



MEDFORD BUREAU OF FIRE PREVENTION

A Division of the Medford Fire-Rescue
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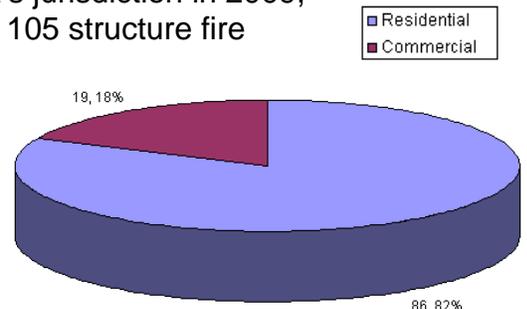
2009 Fire Marshal Report

The Medford Bureau of Fire Prevention serves a population of 90,000 people that reside within a geographic area covering over 55 square miles. The Bureau is responsible for conducting business fire and life safety compliance inspections, performing origin and cause fire investigations, providing public education encompassing all aspects of fire and life safety issues, issuing fire code permits and conducting related inspections, reviewing land development projects for access and water supply requirements, and conducting plan review/inspections for fire protection systems in both new and existing structures. The following is a summary about events that occurred in the community and the Bureau's activities during 2009.

2009 in Retrospect

Fires

Medford Fire-Rescue responded to 279 fire incidents within its jurisdiction in 2009, accounting for 3.6% of the call volume. Medford experienced 105 structure fire incidents in 2009 causing \$1,172,330 in total losses. Over \$60 million in potential losses were associated with these incidents. There were two civilian injuries associated with these fires. Of the structure fires that occurred, 82% occurred in residential occupancies (66% in single family dwellings and 17% in multi-family dwellings) and 18% occurred in commercial occupancies. Medford was fortunate in 2009 to experience zero fatalities in these fires. Medford also responded to 68 wildfires (including grass fires) during the year. The Bureau investigated 71 fires in 2009.



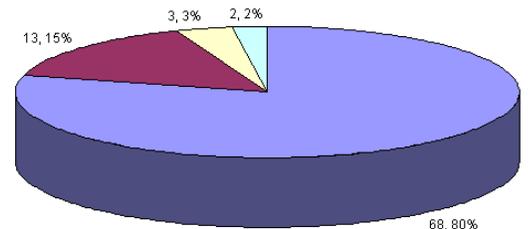
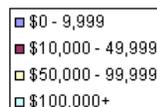
2009 Medford Structure Fires-
By Residential/Commercial

Residential Structure Fire Statistics

Number of Fires: 86

Total \$ Loss: \$ 970,220

- 80% \$0 - 9,999
- 15% \$10,000 – 49,999
- 3% \$50,000 – 99,999
- 2% \$100,000 +



2009 Medford Residential Structure Fires-
By Property Loss

Areas of Origin:

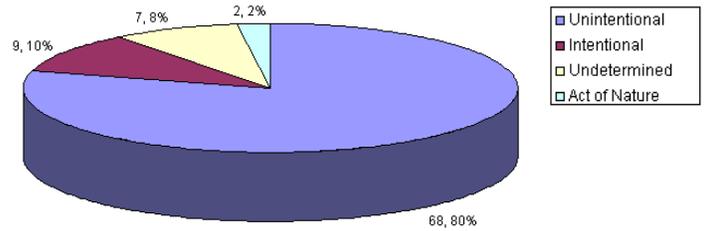
- 33% kitchens
- 6% exterior origins
- 6% common rooms (living, den, family rooms)

Initial Ignition Heat Sources:

- 22% radiated/conducted heat from operating equipment
- 14% heat from powered equipment
- 13% heat from hot ember or ash

Causes:

- 80% unintentional
- 10 % intentional
- 8 % undetermined
- 2% act of nature

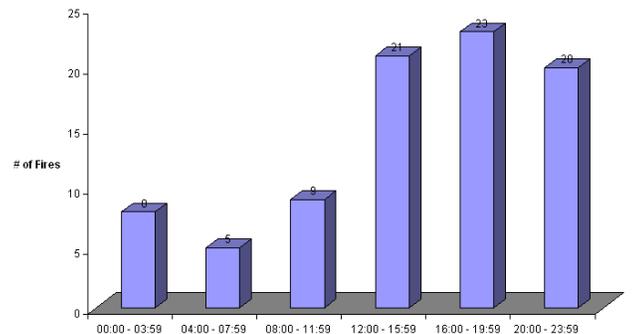


Time of Alarm:

