fires	%
Apartments	178	71%
1- & 2-Family homes	40	16%
Rooming houses	11	4%
Residential board & care	9	4%
Hotels/motels	5	2%
Dormitories	4	2%

Detector Status	Fires	%
Operated	67	27%
Didn't operate	2	1%
None	1	0.4%
Fire too small	7	3%
Didn’t alert (confined)	25	10%
Undetermined	149	59%

Area of Origin[29]	%
Kitchen	81%
Heat equipment room	3%
Wall surface, exterior	2%
Bedroom	2%

Heat Source	%	%Unconfined[30]
Heat from operating eq.	3%	16%
Heat open flame/smok. mat.	2%	11%
Arcing	1%	5%
Lightning	0.4%	2%
Candle	0.4%	2%
Cigarette	0.4%	2%

[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%	Misuse of mater. or product	3%	16%
Rubbish, trash, waste	3%	Equipment unattended	1%	7%
Flammable or combustible. liq.	3%	Electrical failure, malfunc.	1%	5%
Multiple items	3%	Accident. turned on/not off	1%	5%
		Agriculture burns	1%	5%

Equipment[33]	**%**	**Cause of Ignition**	**%**	**%Unconfined**[34]
Kitchen & cooking equipment	77%	Unintentional	7%	58%
None	15%	Fail of equip. or heat source	1%	10%
Boiler, furnace, cent. heat. unit	3%	Intentional	0.4%	3%
Stove, heating	2%	Undetermined	2%	13%
Clothes dryer	1%	Cause under investigation	1%	10%
		Act of Nature	1%	6%

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

Alerted occupants	25%
Didn't alert occupants	12%
Undetermined	63%

Mutual Aid Given	**# of Incidents**
Boston	2
Somerset	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	34	30	1	3
February	38	31	2	5
March	47	30	2	15
April	60	29	0	11
May	34	32	1	1
June	25	13	2	10
July	39	19	4	16
August	18	15	2	1
September	29	21	0	8
October	19	18	0	1
November	47	38	4	5
December	35	31	2	2

Day	Total Fires	Structure Fires	Vehicle Fires	Other Fires
Sunday	64	47	4	15
Monday	63	40	2	21
Tuesday	69	53	1	15
Wednesday	58	41	6	11
Thursday	47	37	1	9
Friday	54	39	3	12
Saturday	70	50	3	17

Time	Total Fires	Structure Fires	Vehicle Fires	Other Fires
00:01 - 04:00	29	18	5	6
04:01 - 08:00	27	21	3	3
08:01 - 12:00	62	46	4	12
12:01 - 16:00	117	74	2	41
16:01 - 20:00	123	97	4	22
20:01 - 00:00	67	51	2	14

Motor Vehicle Fires

Total: 20
Automobiles: 16 (80%)
4 (25%) of the automobile fires considered intentionally set.

Arson Fires

Total Arsons: 12 **$93,002**

Situation	Arsons	% of Situation	% of Arson	Dollar Loss
Structure Arsons	4	1%	33%	$5,002
Vehicle Arsons	4	20%	33%	88,000
Other Arsons	4	4%	33%	0

2 Fire Service Injuries

0.34 Arson fires/1,000 population
0.11 Structure arsons/1,000 population
0.11 Vehicle arsons /1,000 population
0.11 Other arsons/1,000 population

Peak Times of Day for Arson Fires

Structure Arsons	#	%	Vehicle Arsons	#	%
20:01 - 00:00	2	50%	00:01 – 04:00	2	50%
00:01 - 04:00	1	25%	08:00 – 12:00	1	25%
12:01 - 16:00	1	25%	20:00 – 00:00	1	25%

Other Arsons	#	%
08:01 - 12:00	2	50%
00:01 - 04:00	1	25%
20:01 - 00:00	1	25%

Peak Fixed Property Uses for Structure Arsons

Apartments	3	75%
1- or 2-Family homes	1	25%

Revere Fires in 2012

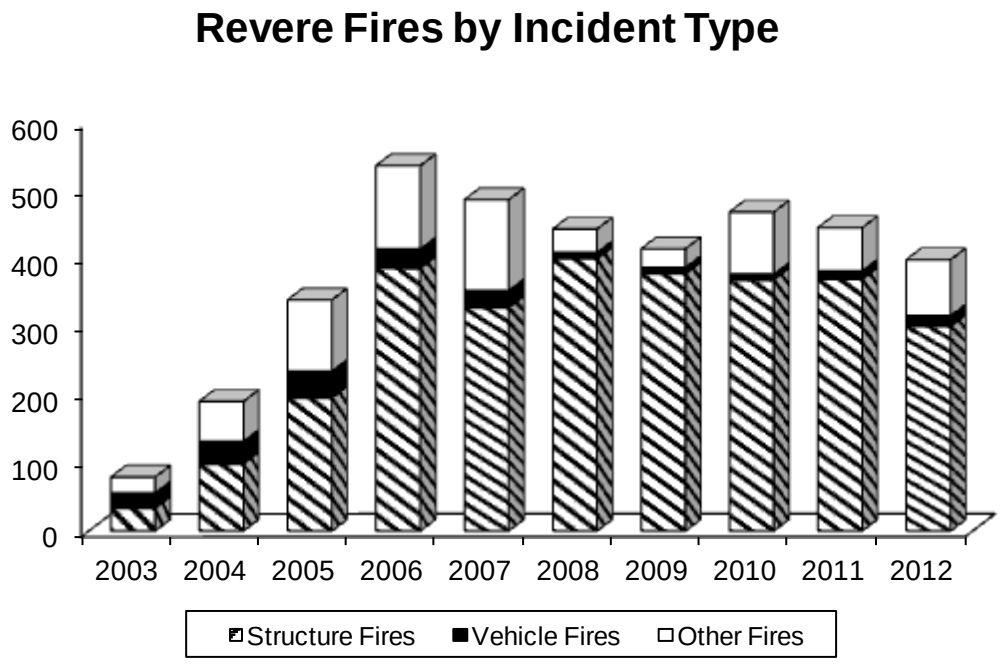
398 Fires — 369 Structure Fires, 16 Vehicle Fires and 82 Other Fires
The City of Revere reported 398 fires to the Massachusetts Fire Incident Reporting System (MFIRS) in 2012. The 300 structure fires, 16 motor vehicle fires, 53 outside rubbish fires, 24 grass, tree or brush fire, and five unclassified fires, caused four fire service injuries and an estimated dollar loss of $8.5 million. There were 7.7 fires for every 1,000 citizens in 2012.

Structure Fires Down
The total number of reported fires decreased by 48 from the 446 reported in 2011. Structure fires decreased by 70 from the 370 reported during the previous year. Motor vehicle fires increased by three from 13 reported in 2011. Reported outside and other fires increased by 19 from 63 the year before.

