



**Oregon Office of State Fire Marshal**

# **Juveniles and Fire in Oregon 2012**

Prepared by the Data Collection & Research Unit of the Office of State Fire Marshal.  
Includes incident data for 2012 as reported by Oregon fire agencies as of April 3/2013.

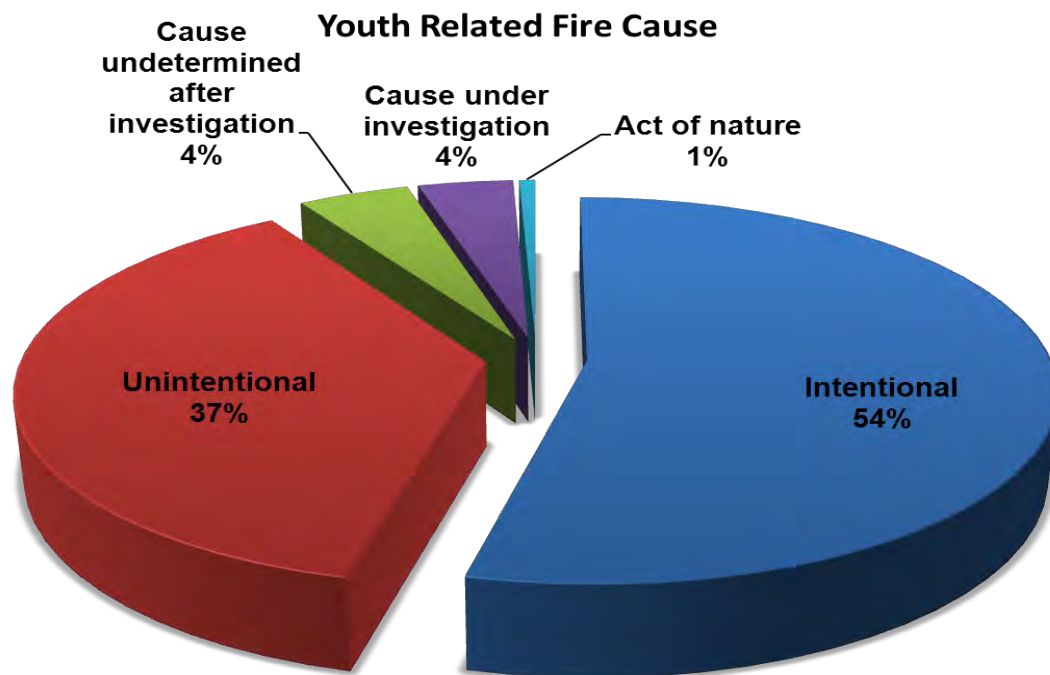
# YOUTH INVOLVED WITH FIRE

This report pertains to youth involved with fire. Youth are defined as persons under the age of 18. Information pertaining to youth involved with fire incidents are based on NFIRS incident data submitted by local fire agencies. In 2012, there were 156 fires identified as having youth involvement reported to the OSFM.

The following is a year to year comparison of key characteristics of youth involved fires in Oregon.

|                             | <u>2010</u> | <u>2011</u> | <u>2012</u> |
|-----------------------------|-------------|-------------|-------------|
| Total Fires                 | 134         | 141         | 156         |
| Civilian Deaths             | 2           | 2           | 0           |
| Civilian Injuries           | 2           | 3           | 3           |
| Property Damage in millions | \$0.24      | \$1.11      | \$2.37      |

In 2012, over half (54%) of all fires involving youths were determined to be intentionally set fires.