- 9% between 12:00 AM and 3:59 AM
- 6% between 4:00 AM and 7:59 AM
- 10% between 8:00 AM and 11:59 AM
- 24% between 12:00 PM and 3:59 PM
- 28% between 4:00 PM and 7:59 PM
- 23% between 8:00 PM and 11:59 PM



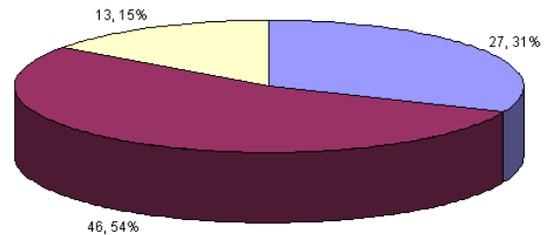
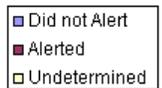
**2009 Medford Residential Structure Fires-
By Cause of Ignition**



**2009 Medford Residential Structure Fires-
By Time of Alarm**

Smoke alarms:

- 54% present and alerted the residents
- 31% did not alert or were not present



**2009 Medford Residential Structure Fires-
By Smoke Alarm Alert**

Although national surveys have shown that 96% of all households have at least one smoke alarm, it is troubling that of smoke alarms did not alert or were not present in almost a third of Medford’s residential fires. One explanation for this is that, in some cases, the smoke alarms may not have been a factor in the fire (chimney/flue fires, exterior fires, etc.). While Medford’s statistics in this area are not out of the ordinary, (NFPA reported that “Smoke alarms sounded in roughly half of the home fires reported to U.S. departments”), we know that having a smoke alarm in the home reduces the risk of dying in a house fire by 50%. National statistics also show that smoke alarms are missing in 2/3 of fatal residential fires. Having an early warning in a house fire is essential for effective evacuation; increasing the possibility that someone may make it out alive. In 2007 Medford Fire-Rescue implemented a program where smoke alarms were checked during any incident (including medicals) involving a residence. In 2009, 38 smoke alarms were found to be missing or failed to operate and personnel took action to ensure these residences had a working smoke alarm. We will continue to target this area and also promote home evacuation planning and residential fire sprinklers. The chance of surviving a residential fire approaches 100% when smoke alarms and a residential fire sprinkler system are installed in a home.

Commercial Structure Fire Statistics

Number of Fires: 19

Total \$ Loss: \$202,110

- 79% \$0 – 9,999
- 16% \$10,000 – 49,000
- 5% \$100,000+

Areas of Origin:

- 20% cooking areas
- 11% storage rooms
- 11% trash/waste areas
- 11% vehicle storage areas
- 11% laundry areas
- 11% storage-other

Causes:

- 63% unintentional
- 11% intentional
- 21% undetermined
- 5% act of nature

Property Use

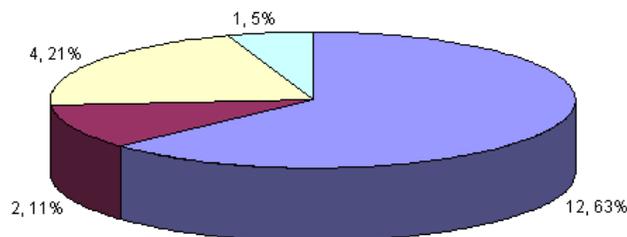
- 22% mercantile, business, other
- 11% outbuilding or shed
- 11% storage, other
- 11% manufacturing, processing

Initial Ignition Heat Sources:

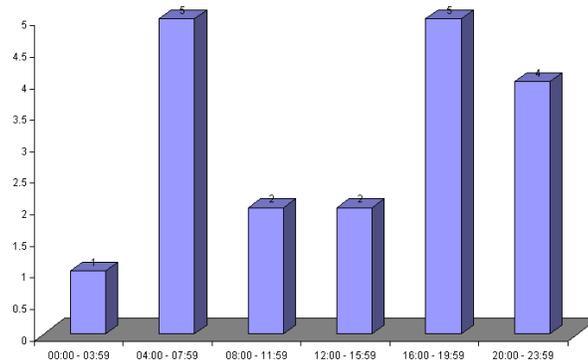
- 22% hot or smoldering object
- 11% heat from powered equipment
- 11% spontaneous combustion
- 21% undetermined

Time of Alarm:

- 5% between 12:00 AM and 3:59 AM
- 26% between 4:00 AM and 7:59 AM
- 11% between 8:00 AM and 11:59 AM
- 11% between 12:00 PM and 3:59 PM
- 26% between 4:00 PM and 7:59 PM
- 21% between 8:00 PM and 11:59 PM



2009 Medford Commercial Structure Fires-
By Cause of Ignition



2009 Medford Commercial Structure Fires-
By Time of Alarm

The largest single commercial property loss, which accounted for over ½ of the total losses for 2009 occurred at a restaurant that was part of a larger business center. Fire sprinklers initially controlled this fire and saved millions of dollars in losses.

Wildfires (Includes grass/vegetation)

Number of Fires: 68

Total Acres: 684

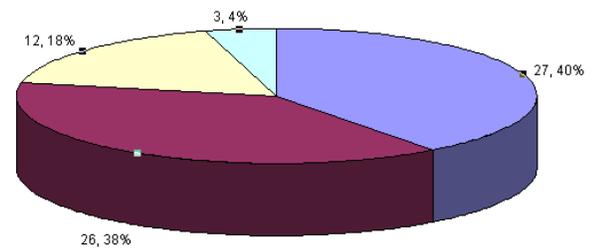
Causes:

- 38% unintentional
- 18% intentional
- 38% undetermined
- 4% act of nature

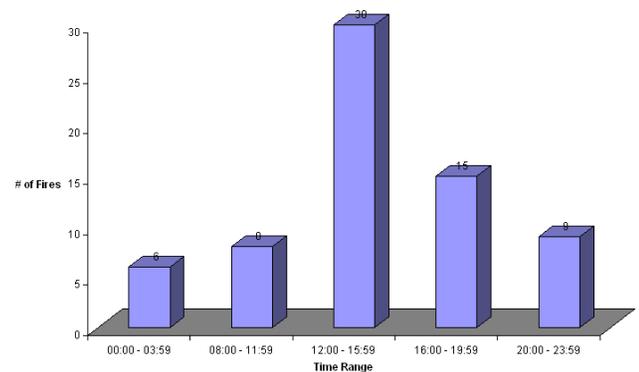
Time of Alarm:

- 9% between 12:00 AM and 3:59 AM
- 0% between 4:00 AM and 7:59 AM
- 12% between 8:00 AM and 11:59 AM
- 44% between 12:00 PM and 3:59 PM
- 22% between 4:00 PM and 7:59 PM
- 13% between 8:00 PM and 11:59 PM

Two significant wildfires occurred in 2009. These were the Deer Ridge fire (633 acres) on September 21 and the Bear Creek Greenway fire (30 acres) on July 5. Although residents and homes were threatened during these fires, nobody was hurt and no homes were lost during these incidents.



**2009 Medford Wildfires-
By Cause of Ignition**



**2009 Medford Wildfires-
By Time of Alarm**

Juvenile Set Fires

In 2009, there were at least 14 juvenile set fires. These included 3 structure fires and 11 outside wildland/grass fires. The structure fires caused \$270,000 in damage. In addition to these, some of the undetermined wildland/grass fires most likely involved juveniles.

Arson Fires

Medford Fire-Rescue has a close working relationship with law enforcement agencies when conducting fire investigations. In cooperation with the Medford Police Department, 51 arson fires were reported, resulting in 25 charges and 19 subjects arrested and/or cited in 2009.