REVERE FIRES FROM 2003 TO 2012

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

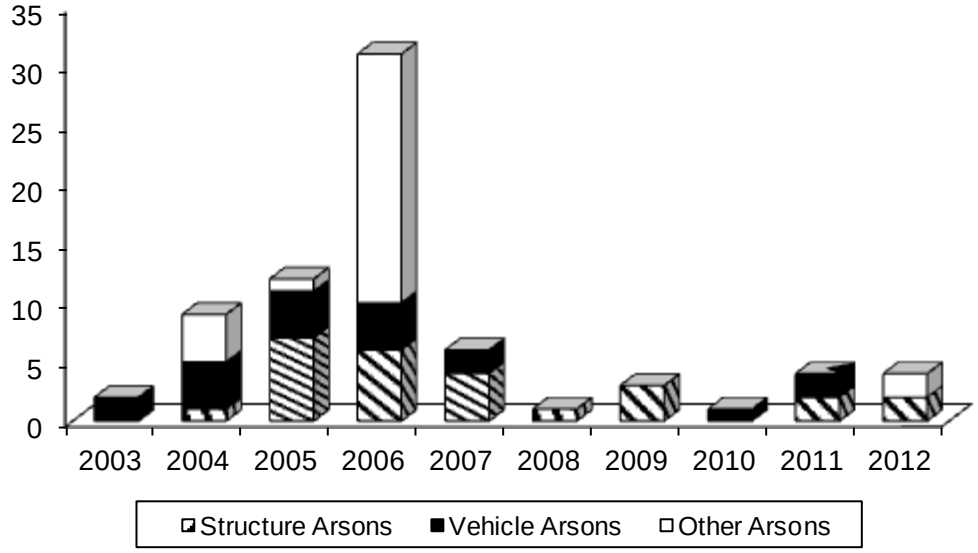
[35] The majority of this increase in reported fires was a dramatic increase in the reporting of the number of confined structure fires. In 2005 Revere reported 133 confined structure fires; and in 2006 they reported 319 of these types of fires for an increase of 140%. This increase of 186 confined fires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



4 Arsons — 2 Structure Arson & 2 Outside Arsons
Four (4), or 1%, of Revere's 398 reported fires were considered intentionally set, or for purposes of this analysis, arson. These four arsons caused an estimated dollar loss of $8,500.

All Arson Up Slightly
The total number of reported arson fires increased by one from the three reported in 2011. Structure arsons remained the same with two reported in both 2011 and 2012. The two outside arsons were an increase of two over none reported the previous year. These were the first reported outside and other arsons since 21 were reported in 2006.

Revere Arsons by Incident Type



STRUCTURE FIRES

Structure Fires Up by 1
The 300 structure fires caused three fire service injuries and an estimated dollar loss of $8.3 million. These fires accounted for 75% of the fires Revere reported in 2012. Structure fires decreased by 70 from the 370 reported during 2011.

2 Structure Arsons in 2012
The two structure arsons caused an estimated dollar loss of $8,500. Arson was indicated as the cause of 1% of the structure fires and accounted for less than 1% of Revere's structure fire dollar loss. The two structure arsons represented 50% of the Revere's arson fires reported in 2012. The total number of reported structure arsons remained the same with two reported in both 2011 and 2012.

BUILDING FIRES

There were 298 building fires of different types in Revere in 2012. These 298 building fires accounted for 99.3% of structure fires in Revere.

79% of Building Fires in Homes
The 298 building fires that occurred in Revere in 2012 can be broken down by fixed property use as follows: 238, or 79%, of all the building fires were in residential properties; 28 fires occurred in public assembly properties; 20 fires took place in mercantile and office properties; five fires happened in institutional facilities; three fires occurred in special properties; two fires occurred in educational facilities; one fire happened in an industrial facility; and one fire took place in a storage facility.

RESIDENTIAL BUILDING FIRES

79% of Building Fires Occurred in Residences

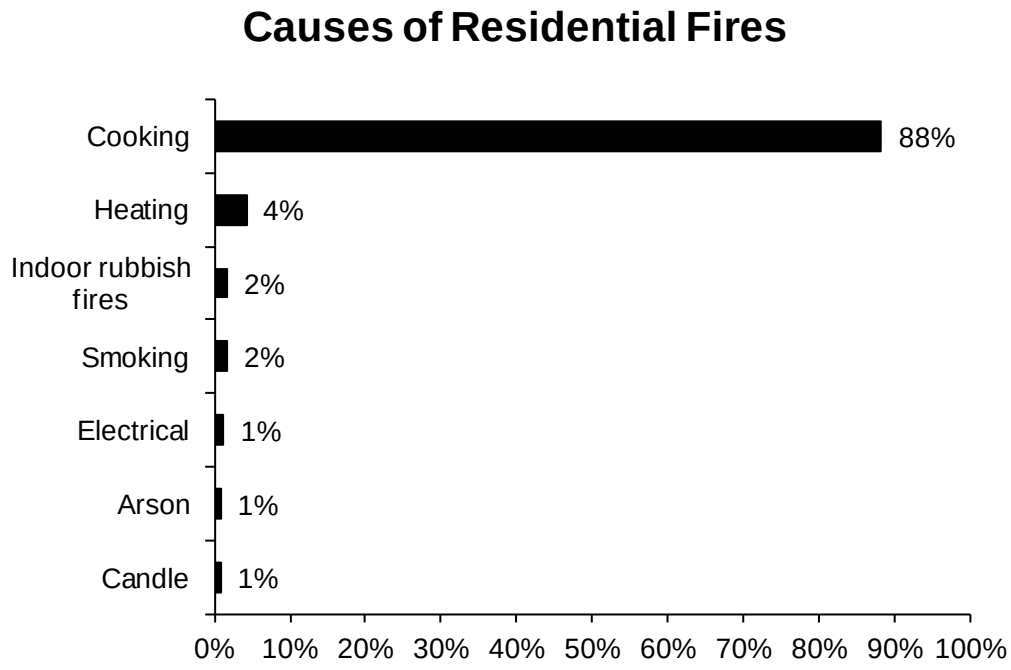
Two hundred and thirty-eight (238), or 79%, of the 298 building fires occurred in residences. The 238 residential building fires reported in 2012 caused one fire service injury and an estimated dollar loss of $244,400.

Apartments Accounted for 65% of Residential Building Fires

The peak fixed property uses for residential building fires were apartments accounting for 65% of the residential building fires in Revere; 29% occurred in 1- or 2-family homes; 3% occurred in rooming houses; 2% occurred in residential board and care facilities; and 1% took place in hotels or motels.