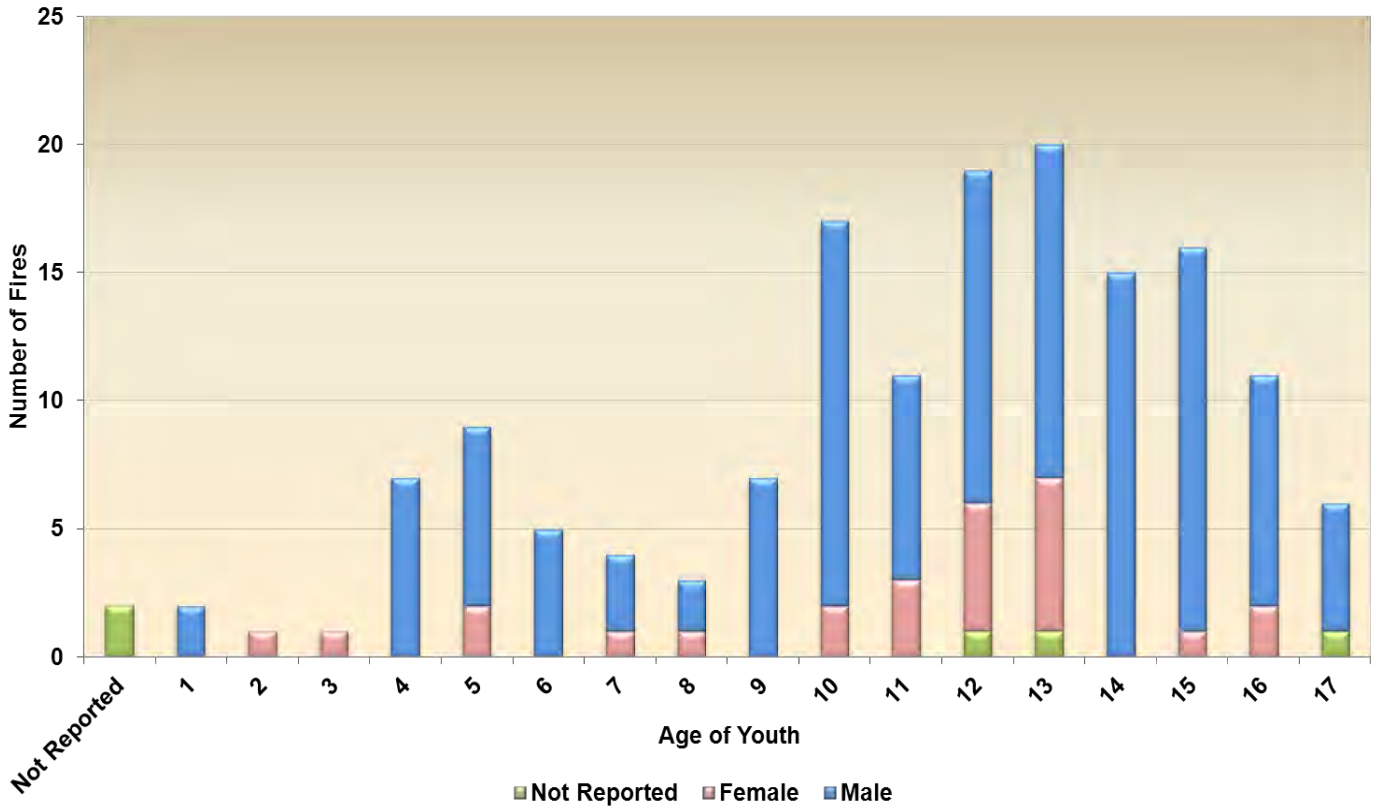


| Cause                                  | Total      | Pct.  |
|--|------------|-------|
| Intentional                            | 84         | 53.8% |
| Unintentional                          | 58         | 37.1% |
| Cause undetermined after investigation | 7          | 4.4%  |
| Cause under investigation              | 6          | 3.8%  |
| Act of nature                          | 1          | 0.6%  |
| <b>Grand Total</b>                     | <b>156</b> |       |

# Youth Involved With Fire - Incidents

As identified in the chart below, youths between the ages 10 and 15, accounted for the majority (63%) of youth involved fires. Males were involved in 81% of the fires, while females accounted for 16%. No gender was reported for the remaining 3%.