Public Education

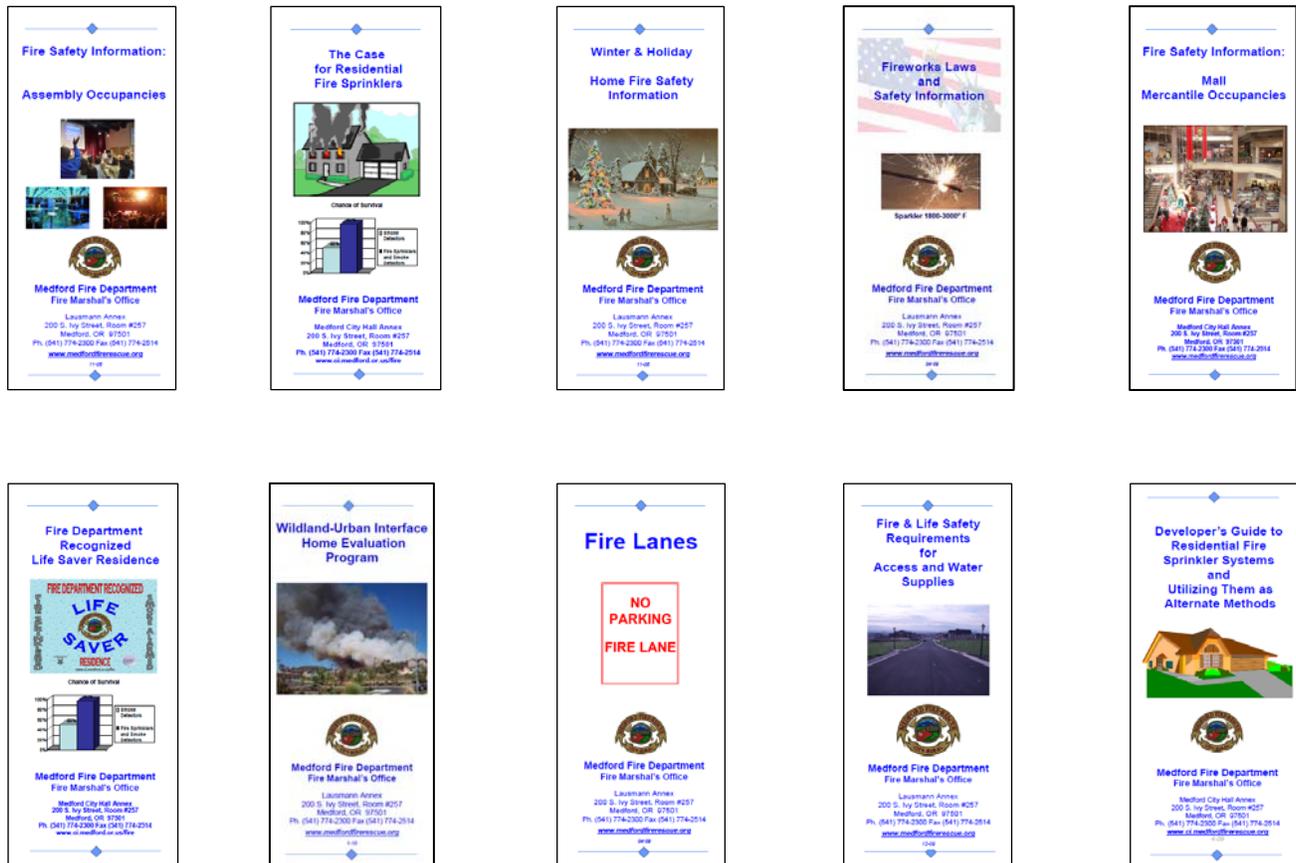
The Bureau took part in 50 public education events/sessions, reaching more than 2,468 individuals in 2009. Medford Fire-Rescue continues to be the lead agency in Southern Oregon Safe Kids Coalition. Medford also takes a prime role in the Juvenile Firesetter's Program. In addition, Medford takes an active role in several public education programs throughout the year, including the following:

- The Hazard House program-over 1,500 4th grade students in 18 schools were taught about smoke alarms, home fire safety, and home escape planning