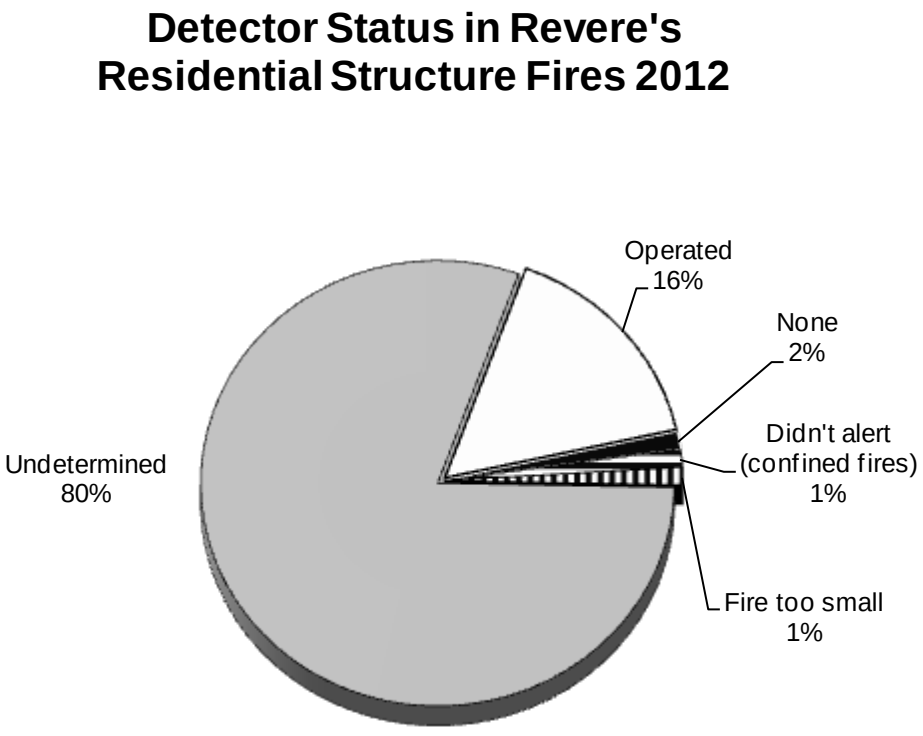
Unsafe Cooking Causes 88% of Residential Fires

Cooking was the leading cause of fire in Revere's residential properties in 2012, accounting for 88% of these fires. Heating equipment caused 4% of residential building fires in 2012. Indoor rubbish fires and smoking were each responsible for 2% of these fires. Electrical problems, arson and candles were each the cause of 1% of the residential building fires in Revere in 2012.



91% of Residential Building Fires Are Confined to Non-Combustible Containers[2]
Two hundred and seventeen (217), or 91% of all residential building fires were reported as confined to non-combustible containers in 2012. Two hundred and three (203) of the confined fires were cooking fires contained to a non-combustible container and accounted for 85% of residential building fires. Ten (10), or 4%, of the confined fires were fires confined to a fuel burner or boiler malfunction. Four (4), or 2%, were confined indoor rubbish fires.

Detectors Alerted Occupants in 16% of Fires
Smoke or heat detectors operated and alerted the occupants in only 38, or 16%, of the residential building fires. In 1% of these fires[36], the detectors did not alert the occupants. There were no reported incidents where detectors were present but did not operate. In 2% 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 191 incidents, or 80% 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.

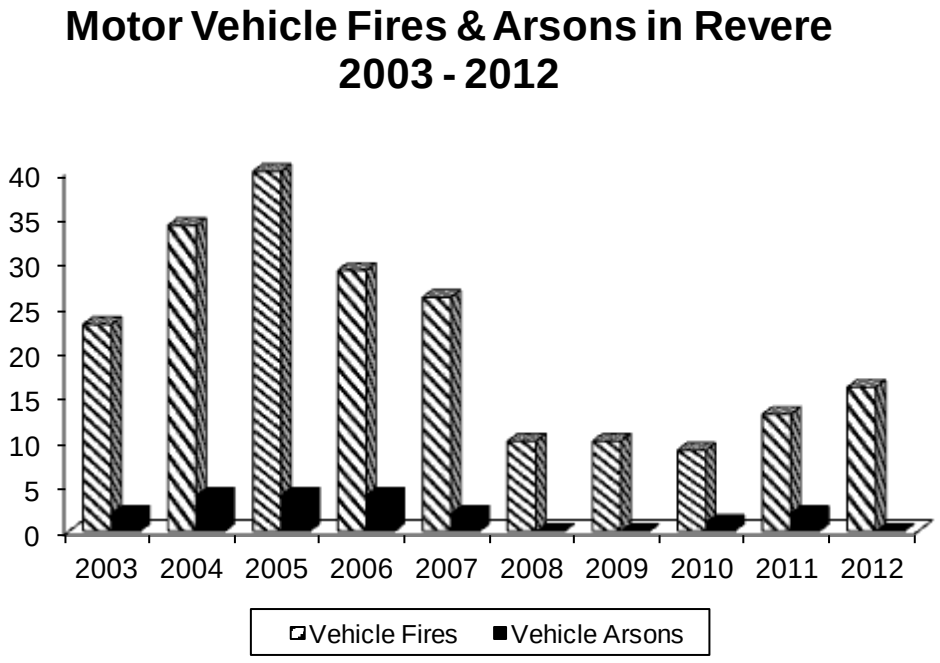
MOTOR VEHICLE FIRES

Motor Vehicle Fires Up Slightly

There were 16 motor vehicle fires in Revere in 2012 that caused one civilian injury and an estimated $161,250 in damages. Motor vehicle fires comprised 4% of Revere's reported fires in 2012. The total number of motor vehicle fires increased by three from the 13 reported in 2011.

0 Motor Vehicle Arson

There were no reported motor vehicle fires that were considered intentionally set. This was a decrease of one from the one reported in 2011.



OUTSIDE AND OTHER FIRES

Outside and Other Fires Up

There were 82 outside and other fires reported to MFIRS in 2012. These 82 fires included 53 outside rubbish fires, 24 brush fires and five unclassified fires. Outside and other fires comprised 21% of the 398 Revere fires reported in 2012. These 82 incidents are a 19% increase in the number of outside and other fires in Revere from the 63 reported in 2011. This increase in outside fires was a statewide trend.

No Outside and Other Arsons

For the first time since 2006, Revere reported an outside or other arsons. There were two reported brush fires that were coded as arsons. These two fires caused $3,006 in estimated damages.