**Age and Gender of Youth Involved in Fire Incidents**

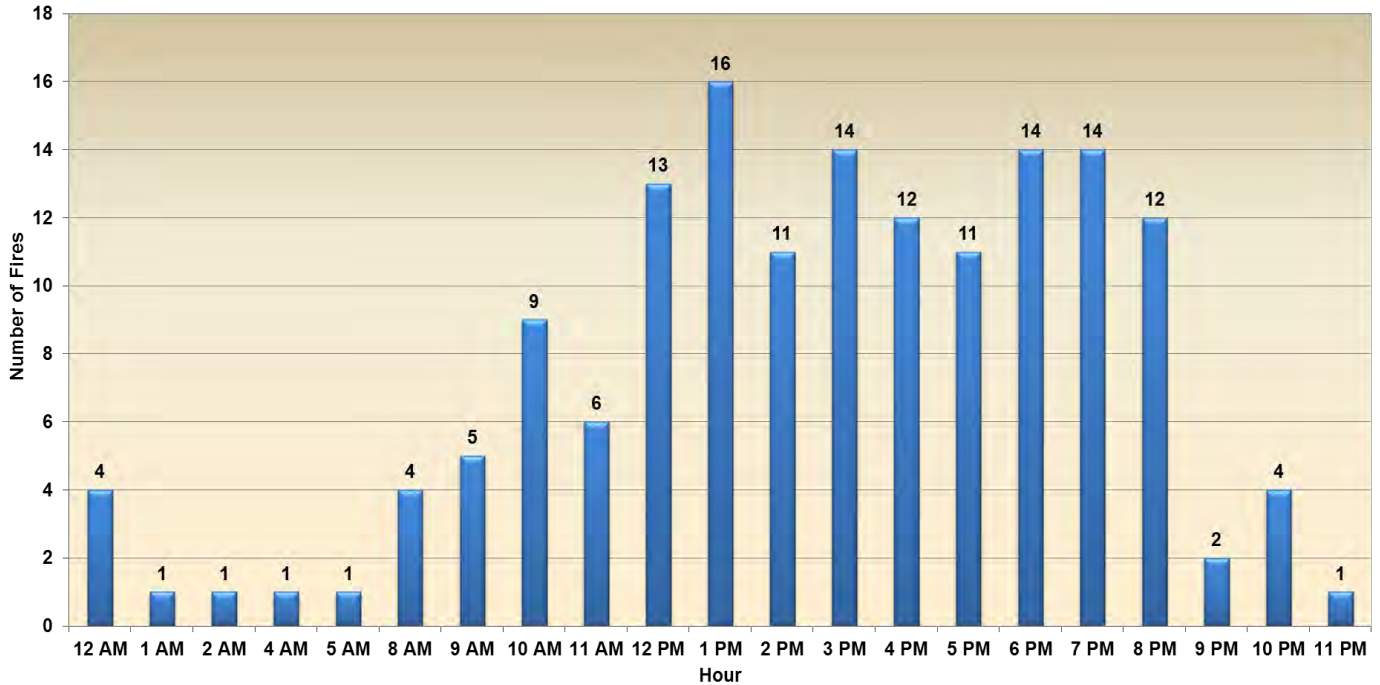


|                     |   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | Total |
|---------------------|---|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|-------|
| Gender Not Reported | 2 |   |   |   |   |   |   |   |   |   |    |    | 1  | 1  |    |    |    | 1  | 5     |
| Female              |   |   | 1 | 1 |   | 2 |   | 1 | 1 |   | 2  | 3  | 5  | 6  |    | 1  | 2  |    | 25    |
| Male                |   | 2 |   |   | 7 | 7 | 5 | 3 | 2 | 7 | 15 | 8  | 13 | 13 | 15 | 15 | 9  | 5  | 126   |
| Total               | 2 | 2 | 1 | 1 | 7 | 9 | 5 | 4 | 3 | 7 | 17 | 11 | 19 | 20 | 15 | 16 | 11 | 6  | 156   |

# Youth Involved With Fire - Incidents

The largest percentage (75%) of fire incidents involving youth occur between noon and 8 pm. More specifically, the hours from noon to 2 pm and 6 pm to 8 pm account for half of all youth involved fires.

## Fire Incidents Involving Youth by Time of Day



|              | 12 AM | 1 AM | 2 AM | 4 AM | 5 AM | 8 AM | 9 AM | 10 AM | 11 AM | 12 PM | 1 PM  |
|--------------|-------|------|------|------|------|------|------|-------|-------|-------|-------|
| <b>Total</b> | 4     | 1    | 1    | 1    | 1    | 4    | 5    | 9     | 6     | 13    | 16    |
| <b>Pct.</b>  | 2.6%  | 0.6% | 0.6% | 0.6% | 0.6% | 2.6% | 3.2% | 5.8%  | 3.8%  | 8.3%  | 10.3% |

|              | 2 PM | 3 PM | 4 PM | 5 PM | 6 PM | 7 PM | 8 PM | 9 PM | 10 PM | 11 PM | Total |
|--------------|------|------|------|------|------|------|------|------|-------|-------|-------|
| <b>Total</b> | 11   | 14   | 12   | 11   | 14   | 14   | 12   | 2    | 4     | 1     | 156   |
| <b>Pct.</b>  | 7.1% | 9.0% | 7.7% | 7.1% | 9.0% | 9.0% | 7.7% | 1.3% | 2.6%  | 0.6%  | 100%  |

## Youth Involved With Fire - Incidents

The months of July, August, and September account for the largest percentage (41%) of fires involving youths.

### Fire Incidents Involving Youth by Month

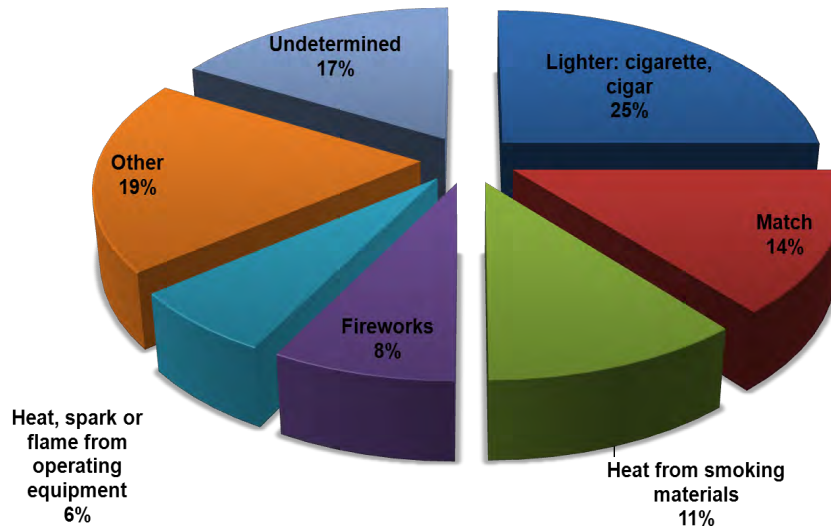


| Month        | Total      | Pct.  |
|--------------|------------|-------|
| Jan          | 9          | 5.7%  |
| Feb          | 8          | 5.1%  |
| Mar          | 9          | 5.7%  |
| Apr          | 12         | 7.6%  |
| May          | 14         | 8.9%  |
| Jun          | 17         | 10.9% |
| Jul          | 27         | 17.3% |
| Aug          | 19         | 12.1% |
| Sep          | 18         | 11.5% |
| Oct          | 10         | 6.4%  |
| Nov          | 4          | 2.5%  |
| Dec          | 9          | 5.7%  |
| <b>Total</b> | <b>156</b> |       |

# Youth Involved With Fire - Incidents

The following charts show the heat sources and top items first ignited by youths. The heat sources and items first ignited are determined by on-scene fire officers or investigators .

