# Fire in Alaska

Department of Public Safety
Division of Fire and Life Safety



### Alaska State Fire Marshal Fire In Alaska - 2014



### Lloyd Nakano Acting State Fire Marshal

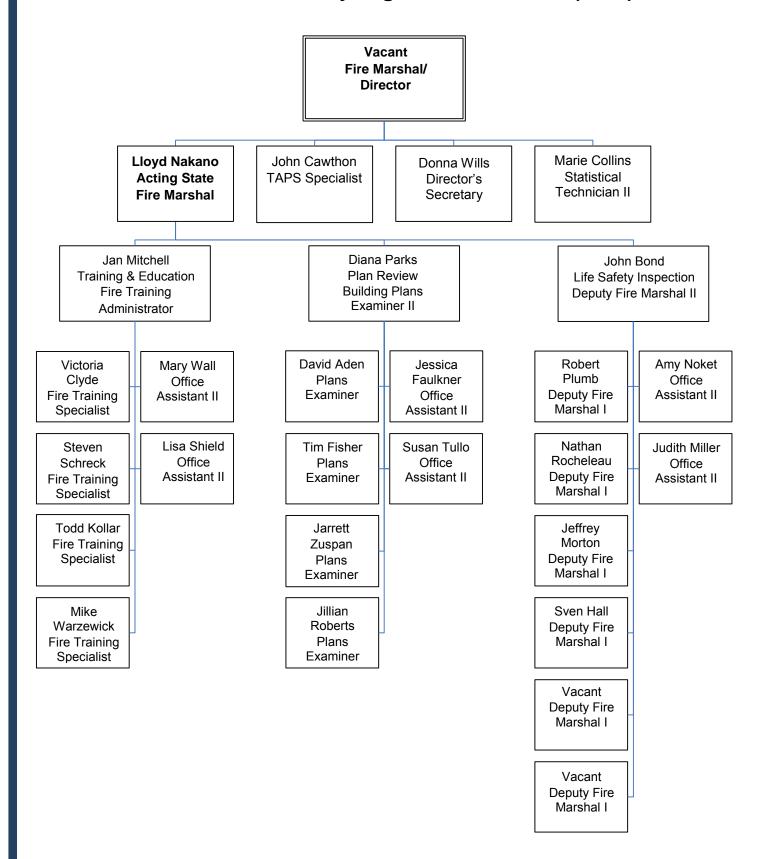
Department of Public Safety Division of Fire and Life Safety

5700 East Tudor Road Anchorage, Alaska 99507-1225 Phone: 907-269-5491 Web site: www.burny.alaska.gov

### **Table of Contents**

Division of Fire and Life Safety Organizational Chart	3
Letter of Introduction from Acting State Fire Marshal, Lloyd Nakano	4
Division of Fire and Life Safety Office	5 - 6
Fire Department Registration	7
Alaska National Fire Incident Reporting System (ANFIRS)	8
Fire Picture at a Glance	9 - 10
Non-Fire Incidents	11
Alaska's 2014 Fires	12
Statewide Fire Dollar Loss	13
Mobile Property Fires	14
Structure Fires	15
Residential Structure Fires	16
Occupancy and Leading Causes	16
Heat Source and Area of Origin	17
Smoke Alarm Presence and Performance	18
When Residential Structure Fires Occur	19
Intentionally Set Fires	20
Juveniles Involved with Fire	21
Fire Injuries and Fatalities	22
Firefighter Injuries	22
Civilian Fire Injuries	23 – 25
Alcohol and Drug Related Fire Fatalities	26
Burn Injuries	27 - 29
ANFIRS Participants	30
List of Fire Department Participation	31 – 44
Per Capita, Rates and Comparisons	45

### Division of Fire and Life Safety Organizational Chart (2015)



#### Letter from Acting Alaska State Fire Marshal, Lloyd Nakano



Dear Fire Service Partners and Advocates:

The "2014 Fire in Alaska" annual report captures the emergency response experience of the Alaska State Fire Service for the year of 2014. This report was generated by the Alaska State Fire Marshal's Office from the data reported by fire departments to the Alaska National Fire Incident Reporting System (ANFIRS).