FATAL FIRES

0 Fire Deaths in 2012
There were no fatal fires in Revere in 2012.

JUVENILE-SET FIRES

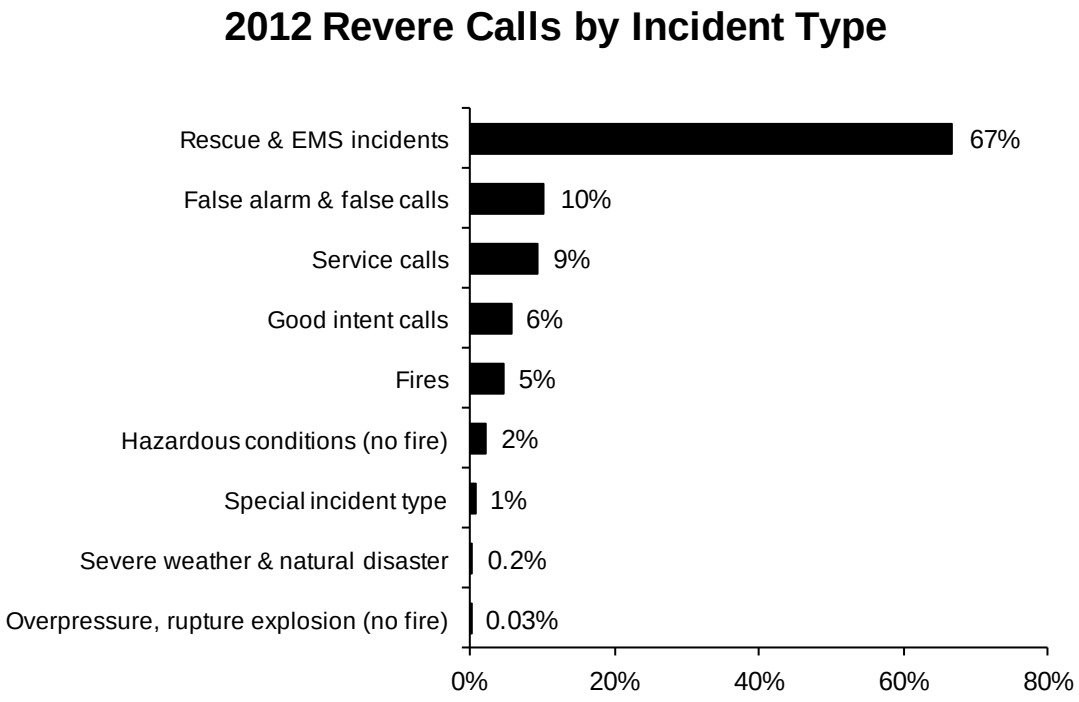
No Juvenile-set Fires
In 2012, Revere did not report any juvenile-set fires.

ALL CALLS

Rescue & EMS Calls Are 2/3 of All Reported Responses
In 2012, the Revere Fire Department reported 8,687 total responses to MFIRS. Of these 8,687 responses, 8,286 non-fire calls were voluntarily reported.

Of these 8,286 non-fire calls, 5,806, or 67%, of all the responses reported in 2012 were reported rescue and emergency medical services (EMS) calls; 891, or 10%, were reported false alarm or false calls; 820, or 9%, were reported service calls such as lock-outs, water or smoke problems, unauthorized burning or public service assistance; 492, or 6%, were reported good intent calls; 195, or 2%, were reported hazardous condition calls with no fire; 59, or 1%, were special incident type calls such as citizen complaints; 20, or 0.2%, were reported severe weather calls; and three, or 0.03%, were reported overpressure, rupture, explosion or overheat calls with no fire.

Four hundred and one (401), or 5%, of the total responses submitted by the Revere Fire Department were fires.



Revere Reported Giving Mutual Aid 45 Times
In 2012, the Revere Fire Department reported coming to the aid of other fire departments 45 times. Of these 45 responses, 44, or 98%, were for service calls such as cover assignments; and one, or 2%, was a rescue or EMS incident.

Revere Received Mutual Aid in 49 Incidents
In 2012, the Revere Fire Department reported receiving aid from surrounding departments in 49 incidents. Of these 49 incidents, 27, or 55%, were for rescue or EMS calls; 12, or 24%, were for fires; four, or 8%, was for hazardous condition calls with no fire; three, or 6%, were for service calls; and another three, or 6%, were for good intent calls.

CONCLUSIONS

- **Structure Fires Were Down**

Structure fires decreased 70, or 19%, from the 370 reported in 2011. Outside and other fires increased by 19 and motor vehicle fires increased by three in 2012.

- **Cooking Caused 88% 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 ten (210), or 88%, of Revere's residential building fires were attributed to cooking. Two hundred and three (203) 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 ninth year in a row that heating equipment was the second leading cause of residential fires in Revere.

- **91% of Residential Building Fires Were Confined Fires**

The overwhelming majority of residential fires in 2012 were confined fires. Two hundred and seventeen (217), or 91%, of the 298 residential building fires in Revere in 2012 were confined to their non-combustible containers.

- **Only 4 Arsons in Revere in 2012**

In 2012, Revere reported two structure arsons and two outside and other arsons.

- **Smoke Detectors Operated in Just 16% Residential Fires**

Smoke or heat detectors operated in 38, or 16%, of the 298 residential fires. Unfortunately in 191 incidents, or 80% 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 **398** **$8,314,100**

7.7 Fires/1,000 Population

Situation Found	Fires	% of Fires	Dollar Loss
Structure Fires	369	75%	$8,314,100
Vehicle Fires	16	4%	161,250
Other Fires	82	21%	3,006

4 Fire Service Injuries

5.80 Structure fires/1,000 population
0.31 Vehicle fires /1,000 population
1.58 Other fires/1,000 population

Building Fires: 298

Residential Building Fires: 238

Residential Building Fires Confined to Non-Combustible Containers: 217

Unconfined Residential Building Fires: 21

No Injuries

Occupancy	Fires	%
Apartments	155	65%
1- & 2-Family homes	70	29%
Rooming houses	7	3%
Residential board & care	4	2%
Hotels/motels	2	1%

Detector Status	Fires	%
Operated	38	80%
Didn't operate	0	0%
None	3	1%
Fire too small	3	1%
Didn’t alert (confined)	3	1%
Undetermined	191	80%

Area of Origin[37]	%	Heat Source	%	%Unconfined[38]
Kitchen	88%	Radiated heat from op. eq.	1%	1%
Heating room or area	4%	Arcing	1%	1%
Bedroom	1%	Cigarettes	1%	1%
Living room	1%	Candles	1%	1%
Exterior balcony/unencl. porch	1%	Cigarette lighter	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]	**%**
Food, cooking materials	87%
Flammable, combustible liquid	4%
Rubbish, trash, waste	2%
Structural member, framing	1%
Exterior trim, appurtances	1%

Factor Contrib. to Ignit.	**%**	**%Unconfined**[40]
Too close to combustibles	0.4%	5%
Abandoned materials	0.4%	5%
Unspec. short-circuit arc	0.4%	5%

Equipment[41]	**%**
Cooking equipment	87%
None	6%
Boiler, furnace, cent. heat. unit	4%
Electrical branch circuit	1%

Cause of Ignition	**%**	**%Unconfined**[42]
Unintentional	5%	62%
Failure of eq./heat source	1%	14%
Intentional	1%	10%
Undetermined	1%	10%
Cause under investigation	0.5%	5%