## Top Heat Sources of Youth Involved Fires



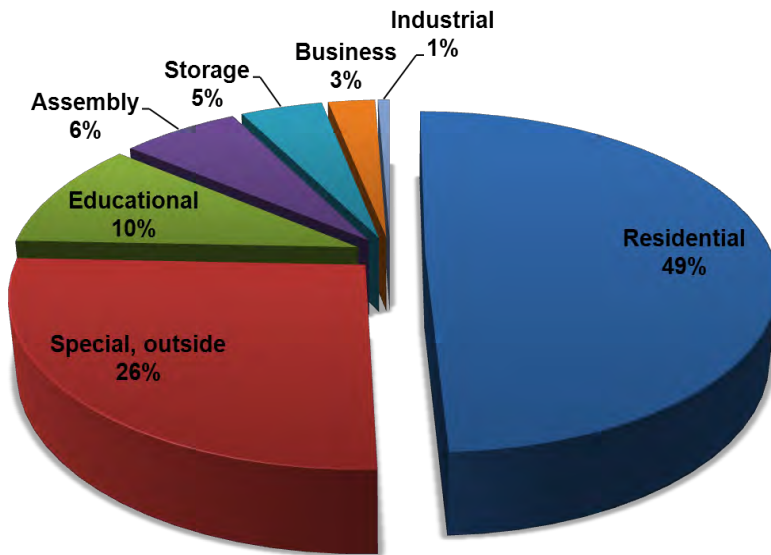
| Heat Source                                   | Total      | Pct.  |
|---|------------|-------|
| Lighter: cigarette, cigar                     | 39         | 25.0% |
| Match   | 22         | 14.1% |
| Heat from smoking materials                   | 17         | 10.9% |
| Fireworks                                     | 12         | 7.6%  |
| Heat, spark or flame from operating equipment | 10         | 6.4%  |
| Other   | 30         | 19.2% |
| Undetermined                                  | 26         | 16.6% |
| <b>Total</b>                                  | <b>156</b> |       |

| Top 10 Items First Ignited                    | Total | Pct.  |
|---|-------|-------|
| Light vegetation, including grass             | 35    | 22.4% |
| Rubbish, trash, waste                         | 20    | 12.8% |
| Magazine, newspaper, writing paper            | 13    | 8.3%  |
| Organic materials, other                      | 7     | 4.4%  |
| Heavy vegetation, including trees             | 5     | 3.2%  |
| Bedding; blanket, sheet, comforter            | 4     | 2.5%  |
| Chips, including wood chips                   | 4     | 2.5%  |
| Cooking materials, including edible materials | 4     | 2.5%  |
| Flammable liquid/gas - uncontained            | 4     | 2.5%  |
| Wearing apparel not on a person               | 4     | 2.5%  |

# Youth Involved With Fire - Incidents

The majority (49%) of all fires involving youths were on residential property. The following chart shows the property uses on which fires involving youths started. Special, outside properties are defined as open land or fields, dumps, tunnels, campsites, and outbuildings, such as weather shelters, mailboxes, privies, and telephone booths.

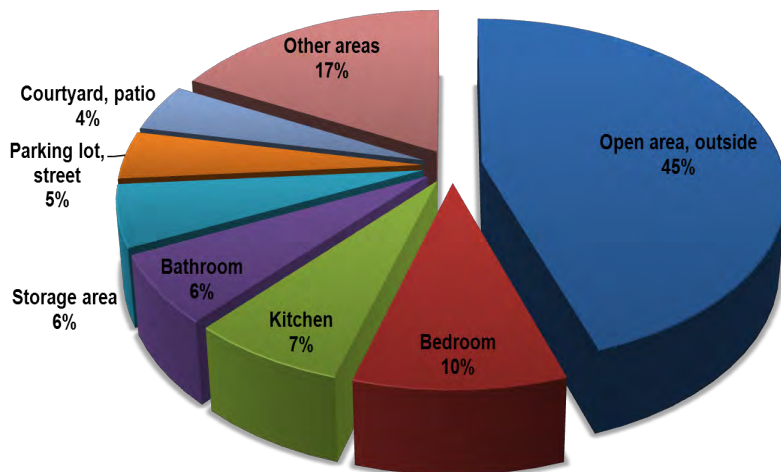
## Fires Involving Youth by Property Use



| Property Use     | Total      | Pct.  |
|------------------|------------|-------|
| Residential      | 77         | 49.3% |
| Special, outside | 41         | 26.2% |
| Educational      | 16         | 10.2% |
| Assembly         | 10         | 6.4%  |
| Storage          | 7          | 4.4%  |
| Business         | 4          | 2.5%  |
| Industrial       | 1          | 0.6%  |
| <b>Total</b>     | <b>156</b> |       |

Nearly two thirds (63%) of all fires involving youths start in outdoor areas, such as fields, forest areas, playgrounds, and courtyards. As indicated in the chart below, the highest percentage of indoor fires originate in bedroom areas.