Alaska National Fire Incident Reporting System enables fire agencies to collect and share information in a standardized format across jurisdiction lines. Decision makers at the local, state, and national levels are able to access the information to help support fire service initiatives designed at increasing public safety.

The dedication that our state's fire service organizations and associations are demonstrating toward the ANFIRS program is admirable. Be assured that your contributions are creating a safer Alaska.

This report is a representative, but by no means complete, look at the myriad of services provided to Alaska citizens by the dedicated personnel of the Alaska State Fire Marshal's Office.

Since 1955, the State Fire Marshal's Office has consistently increased its level of public service to the State of Alaska through code enforcement, plan reviews, public fire education, fire investigations and many other duties.

This report is in part also a reflection of the efforts of Alaska's fire departments and the fire service organizations that represent full-time, volunteer and part-paid departments. It should not be forgotten that on a daily basis, these brave men and women are ready to give their lives protecting their communities from fire and other emergency incidents.

As the Acting State Fire Marshal, I am honored to be part of this agency and to witness your incredible service and commitment to you fellow Alaskans. Thank you for everything that you do.

Sincerely, Lloyd Nakano

Acting State Fire Marshal

#### **Division of Fire and Life Safety Office**

The Division of Fire and Life Safety office is composed of the Director's Office and three Bureau's. Fire safety is improved through these means and our office is formed on that basis.

#### Director's Office -

The staff of the Director's Office is comprised of Alaska's State Fire Marshal, Assistant State Fire Marshal, Statistical Technician, and Executive Secretary. These individuals are responsible for establishing the vision, direction, operations and policies to accomplish the Division of Fire and Life Safety's mission, "To prevent the loss of life and property from fire and explosion". They work to achieve this mission by providing funding mechanisms, budgetary priorities and bureau work production. They advise, educate and collaborate with legislative and executive contacts on fire and life safety issues, public policy and safety throughout Alaska.

Working directly for the Director is the Trans-Alaska Pipeline System (TAPS) Fire Safety Specialist. This position provides fire protection education, engineering, inspection and investigative oversight of the Trans-Alaska oil pipeline facilities, regulated and unregulated oil, as well as gas pipeline facilities and refineries.

#### Life Safety Inspection Bureau -

Life Safety Inspection Bureau (LSIB) has three offices. The Fairbanks Office (aka Northern Region) is located at 1879 Peger Road in Fairbanks. The Anchorage Office (aka Southcentral Region) is located at 5700 E. Tudor in Anchorage and the Juneau Office (aka Southeast Region) is located at 2760 Sherwood Lane in Juneau. The Bureau currently has six Deputy Fire Marshals. Deputy Fire Marshals conduct fire inspections, fire investigations, plan reviews and assist with training throughout the state. LSIB has two support staff and a one supervisor.

Building inspections are a customer-oriented, multi-faceted unit with statutory authority to conduct fire safety inspections in commercial properties and applicable regulated industries throughout the state. These occupancies include, but are not limited to; restaurants, bars, churches, schools, daycare facilities, prisons, jails, hospitals, nursing homes, assisted living homes, apartments and hotels with more than 15 rooms and high impact facilities which include major fish processing plants.

Prioritizing of building inspections continues to be based upon those occupancies that are at greatest risk of firerelated injuries, fatalities, property loss and high community impact. The Division strives to increase owner/occupancy awareness of hazards so a greater number of buildings will be found in compliance with legal standards at time of inspection. Each deficiency needing correction is issued on an Order to Correct. Deficiencies must be followed up to completion.