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

Alerted occupants	12%
Didn't alert occupants	1%
Undetermined	87%

Mutual Aid Given	**# of Incidents**
Chelsea	30
Malden	5
Everett	2
Melrose	2
Saugus	1
Winthrop	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	35	32	2	1
February	27	26	1	0
March	21	16	0	5
April	60	29	2	29
May	31	22	2	7
June	28	22	1	5
July	37	21	2	14
August	33	23	0	10
September	27	18	3	6
October	31	29	1	1
November	33	30	1	2
December	35	32	1	2

Day	Total Fires	Structure Fires	Vehicle Fires	Other Fires
Sunday	62	48	1	13
Monday	58	41	4	13
Tuesday	57	41	2	14
Wednesday	60	46	3	11
Thursday	52	44	1	7
Friday	46	36	1	9
Saturday	63	44	4	15

Time	Total Fires	Structure Fires	Vehicle Fires	Other Fires
00:01 - 04:00	23	17	2	4
04:01 - 08:00	24	21	1	2
08:01 - 12:00	60	44	4	12
12:01 - 16:00	116	80	4	32
16:01 - 20:00	110	86	3	21
20:01 - 00:00	65	52	2	11

Motor Vehicle Fires

Total: 16
Automobiles: 12 (75%)
None of the automobile fires were considered to be intentionally set.

Arson Fires

Total Arsons: 4 **$8,500**

Situation	Arsons	% of Situation	% of Arson	Dollar Loss
Structure Arsons	2	1%	50%	$8,500
Vehicle Arsons	0	0%	0%	0
Other Arsons	2	2%	50%	0

No Injuries

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

Peak Times of Day for Arson Fires

Structure Arsons	#	%	Vehicle Arsons	#	%
04:01 - 08:00	1	50%			
20:01 - 00:00	1	50%			

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

Occupancy	#	%
Apartments	2	100%

Winthrop Fires in 2012

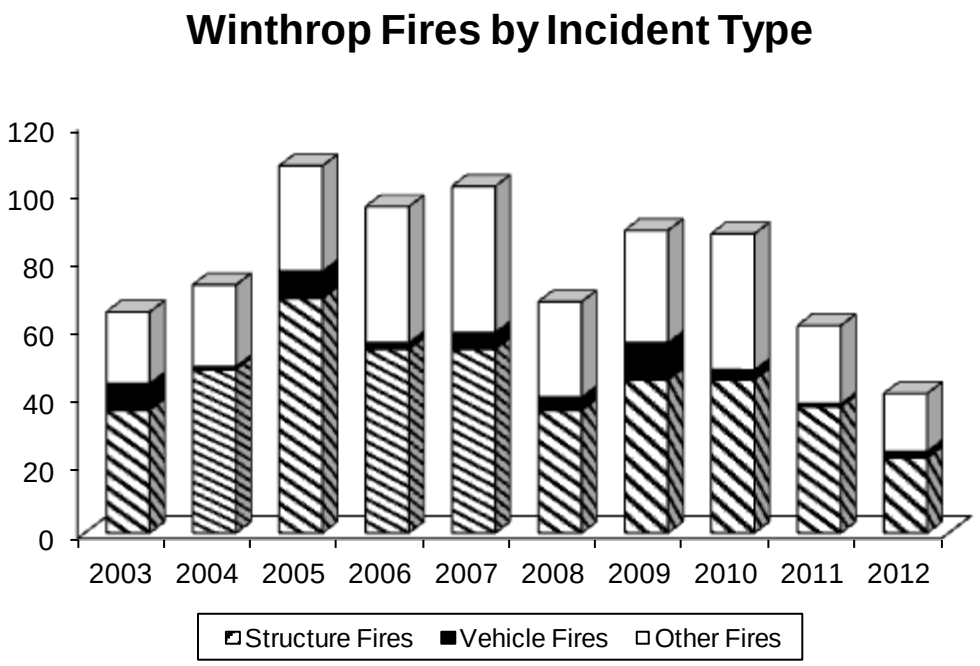
41 Fires — 22 Structure Fires, 2 Vehicle Fire & 17 Other Fires
The Town of Winthrop reported 41 fires to the Massachusetts Fire Incident Reporting System (MFIRS) in 2012. The 22 structure fires, two motor vehicle fires, five brush and grass fires, two outside rubbish fires, three special outside fires, and seven unclassified fires caused an estimated dollar loss of $960,850. There were 2.3 fires for every 1,000 citizens in 2012.

No Fire Deaths in 2012
In 2012, the Town of Winthrop did not have any fire-related deaths.

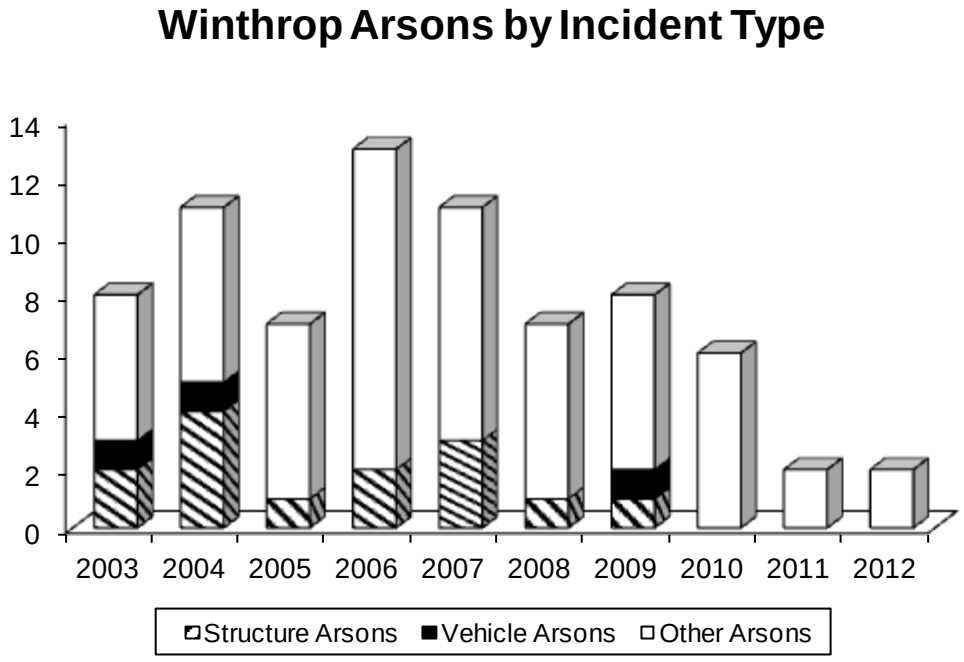
All Fires Down
The total number of fires reported in Winthrop decreased by 20 from 89 in 2011. Structure fires decreased by 15 from the 37 reported in 2011. Motor vehicle fires increased by one from one in 2011. Outside and other fires decreased by six from 23 in 2011.