## Fires Involving Youth by Area of Origin



| Fire Origin         | Total      | Pct.  |
|---------------------|------------|-------|
| Open area, outside  | 70         | 44.8% |
| Bedroom             | 15         | 9.6%  |
| Kitchen             | 11         | 7.0%  |
| Bathroom            | 10         | 6.4%  |
| Storage area        | 9          | 5.7%  |
| Parking lot, street | 7          | 4.4%  |
| Courtyard, patio    | 7          | 4.4%  |
| Other areas         | 27         | 17.3% |
| <b>Total</b>        | <b>156</b> |       |

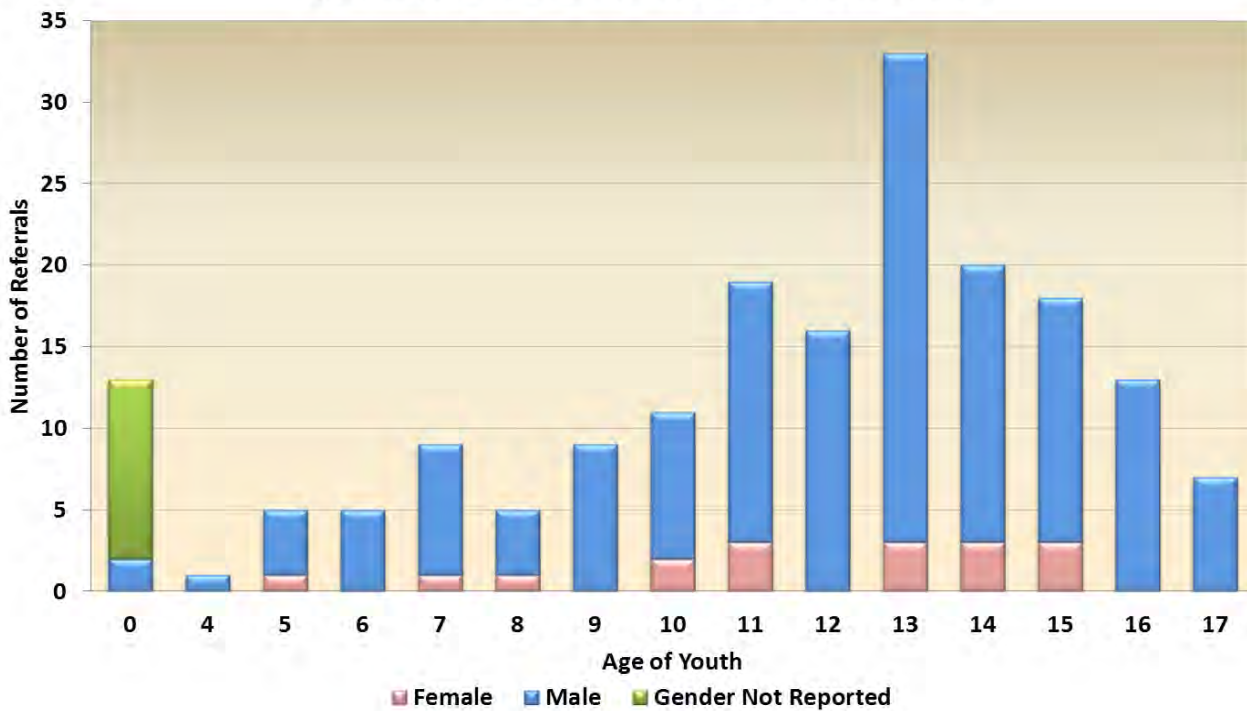
## Youth Involved With Fire - Interventions

In 2012, 184 interventions involving youth were reported to the OSFM. It is important to note that not every fire involving a youth necessarily results in an intervention. Conversely, interventions may occur without a response from a local fire agency.

OSFM's transition to a new online reporting system resulted in a decrease of fire agencies and other entities reporting youth misusing fire to the state office. Strategies to address this have been identified and are being implemented.

The following information includes data exclusively from the youth involved with fire module in the Oregon Fire Bridge™.

**Ages and Gender of Youth Involved with Fire**



|            | 0  | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | Total |
|------------|----|---|---|---|---|---|---|----|----|----|----|----|----|----|----|-------|
| Female     |    |   | 1 |   | 1 | 1 |   | 2  | 3  |    | 3  | 3  | 3  |    |    | 17    |
| Male       | 2  | 1 | 4 | 5 | 8 | 4 | 9 | 9  | 16 | 16 | 30 | 17 | 15 | 13 | 7  | 156   |
| Gender Not | 11 |   |   |   |   |   |   |    |    |    |    |    |    |    |    | 11    |
| Total      | 13 | 1 | 5 | 5 | 9 | 5 | 9 | 11 | 19 | 16 | 33 | 20 | 18 | 13 | 7  | 184   |