Fires normally investigated by the Division of Fire and Life Safety are; fires that result in a fatality or serious injuries, that involve a substantial loss of property (\$500,000 or more), appear to be intentionally caused as part of an insurance fraud or other criminal activity, have a significant public impact, indicate trends or a serious consumer safety problem and any fire that involves Department of Public Safety facilities or equipment.

#### Plan Review Bureau -

The objective of the Plan Review Bureau (PRB) is to ensure the public's safety by identifying building and fire code violations during the design phase of construction. This process increases public safety and reduces overall construction cost and field inspection time.

#### **Division of Fire and Life Safety Office**

To best serve the needs of the State, the Bureau has offices in Anchorage, Fairbanks and Juneau. Each office has at least one Plans Examiner or Deputy Fire Marshal and an Office Assistant. The Anchorage headquarters consists of three Plans Examiner's, an Office Assistant and the Bureau Supervisor.

PRB ensures the public's safety by identifying building and fire code violations during the building construction design phase, which decreases deficiencies, eases construction costs and reduces field inspection time. To ensure current building and fire code requirements are being met, the Bureau is responsible for examining building plans for new construction, renovations, additions, occupancy changes, fuel systems and fire suppression, alarm and detection systems. During the early stages of the design process, the Bureau assists design professionals to meet the minimum code requirements, which also saves the customer time and money by eliminating significant reengineering later on. Each year, PRB receives over 1,200 applications ranging from small home daycares to large oil and gas projects.

The Bureau performs construction inspections at 60% (framing) and 90% (before enclosure) of project completion. Inspections are limited to special interest facilities and buildings with a valuation that exceeds \$5,000,000. Construction inspections are a recurring part of PRB's objective to ensure public safety by determining if buildings are built properly and according to their approved plans.

#### **Training and Education Bureau -**

The Training and Education Bureau (TEB) provides training for the fire service and also provides education for the public. TEB has four offices. They are located in Anchorage, Palmer, Fairbanks and Juneau. The Bureau currently has four Fire Service Training Specialists, two Office Assistants and the TEB Supervisor.

TEB offers training for the fire services that face the challenge of keeping their communities safe from the devastation of fire. The public education section provides a variety of opportunities in community outreach to reduce the loss of life and property to fire.

The Office of Rural Fire Protection (ORFP) is co-housed with Public Education in Palmer. ORFP and Public Education are provided administrative support through an Office Assistant I, located in Palmer, and the Office Assistant II located in Anchorage. ORFP provides training, equipment and education for the rural fire departments. Working closely with the Alaska State Trooper Village Public Safety Officer (VPSO) program, ORFP teaches a segment on fire safety at the State Trooper Academy located in Sitka. VPSO's complete the program with knowledge of fire behavior, hazardous materials, front line firefighting skills and the ability to present public education programs when they return to their community.

#### **Division Programs**

#### FIRE DEPARTMENT REGISTRATION

The Division of Fire and Life Safety, Director's Office, manages the registration of local fire and emergency response agencies in Alaska. Alaska state regulations require that every local organization that is performing duties as a fire department to be registered with the Division of Fire and Life Safety.

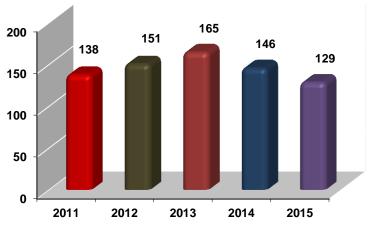
In order to become a newly registered fire department a fire department must submit the following:

- 1. Enabling Authority A copy of their enabling authority document and
- 2. Response Areas/Boundaries A description of the boundaries or response areas of the department. This can include either a map or a general description of the limits of the response. Also a description under what circumstances and under whose authority the department will respond outside those boundaries. If the response area is within or overlaps another agencies response area a Mutual Aid or Memorandum of Agreement between those two agencies is required and
- 3. Annual Summary Report A summary report must be completed annually by using information from the previous calendar year and
- 4. Membership Roster Fire Departments are required under the registration process to forward a current list of all members. Any changes in membership must be sent within 10 days of these changes taking place and
- 5. Public Education The number of public fire safety and burn prevention education programs conducted in the community and
- 6. Personnel Within 30 days of change, submit every addition or deletion from the membership list. This must be forwarded to the State Fire Marshal and
- 7. ANFIRS In order for a fire department to continue their registration status, they must report every fire and fire related incident Division of Fire and Life Safety monthly per 13 AAC 52.020. The fire department may lose their registered status if they fail report.