WINTHROP FIRES FROM 2003 TO 2012

Year	Total Fires	Structure Fires	Vehicle Fires	Other Fires	Total Arsons	Structure Arsons	Vehicle Arsons	Other Arsons
2003	65	36	8	21	8	2	1	5
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



2 Arsons – 2 Outside & Other Arsons
Two (2), or 5%, of the 41 Winthrop fires were considered intentionally set, or, for purposes of this analysis, arson.



STRUCTURE FIRES

Structure Fires Down
The 22 structure fires caused an estimated dollar loss of $924,950. These incidents represented 54% of Winthrop's reported fires in 2012. Structure fires decreased by 15, or 41%, from the 37 reported in 2011.

No Structure Arsons
For the third year in a row there were no reported structure arsons in Winthrop in 2012.

BUILDING FIRES

There were 22 building fires of different types in Winthrop in 2012. These 22 building fires accounted for all of the structure fires in Winthrop.

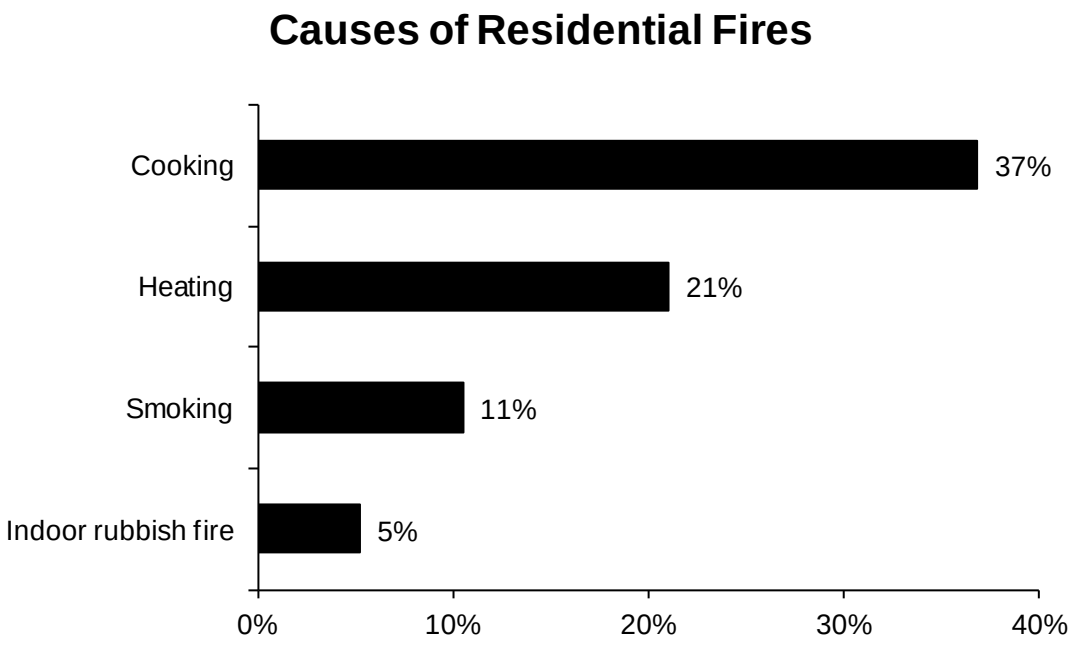
86% of Building Fires in Homes
The 22 building fires that occurred in Winthrop in 2012 can be broken down by fixed property use as follows: 19, or 86%, of all the building fires reported in 2012 were in residential properties; one fire, or 5%, happened at a mercantile or business property; one fire, or 5%, occurred in an institutional facility; another fire, or 5%, happened at a storage facility.

RESIDENTIAL BUILDING FIRES

86% of Winthrop's Building Fires Occurred in Residences
Nineteen (19), or 86%, of Winthrop's 22 reported building fires occurred in residential occupancies. There were no reported residential building arsons in 2012. The 19 residential building fires reported in 2012 caused an estimated dollar loss of $872,750.

1- & 2-Family Homes Accounted for 63% of Residential Building Fires
The peak fixed property uses for residential building fires were one- and two-family homes, accounting for 63% of the residential building fires in Winthrop. Thirty-seven percent (37%) occurred in apartments.

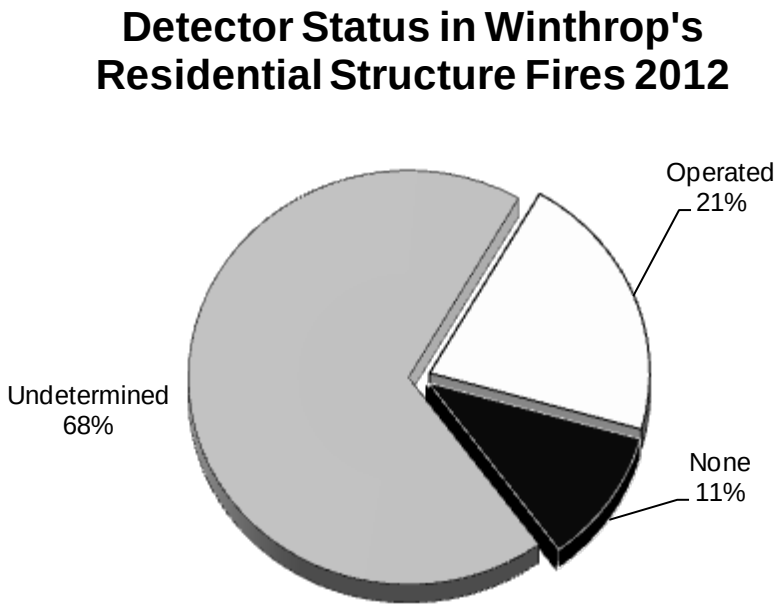
Unsafe Cooking Practices Caused 37% of Winthrop's Residential Fires
Cooking was the leading cause of fires in Winthrop residential properties in 2012 accounting for 37% of these fires. Heating equipment fires were the second leading cause, accounting for 21% of these fires; smoking caused 11%; and indoor rubbish fire accounted for 5% of the fires in Winthrop's homes in 2012.



58% of Residential Building Fires Are Confined to Non-Combustible Containers[43]
Eleven (11), or 58% of all residential building fires, were reported as confined to non-combustible containers in 2012. Six (6) of the reported fires were cooking fires contained to a non-combustible container accounting for 55% of residential building fires. Four (4), or 21%, were fires confined to a fuel burner or boiler malfunction. One (1), or 5% of these fires were confined indoor rubbish fires.

Detectors Alerted Occupants in Only 21% of Fires
Smoke or heat detectors operated and alerted the occupants in four, or 21%, 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 were two reported fires where no detectors were present at all accounting for 11% of these fires. There were no reported fires where the fire was too small to trigger the detector. Smoke detector performance was undetermined in 10 incidents, or 68% 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

2 Motor Vehicle Fire Reported in 2012
The two motor vehicle fires caused an estimated dollar loss of $21,000. Motor vehicle fires comprised 5% of Winthrop's 41 reported fires in 2012. Motor vehicle fires increased by one, or 100%, from the three fires reported in 2011.