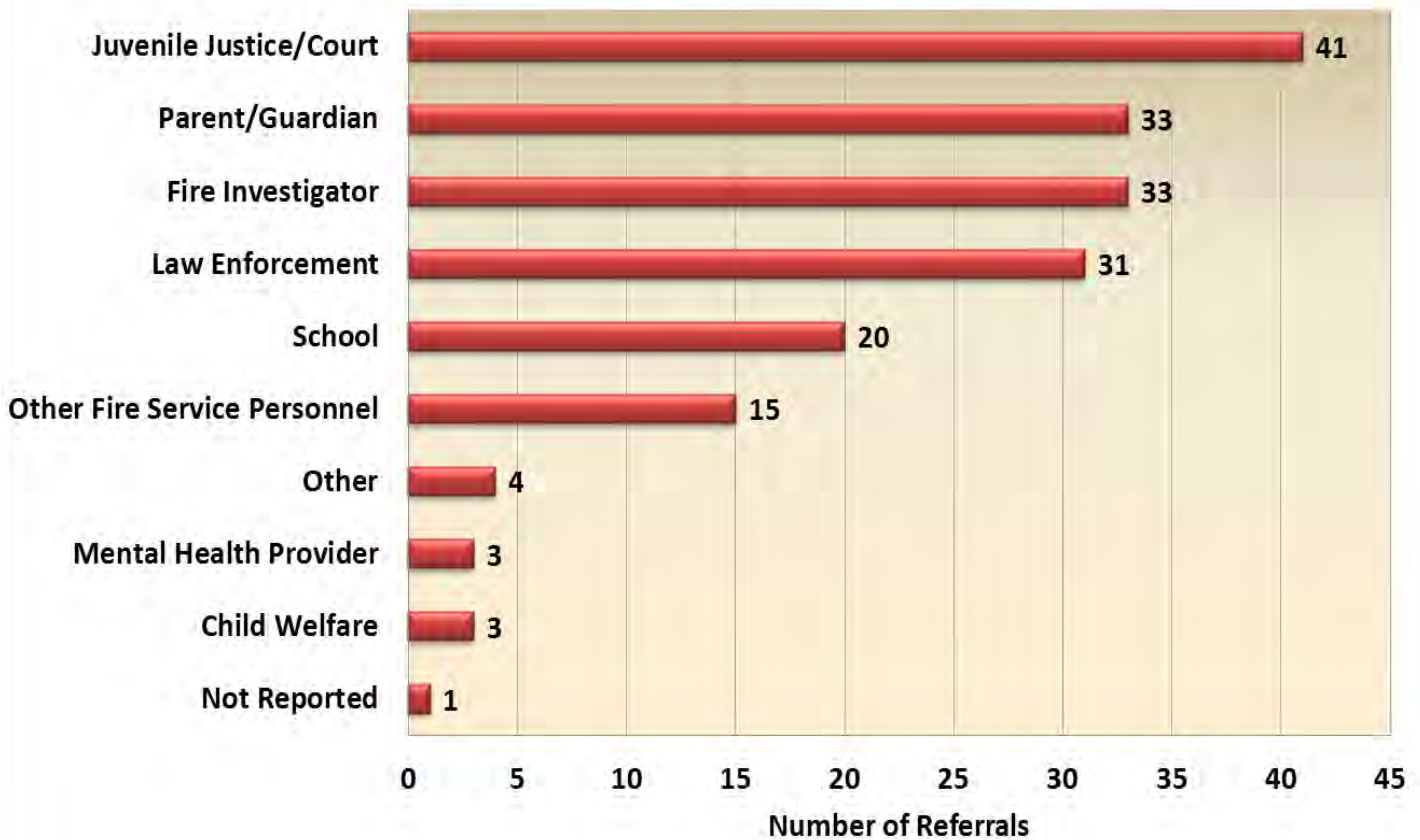
This graph indicates the majority of youths involved in misusing fire are ages 10-15. Determining their ages helps establish a target group for prevention and intervention programs.



# Youth Involved With Fire - Interventions

Youth misusing fire are referred through a number of community partners or their parents. This graph demonstrates the variety of disciplines involved in ensuring the continuum of care.

## Sources of Youth Referrals to the Fire Service

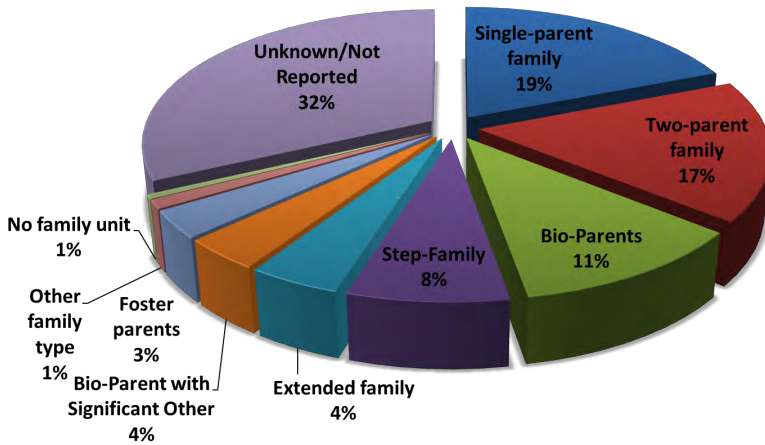


| Source of Referral           | Total      | Pct. |
|------------------------------|------------|------|
| Juvenile Justice/Court       | 41         | 22%  |
| Fire Investigator            | 33         | 18%  |
| Parent/Guardian              | 33         | 18%  |
| Law Enforcement              | 31         | 17%  |
| School                       | 20         | 11%  |
| Other Fire Service Personnel | 15         | 8%   |
| Other                        | 4          | 2%   |
| Child Welfare                | 3          | 2%   |
| Mental Health Provider       | 3          | 2%   |
| Not Reported                 | 1          | 1%   |
| <b>Grand Total</b>           | <b>184</b> |      |

# Youth Involved With Fire - Interventions

There are many combinations of family units in today's society. In 2012, of the 184 reported youth involved with fire, the majority (47%) of youths misusing fire lived in family combinations where two adults were in the home.