\*Note\* To continue fire department registration, departments must submit the Annual Summary Report, Membership Roster, annual fire prevention/burn injury prevention education programs, membership changes and ANFIRS, authority per 13 AAC 52.030.

2015 totals are inclusive of all fire departments registration received by March 31, 2015.

#### **Total Registered Fire Departments 2011 - 2015**

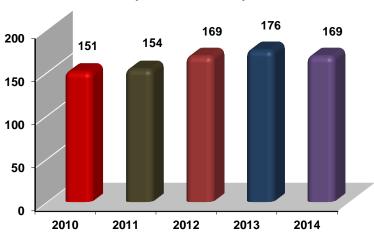


Page 7

#### **Division Programs**

#### ALASKA NATIONAL FIRE INFORMATION REPORTING SYSTEM (ANFIRS)

Alaska has seen an increase in fire department participation in the ANFIRS program. The number of fire departments reporting should be considered when reviewing data comparisons between years.



**ANFIRS Fire Department Participation 2010 - 2014** 

Fire departments use this reporting system to uniformly code incident information. Accurate and complete information about fires and other incidents can provide a fire department with a valuable reference to:

- · help allocate limited resources
- · justify budget needs
- · review the need for personnel training
- · focus the direction of fire education/prevention programs

State lawmakers, the press, the general public, insurance companies, and fire service administrators and leaders request ANFIRS summary reports to help address fire safety concerns and new legislation issues.

ANFIRS data is forwarded to the National Fire Data Center (NFDC) at the U.S. Fire Administration (USFA) each year. The NFDC can then compare and contrast statistics from states and large metropolitan departments to:

- · develop national fire and life safety education campaigns
- · make recommendations for national codes and standards
- · guide allocation of federal grants
- · ascertain consumer product failures
- · identify the focus for research efforts
- · support federal legislation

National Fire Information Reporting System (NFIRS) data is used as the basis for the USFA's publication *Fire in the United States*, which is the single most comprehensive reference on the nature and scope of the fire problem in the United States.

#### Alaska 2014 Fire Picture at a Glance

Fire departments reporting to Alaska National Fire Incident Reporting System (ANFIRS) had 60,452 responses in 2014, with 1,454 of these responses reporting mutual aid assistance and 109 being exposures.

2014 State Incident Summary

Total Responses	60,452
Less Mutual Aid Responses & Exposures	-1,563
Total Fires Incidents	58,998



Structure Fires	708
Confined and/or Contained Inside Structure Fires	468
Motor Vehicle Fires	436
Tree, Brush, or Grass Fires	341
Outside Rubbish or Trash Fires	425
Other Outside Fires	56
Other Fires	0
Exposure Fires	109
Total Fires	2,543

#### 2014 State Non-Fire Incident Breakdown:

Rescue/EMS	39,237
Explosion – No After Fire	41
Hazardous Conditions	1,289
Service Calls	3,570
Good Intent Calls	7,828
Other Calls	94
False Alarms	4,396
Total Non-Fires	56,455

### Alaska's 2014 Time Clock. Every...

- 1 minute a fire caused \$125.71 damage
- 9 minutes a fire department responded to a call
- 13 minutes a fire department responded to a rescue call
- 1 hour a fire department responded to a good intent call
- 2 hours a fire department responded to a false call
- 4 hours a fire department responded to a fire call
- 2 hours a fire department responded to a service call
- 7 hours a fire department responded to a hazardous call
- 12 hours a fire department responded to a structure fire
- 20 hours a fire department responded to a vehicle fire
- 10 hours a fire department responded to a residential fire



#### Alaska 2014 Fire Picture at a Glance

The following information has been submitted by fire departments to the Division of Fire and Life Safety. The primary source of data used is the Alaska National Fire Incident Reporting System (ANFIRS).