No Motor Vehicle Fires Considered Arson

Neither of Winthrop's motor vehicle fires was determined to be intentionally set. This is the third year in a row with no reported motor vehicle arsons.

OUTSIDE AND OTHER FIRES

Outside and Other Fires Account for 41% of Winthrop Fires

The Winthrop Fire Department reported 17 outside and other fires to the Massachusetts Fire Incident Reporting System in 2012, a decrease of six from 23 in 2011. The five brush and grass fires, three special outside fires, two outside rubbish fires, and seven unclassified fires caused estimated dollar loss of $14,900. Outside and other fires comprised 41% of the 41 Winthrop fires reported in 2012.

12% of Outside & Other Fires considered Arson

Two (2), or 12%, of the 17 outside and other fires were considered intentionally set. One was a brush fire and the other was an outside rubbish arson. Outside and other arsons remained the same with two reported in both 2011 and 2012. For the second year in a row outside and other arson comprised all of Winthrop's arsons.

JUVENILE-SET FIRES

0 Juvenile-set Fire

There were no reported juvenile-set fires in Winthrop in 2012.

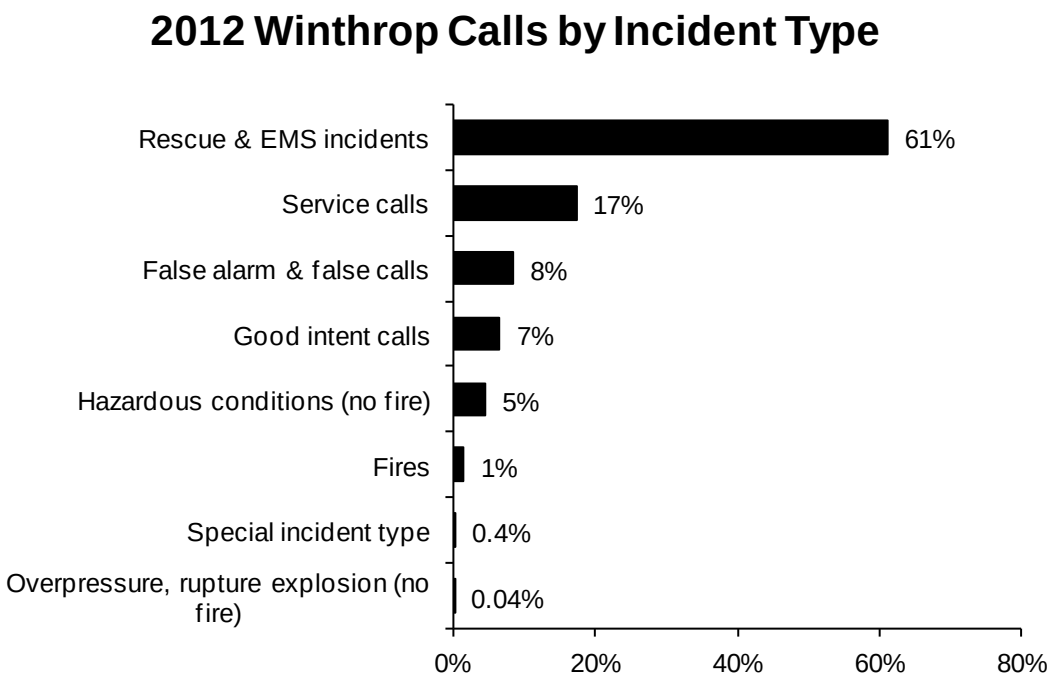
ALL CALLS

Rescue & EMS Calls Were 61% of All Reported Responses

In 2012, the Winthrop Fire Department reported 2,803 total responses to MFIRS. Of these 2,803 responses, 2,761 non-fire calls were voluntarily reported.

Of these 2,761 non-fire calls, 1,715, or 61% of all the responses reported in 2012, were reported rescue and emergency medical services (EMS) calls; 486, or 17%, were reported service calls such as lock-outs, water or smoke problem, unauthorized burning or public service assistance; 237, or 8%, were reported false alarm or false calls; 184, or 7%, were reported good intent calls; 127, or 5%, were reported hazardous condition calls with no fire; 11, or 0.4%, were special incident type calls such as citizen complaints; and one, or 0.04%, was a reported overpressure, rupture, explosion or overheat call with no fire.

Forty-two (42), or 1%, of the total responses submitted by the Winthrop Fire Department were fires.



Winthrop Reported Receiving Mutual Aid 3 Times
In 2012, the Winthrop Fire Department reported receiving aid from surrounding departments three times. Two (2) were for rescue or EMS incidents and one was for a fire.

Winthrop Reported Giving Mutual Aid 3 Times
Winthrop reported coming to the aid of other fire departments three times in 2012. All three of these were service calls such as station coverage.

CONCLUSIONS

- **Most Building Fires in Homes**

86% of building fires occurred in residences.

- **Cooking Caused 37% of Residential Fires**

Cooking caused 37% of Winthrop's residential building fires. Education and other prevention efforts should help address this problem.

- **Heating Caused 21% of Residential Fires**

Heating was the second leading cause of residential fires in Winthrop. Fires started by heating equipment caused 21% of residential building fires.

- **Smoke Detectors Status Undetermined in 68% Residential Fires**

It was undetermined if smoke detectors sounded the alarm in 68% 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 18 confined fires in 2012.

Winthrop FDID: 25346 Population: 17,497

Total Fires **41** **$960,850**

2.3 Fires/1,000 Population

Situation Found	Fires	% of Fires	Dollar Loss
Structure Fires	227	54%	$924,950
Vehicle Fires	2	5%	21,000
Other Fires	17	41%	14,900

No Injuries

1.3 Structure fires/1,000 population
0.1 Vehicle fires /1,000 population
1.0 Other fires/1,000 population

Building Fires: 22

Residential Building Fires: 19

Residential Building Fires Confined to Non-Combustible Containers: 11

Unconfined Residential Building Fires: 8

Occupancy	Fires	%
1- & 2-Family homes	12	63%
Apartments	7	37%

Detector Status	Fires	%
Operated	4	21%
Didn't operate	0	0%
None	2	11%
Fire too small	0	0%
Didn't alert (confined)	0	0%
Undetermined	13	68%

Area of Origin[45]	%	Heat Source	%	%Unconfined[46]
Kitchen	42%	Cigarette	11%	25%
Heating room or area	26%	Heat operating equipment	5%	13%

[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	32%
Flammable, combustible liquid	21%
Rubbish, trash, waste	11%