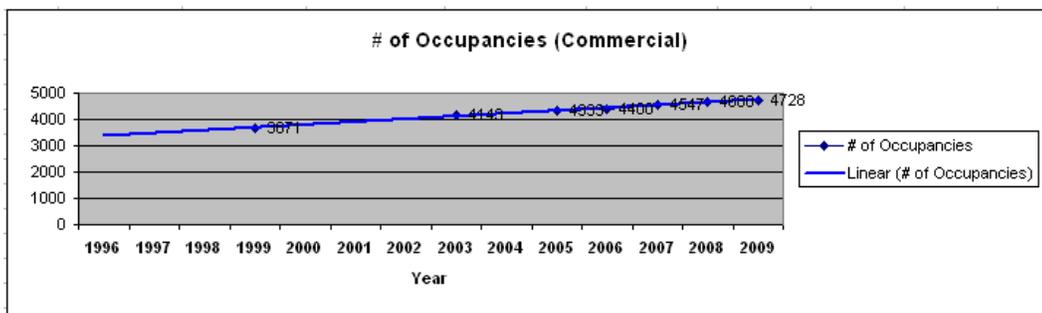
- The Safe Kids Fair
- Fire Prevention Week Open House
- Child Safety Seat clinics
- Adult Foster Care Provider Classes
- Media Releases

The Bureau maintains a wealth of information on the City's website and continues to develop educational materials to serve the public. The following are some of our brochures:



Commercial Inspections and Enforcement

The number of commercial occupancies in Medford Fire-Rescue's jurisdiction rose to 4,728 in 2009.



Our Oregon State Fire Marshal (OSFM) exemption (OAR 837-039) status at a minimum requires us to “Inspect regulated buildings on a frequency deemed necessary to provide a reasonable level of fire and life safety in the applicant's service area.” Regulated buildings include all occupancies regulated by the Oregon Fire Code. The exemption status also specifically requires us to inspect the following occupancies:

- Institutions (I occupancies)-annual
- Schools (E-occupancies)-annual
- Special Residential (SR)-annual
- Outpatient-every three years
- Licensed sheltered workshops-every three years

Inspections are prioritized into three categories, High Risk, Moderate Risk, and Low Risk.

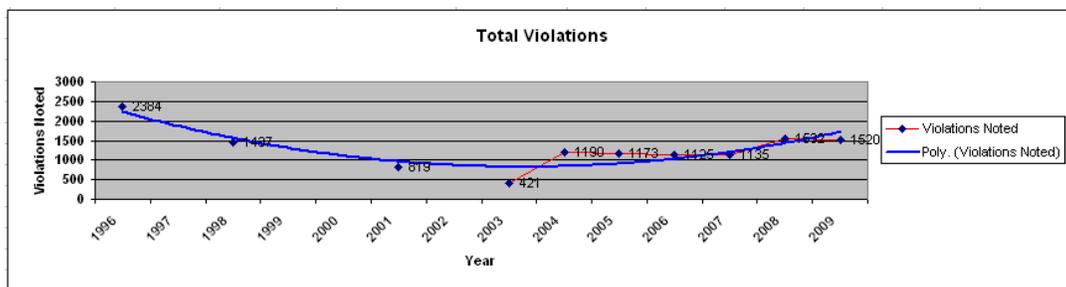
- High Risk (913 identified in Medford in 2008)

These occupancies may have the potential for high loss of life or significant economic impact to the community. They may include structures with required built-in fire protection systems, or may include State of Oregon mandated annual inspections. A goal to inspect these occupancies annually is recommended. These occupancy types include:
- Moderate Risk (958 identified in Medford in 2008)

These occupancies have lower occupant loads, or may have a potential for moderate economic loss, or may have processes or contents that are considered moderately hazardous. A goal to inspect these occupancies every two years is recommended.
- Low Risk (2803 identified in Medford in 2008)

These occupancies have low occupant loads, or involve processes or contents that are considered the least hazardous, and do not have a significant economic impact to the community. A goal to inspect these occupancies every three years is recommended.

During 2009, Medford Fire-Rescue conducted 1,182 compliance inspections and 164 permitted inspections. 1,332 fire code violations were noted during regular business fire inspections and 188 violations were noted during the permitted inspections.