Important: The data presented in this profile does not represent 100% of the fires that occurred in the state. Rather, it is a sum of the fires reported to the Division of Fire and Life Safety from the fire departments participating in ANFIRS.

This information may be used to give a general picture of the fire incidents in the State of Alaska. Without everyone's cooperation the information does not show a complete picture of the fire problem in Alaska.

#### **Fires**

- Fires attended by Alaska Fire Departments decreased from the year of 2013 by 11% to 2543.
- Fires in structures decreased from the year of 2013 by 4% to 1228.
- Grass/Brush/Wildland fires decreased from the year of 2013 by 36% to 346.
- Residential properties accounted for 69% or 845 of all structure fires.

#### **Fire Deaths**

- Civilian fire deaths decreased from the year of 2013 by 25% to 12. All twelve fatalities occurred in residential structures.
- In 58% of all civilian fatalities, alcohol and/or drugs was a contributing factor to the fire and/or victim.

#### Fire Injuries

- Civilian fire injuries increased from the year 2013 by 21% to 80.
- Firefighter fire injuries increased from the year 2013 by 200% to 66.

#### **Property Damage**

- Property loss increased from the year 2013 by 40% to \$66,184,492.
- Structure fires caused \$60,626,394 or 92% of all property damage.
- Residential property losses were \$25,618,602 or 42% of all structure property loss.

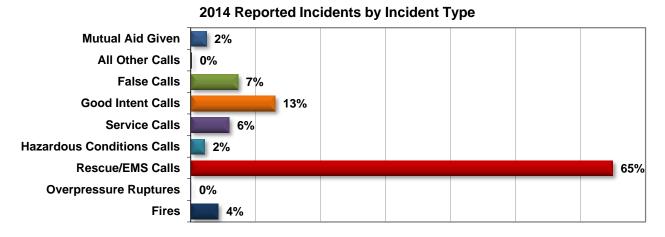
#### **Intentional Fires**

- Structure fires that were reported as intentional were down from the year of 2013 which is 62.
- Intentional structure fires accounted for 5% of all reported 2014 structure fires.
- Intentional structure fires accounted for 7% or \$4,373,757 of all structure property dollar loss.
- In all 2,543 reported fires, 7% or 176 were reported as intentional.
- Intentional fires resulted in 5 civilian fire injuries.
- Intentional fires resulted in 1 civilian fire deaths.
- Juvenile firesetters resulted in 11 or 6% of all intentionally set fires.

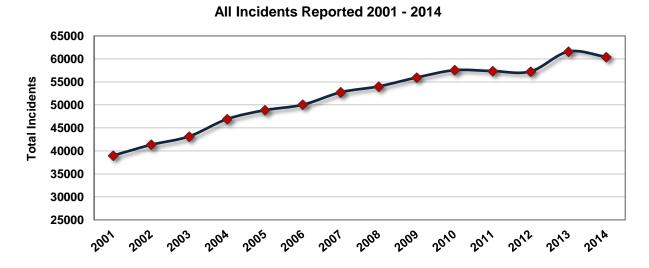
#### **Non-Fire Incidents**

Alaska fire departments do much more than fight fires. Over the past several decades they have branched out and taken on the added responsibilities for EMS response, many types of specialized rescue, hazardous materials incidents, responding during and after natural disasters, as well as the typical service calls, good intent calls, false alarms and the special types of incidents that do not fit neatly into any of the other categories. We expect these numbers to rise as more fire departments automate their reporting and begin reporting all of their incidents to Alaska National Fire Information Reporting System (ANFIRS). Only then will we have a more complete understanding of the amount of work the Alaska fire service does on a day-to-day basis.