Factor Contrib. to Ignit.	%	%Unconfined[48]
Too close to combustibles	11%	25%

Equipment[49]	%
Cooking equipment	37%
Boiler, furnace, cent. heat. unit	37%
None	21%

Cause of Ignition	%	%Unconfined[50]
Unintentional	16%	38%
Failure of eq. or heat source	11%	25%
Intentional	0%	0%
Act of Nature	0%	0%
Undetermined	5%	13%
Cause under investigation	11%	25%

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

Alerted occupants	9%
Didn't alert occupants	0%
Undetermined	91%

[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	8	6	1	1
February	3	2	0	1
March	4	0	0	4
April	3	2	0	1
May	3	1	0	2
June	1	1	0	0
July	3	2	0	1
August	4	0	1	3
September	2	0	0	2
October	2	2	0	0
November	3	3	0	0
December	5	3	0	2

Day	Total Fires	Structure Fires	Vehicle Fires	Other Fires
Sunday	5	3	0	2
Monday	2	1	0	1
Tuesday	7	4	1	2
Wednesday	5	3	0	2
Thursday	8	4	0	4
Friday	8	3	1	4
Saturday	6	4	0	2

Time	Total Fires	Structure Fires	Vehicle Fires	Other Fires
00:01 - 04:00	2	0	1	1
04:01 - 08:00	5	2	1	2
08:01 - 12:00	5	4	0	1
12:01 - 16:00	13	6	0	7
16:01 - 20:00	12	8	0	4
20:01 - 00:00	4	2	0	2

Motor Vehicle Fires

Total: 2
Automobiles: 2 (100%)
None of the automobile fires were considered to be intentionally set.

Arson Fires

Total Arsons: 2 **$0**

Situation	Arsons	% of Situation	% of Arson	Dollar Loss
Structure Arsons	0	0%	0%	$0
Vehicle Arsons	0	0%	0%	0
Other Arsons	2	12%	100%	0

No Injuries

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

Peak Times of Day for Arson Fires

Structure Arsons	#	%	Vehicle Arsons	#	%

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

Peak Fixed Property Uses for Structure Arsons

Occupancy	#	%

Appendix

2012 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	879	348	114	417	4	27	0	12	$16,370,131
Berkshire	607	346	34	227	1	4	0	19	5,729,236
Bristol	2,197	873	278	1,046	5	42	0	31	35,603,409
Dukes	38	16	6	16	0	0	0	0	57,200
Essex	2,997	1,574	236	1,187	4	31	0	40	13,398,910
Franklin	279	128	29	122	0	3	0	1	8,823,316
Hampden	2,181	1,102	220	859	3	31	0	65	14,529,379
Hampshire	539	208	46	285	1	1	0	1	2,208,787
Middlesex	5,175	3,199	407	1,569	7	44	0	85	38,768,870
Nantucket	39	31	3	5	0	0	0	0	5,000
Norfolk	3,270	1,884	2226	1,160	3	31	0	113	16,806,661
Plymouth	2,067	826	212	1,029	3	46	0	36	13,780,449
Suffolk	6,678	4,826	325	1,527	1	17	0	52	64,522,343
Worcester	4,283	2,175	366	1,742	7	45	0	76	26,491,181
Total	**31,229**	**17,536**	**2502**	**11,191**	**39**	**322**	**0**	**531**	**$257,094,872**

2012 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	45	9	5	31	2	1	0	3	$3,520,930
Berkshire	24	5	0	19	0	0	0	1	239,390
Bristol	98	29	10	59	0	2	0	5	1,328,665
Dukes	2	0	1	0	0	0	0	0	0
Essex	105	23	11	71	0	0	0	2	328,559
Franklin	18	6	1	11	0	1	0	0	16,450
Hampden	67	24	10	33	1	4	0	0	633,185
Hampshire	37	4	0	33	1	0	0	0	115,376
Middlesex	136	35	14	87	3	1	0	0	2,648,951
Nantucket	1	0	0	1	0	0	0	0	0
Norfolk	96	10	10	76	3	1	0	0	442,183
Plymouth	134	40	10	84	1	4	0	2	1,170,936
Suffolk	169	33	22	114	0	0	0	3	575,890
Worcester	203	53	20	130	1	2	0	14	2,397,717
Total	**1,135**	**271**	**114**	**750**	**12**	**16**	**0**	**27**	**$13,418,232**

2012 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	879	4.1	4	4.6	0.19	45	0.2
Berkshire	131,219	607	4.6	1	1.6	0.08	24	0.2
Bristol	548,285	2,197	4.0	5	2.3	0.09	98	0.2
Dukes	16,535	38	2.3	0	0.0	0.00	2	0.1
Essex	743,159	2,997	4.0	4	1.3	0.05	105	0.1
Franklin	71,372	279	3.9	0	0.0	0.00	18	0.3
Hampden	463,490	2,181	4.7	3	1.4	0.06	67	0.1
Hampshire	158,080	539	3.4	1	1.9	0.06	37	0.2
Middlesex	1,503,085	5,175	3.4	7	1.4	0.05	136	0.1
Nantucket	10,172	39	3.8	0	0.0	0.00	1	0.1
Norfolk	670,850	3,270	4.9	3	0.9	0.04	96	0.1
Plymouth	494,919	2,067	4.2	3	1.5	0.06	134	0.3
Suffolk	722,023	6,678	9.2	1	0.1	0.01	169	0.2
Worcester	798,552	4,283	5.4	7	1.6	0.09	203	0.3
Massachusetts	**6,547,629**	**31,229**	**4.8**	**39**	**1.2**	**0.06**	**1,135**	**0.2**

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

2012 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	37,974	65	27,420	1,808	2,662	1,390	4,412	54	163
Berkshire	11,565	10	6,783	775	1,485	570	1,854	43	45
Bristol	53,265	86	34,263	2,594	3,637	3,641	8,556	139	349
Dukes	358	2	25	57	14	40	217	2	1
Essex	86,954	104	49,130	3,827	11,743	6,006	15,193	242	664
Franklin	5,079	15	2,636	474	652	531	678	35	58
Hampden	42,466	80	25,083	1,815	3,350	5,308	6,590	48	192
Hampshire	13,145	45	8,439	706	791	770	2,274	13	107
Middlesex	149,834	118	86,532	9,783	14,815	9,130	24,371	599	4,486
Nantucket	2,468	1	1,215	254	117	86	790	5	0
Norfolk	80,802	142	48,879	5,108	7,979	5,274	11,438	207	1,775
Plymouth	74,879	97	49,096	4,239	6,658	5,084	9,066	386	253
Suffolk	88,934	74	50,185	4,718	11,165	7,674	14,664	51	403
Worcester	79,884	106	52,624	3,998	6,275	4,915	10,571	124	1,271
Massachusetts	**727,607**	**945**	**442,310**	**40,201**	**71,343**	**50,419**	**110,674**	**1,948**	**9,767**

[51] WX is the abbreviation for Weather.