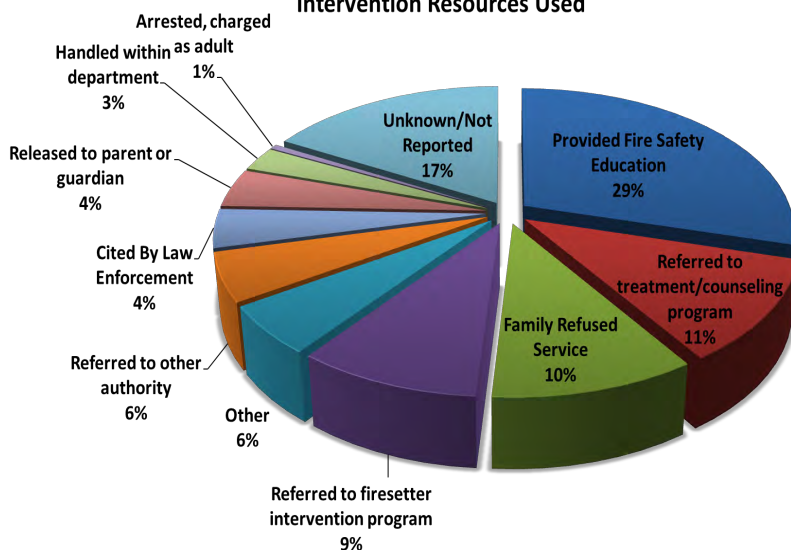
**Family Type of Youth Involved with Fire**



| Family Type                       | Total      |
|-----------------------------------|------------|
| Single-parent family              | 35         |
| Two-parent family                 | 31         |
| Bio-Parents                       | 21         |
| Step-Family                       | 14         |
| Extended family                   | 8          |
| Bio-Parent with Significant Other | 7          |
| Foster parents                    | 6          |
| Other family type                 | 2          |
| No family unit                    | 1          |
| Unknown/Not Reported              | 59         |
| <b>Total</b>                      | <b>184</b> |

A youth coming to the attention of a fire department often receives several different interventions. This chart details the number of youths involved with fire that were seen by fire departments and referred for further evaluation and community services.

**Intervention Resources Used**



| Resources Used                   | Total      |
|----------------------------------|------------|
| Provided Fire Safety Education   | 54         |
| Referred to counseling program   | 21         |
| Family Refused Service           | 19         |
| Referred to intervention program | 17         |
| Other                            | 10         |
| Referred to other authority      | 10         |
| Cited By Law Enforcement         | 8          |
| Released to parent or guardian   | 8          |
| Handled within department        | 5          |
| Arrested, charged as adult       | 1          |
| Unknown/Not Reported             | 31         |
| <b>Total</b>                     | <b>184</b> |

# Youth Involved With Fire - Interventions

By the time a youth is referred to the fire department for intervention, or a fire has gotten out of control, a history of misusing fire has already been established. Thirty five percent of youth interventions in 2012 indicated prior experiences with fire. These youths reported a total of 183 fire experiences.

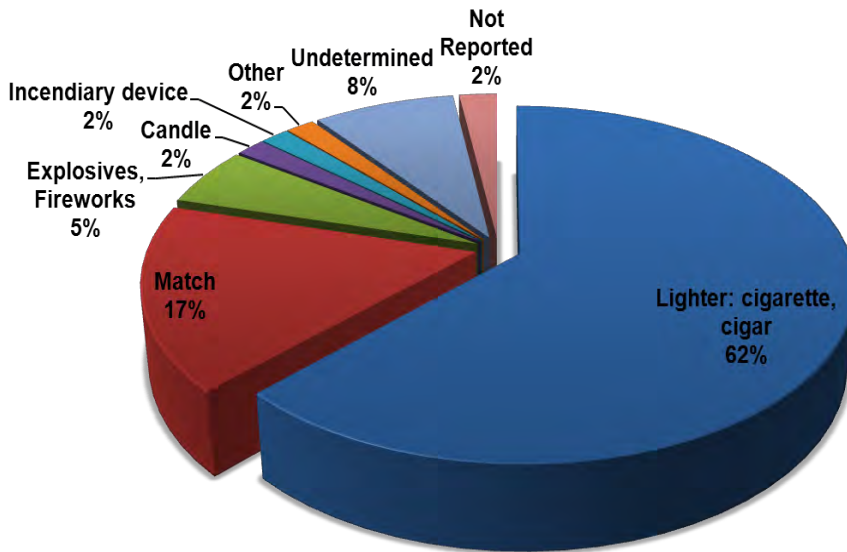
| Number of Previously Set Fires | # of Youth |
|--------------------------------|------------|
| None                           | 106        |
| 1                              | 23         |
| 2                              | 13         |
| 3                              | 10         |
| 4                              | 6          |
| 5                              | 8          |
| 6                              | 2          |
| 8                              | 1          |
| 10                             | 2          |

There were 23 reported instances in which a youth used an accelerant to start a fire. The following is a breakdown of those accelerants.

| Type of Accelerant Used | Total |
|-------------------------|-------|
| Hand sanitizer          | 4     |
| Paint thinner           | 3     |
| AXE body spray          | 2     |
| Lighter fluid           | 2     |
| Molotov cocktail        | 2     |
| Rubbing alcohol         | 2     |
| Carborator fluid        | 2     |
| Gasoline                | 1     |
| Hairspray               | 1     |
| Lysol                   | 1     |
| Off bug spray           | 1     |
| Perfume                 | 1     |
| Petroleum jelly         | 1     |

In 2012, data shows most youths continue to misuse matches and lighters as their primary sources of ignition.