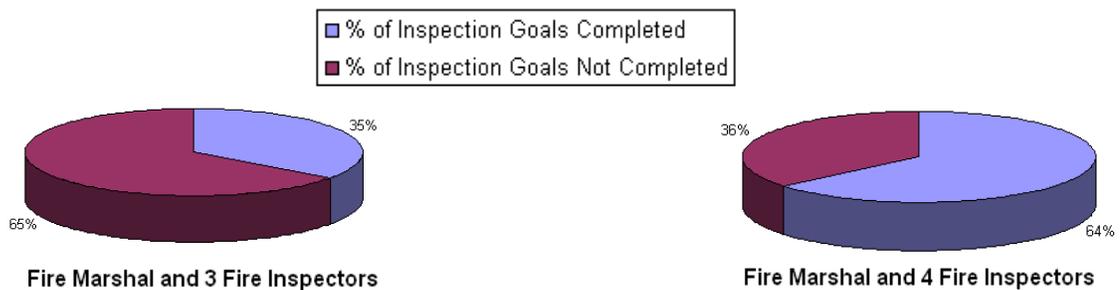


We also continue to manage a self-fire inspection program. The intent of this program is to educate low hazard businesses about fire code requirements, have them physically check their premises, and provide a safety check during the interim between longer inspection intervals.

Based on inquiries in 2005 and 2008 from other fire agencies in Oregon regarding inspection frequency goals, inspection frequencies range from no set inspection frequency goals (due to staffing levels) to goals to inspect every occupancy annually.

In 2008 a study was conducted to see how staffing affected our fire inspection frequency goals. The below charts show the results.

**Percent of Inspection Goals Accomplished*
Based Upon Number of Bureau Personnel**



A survey was conducted in 2010 among agencies in Oregon regarding staffing, number of regulated occupancies, and enforcement inspections. The following is a summary from those who responded:

Agency	Occupancies 2009 (Regulated)	Total Inspections 2009 (Company + Bureau)	Occupancies per Bureau FTE 2009	Total Inspections per Bureau FTE 2009
Medford	4728	1182	946	296
Albany	2565	286	428	57
Canby	500	85	250	43
Forest Grove	740	168	493	67
Hermiston	769	382	513	255
Lake Oswego	2300	367	1150	167
McMinnville	1589	250	530	83
Pendleton	950	19	950	19
Salem	9400	764	1567	127
Springfield	2174	1237	362	206

Of the responding agencies, Medford ranked fourth in the number of total occupancies per Bureau full time employee, and first in the number of total inspections per Bureau full time employee in 2009.

Permits and Development

The Bureau was responsible for 131 fire code operational and construction permits in 2009, overseeing 63 fire protection/detection permits. A total of 161 total plan reviews were conducted during this period, including 40 fire suppression systems, 23 fire alarm systems, and 98 site development reviews.

Staffing and Personnel

In 2009, The Bureau consisted of a Fire Marshal and three Fire Inspectors for most of the year. In late 2009, plans were implemented to fill the vacant fourth Fire Inspector position by May 2010.

Bureau personnel received 470 hours of training in 2009. Training is vital for personnel to keep up-to-date in their fields of expertise.

The professional achievements and qualifications that Bureau personnel have obtained continues to be impressive. Bureau qualifications include:

- All personnel were Fire Code Certified
- Three personnel possessed Oregon State Fire Marshal competency recognition
- Three personnel were IAAI Certified Fire Investigators (CFI)
- Two personnel were certified as Fire Plans Examiners/Building Plans Examiners

2010

In 2010 we will continue to work hard to educate the public about fire and life safety issues and target occupancies for inspections based on their hazard. In 2010 we are beginning a new Wildland-Urban Interface Home Evaluation Program where we will try to educate homeowners living in hazardous wildfire areas about the importance of reducing ignition hazards around their home and creating defensible space. Also, we will continue to take an active role in new development and construction, ensuring new buildings have adequate access, water supply, required fire suppression and detection systems, and the code required life safety systems and features in place. Our goal is to protect people by being actively involved in preventing tragedies, with the goal of making this one of the safest communities to reside in.