## Ignition Source of Youth Involved with Fire

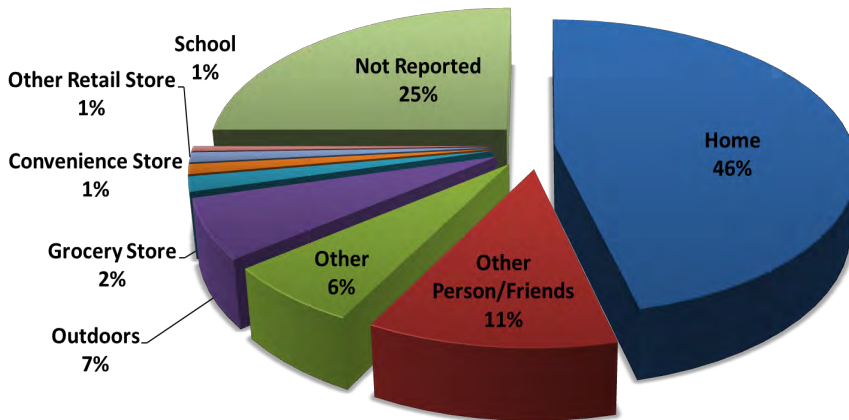


| Ignition Source           | Total      |
|---------------------------|------------|
| Lighter: cigarette, cigar | 115        |
| Match                     | 31         |
| Explosives, Fireworks     | 10         |
| Candle                    | 3          |
| Incendiary device         | 3          |
| Other                     | 3          |
| Undetermined              | 15         |
| Not Reported              | 4          |
| <b>Total</b>              | <b>184</b> |

# Youth Involved With Fire - Interventions

Forty-six percent of the youths reported obtaining the ignition source at home. This has consistently been the leading place where youth have obtained ignition sources in previous years.

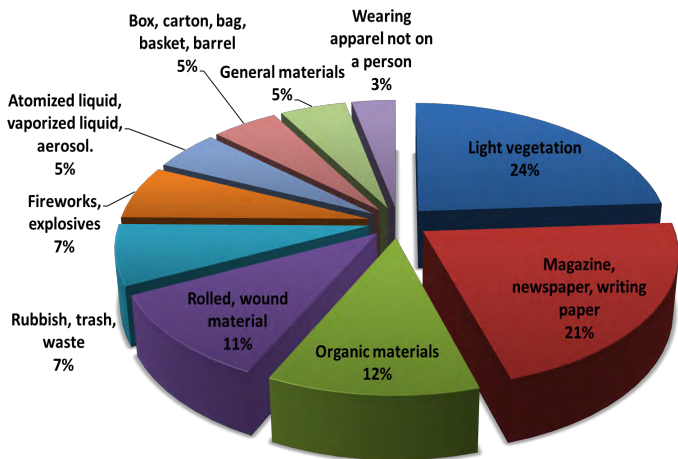
**Where Ignition Source was Obtained**



| Source Obtained      | Total      |
|----------------------|------------|
| Home                 | 85         |
| Other Person/Friends | 21         |
| Other                | 12         |
| Outdoors             | 12         |
| Grocery Store        | 3          |
| Convenience Store    | 2          |
| Other Retail Store   | 2          |
| School               | 1          |
| Not Reported         | 46         |
| <b>Grand Total</b>   | <b>184</b> |

The first material ignited tends to be a functional opportunity. Children use readily available materials as shown in the accompanying chart. These items do not represent a large fire loss,

**Top 10 Items Ignited by Youth Involved with Fire**



| First Item Ignited                         | Total |
|--|-------|
| Light vegetation                           | 29    |
| Magazine, newspaper, writing paper         | 26    |
| Organic materials                          | 14    |
| Rolled, wound material                     | 13    |
| Rubbish, trash, waste                      | 9     |
| Fireworks, explosives                      | 8     |
| Atomized liquid, vaporized liquid, aerosol | 6     |
| Box, carton, bag, basket, barrel           | 6     |
| General materials                          | 6     |
| Wearing apparel not on a person            | 4     |

## Youth Involved With Fire - Interventions

---

Youth involved with fire data is based on information provided by 16 of Oregon's 316 fire agencies:

ALBANY FIRE DEPARTMENT  
BEND FIRE DEPARTMENT  
CLACKAMAS COUNTY FIRE DISTRICT #1  
FOREST GROVE FIRE & RESCUE  
GRANTS PASS DEPARTMENT OF PUBLIC SAFETY  
HILLSBORO FIRE DEPARTMENT  
JEFFERSON COUNTY RFPD #1  
KLAMATH COUNTY FIRE DISTRICT #1  
MEDFORD FIRE & RESCUE  
PORTLAND BUREAU OF FIRE, RESCUE & EMS  
REDMOND FIRE & RESCUE  
SALEM FIRE DEPARTMENT  
SPRINGFIELD FIRE & LIFE SAFETY  
SUBLIMITY FIRE DISTRICT  
TUALATIN VALLEY FIRE & RESCUE  
WOODBURN FIRE DISTRICT