In 2014, 173 fire departments/agencies and/or communities in Alaska reported 60,452 responses to ANFIRS. Of these 60,452 responses, 57,909 non-fire calls and/or mutual or automatic aid given were voluntarily reported.



Alaska fire departments began using the National Fire Information Reporting System (NFIRS) in January 2000. NFIRS 5.0 captures information on all incidents, not just fires, to which a fire department responds. As a result of changes in the reporting system and an increase in reporting departments, Alaska fire departments reported 284% more incidents in 2014 from 2001.



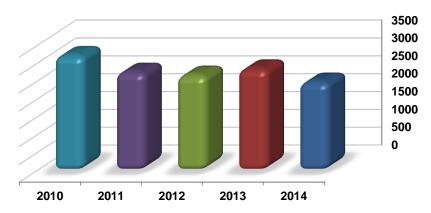
#### Alaska's 2014 Fires

Alaskan departments reported 2,543 fire incidents to the Alaska Fire Incident Reporting System (ANFIRS) in 2014. The total number of fire incidents decreased 12% from the 2,823 incidents reported in 2013.

The following table indicates a breakdown of fire types into structure fires, motor vehicle fires and other fires for the years 2010 through 2014.

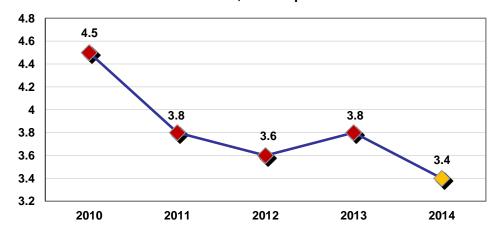
Year	Total Fires	Structure Fires	Vehicle Fires	Other Fires
2014	2,453	1,228	486	739
2013	2,823	1,236	487	1,100
2012	2,644	1,237	455	952
2011	2,731	1,238	515	978
2010	3,195	1,189	428	1,578

Alaska's Reported Fires 2010 - 2014



In 2014 Alaskan fire departments responded to 3.4 fires per 1,000 people. According to the U.S. Census Bureau, Alaska's estimated population in 2014 was 736,732.

Alaska Fires Per 1,000 People 2010 - 2014



#### Statewide Fire Dollar Loss

Estimated dollar losses are an indicator of the magnitude of the fire problem and can be used to evaluate progress in fire prevention. This information helps local communities; states and the nation determine the amount that should be spent on fire prevention. Fire loss estimates take into consideration material damaged during extinguishment, as well as material actually damaged by the fire. Estimates are calculated in the total estimated loss.

Fire Dollar Loss by Year									
Type of Fire 2011 2012 2013 2014									
Structure Fire	\$41,187,568	\$49,651,005	\$42,219,474	\$60,626,394					
Motor Vehicle Fire	\$3,532,965	\$4,993,171	\$4,539,986	5,209,405					
Trees, Brush, or Grass Fire	\$63,515	\$278,525	\$311,650	\$8,732					
Outside Rubbish or Trash Fire	\$17,665	\$19,923	\$17,825	\$18,613					
Other Fires	\$403,805	\$214,739	\$96,855	\$321,348					
Total Fire Dollar Loss	\$45,205,518	\$55,157,363	\$47,185,790	\$66,184,492					

The reported value of structural property lost due to fire during 2014 was \$60,626,394. The reported structural total dollar losses \$1,000,000 or more were in:

Bethel – Alcohol or Substance Abuse Recovery Center - \$12,500,000

Petersburg – Fish Hatchery- \$4,500,000

Unalaska - Warehouse - \$4,000,000

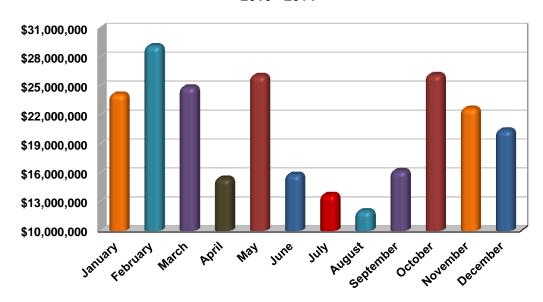
Seldovia - Educational - \$3,500,000

Fairbanks - Residential/Warehouse - \$1,699,622

Delta Junction – Restaurant/Bar - \$1,050,000

Nikiski – Energy Production Plant - \$1,000,000

### Five Year Trend Total Dollar Loss by Month 2010 - 2014

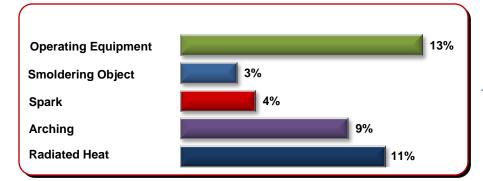


#### **Mobile Property Fires**

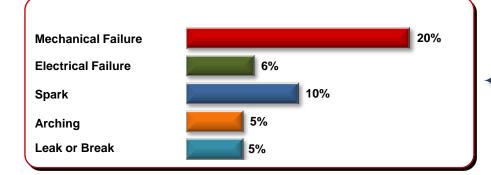
486 motor vehicle fires were reported in 2014. This accounted for 19% of all reported fires, 5 or 6% civilian injuries, 4 or 6% firefighter injuries, and an estimated property damage of \$5.2 million. The 486 mobile property fires in 2014 is less than 1% increase from the 487 motor vehicle fires in 2013.

The majority of these fires involved passenger vehicles. There were 317 fires involving cars, small trucks and vans. Passenger vehicle fires accounted for \$1,653,414 or 32% of property damage for all reported motor vehicle fires. The engine area, running gear or wheel area was reported as the fire area or origin in 56% of all reported vehicle fires.

According to NFIRS, a motor vehicle fire is defined as any fire involving a car, truck, boat, airplane, snow machine, four wheeler, construction equipment or other mobile property (not being used as a permanent structure) that occurs outside of a structure.



This bar chart indicates the most frequently reported heat source in vehicles excluding undetermined.

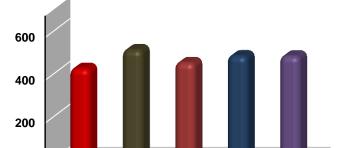


0

2010

2011

This bar chart gives an overview of the ignition factors of mobile property fires excluding undetermined.



2012

Total Vehicle Fires 2010 - 2014

2013

2014

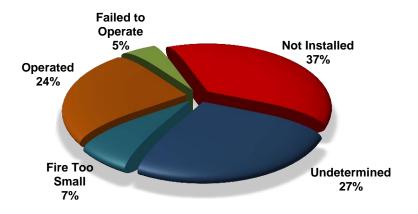
#### **Structure Fires**

The 1,228 reported structure fires in 2014 caused 12 civilian deaths, 71 civilian injuries, 62 fire service injuries, and an estimated dollar loss of \$60 million. Structure fires accounted for 48% of reported fires and 100% of the civilian fire deaths in 2014.

The number of structure fires decreased by 4% from the 1,276 reported in 2013.

2014 Structure Fires by Property Use	Count	%	Civ. Deaths	Civ. Injuries	FF Injuries	Total Dollar Loss
Educational	5	0%	0	0	0	\$2,008,000
Health Care	21	2%	0	3	0	\$12,630,505
Industrial	9	1%	0	1	0	\$1,043,700
Manufacturing, Processing	4	1%	0	0	0	\$150,000
Mercantile	52	4%	0	5	5	\$5,544,672
Other or Special	141	11%	0	7	2	\$380,958
Public Assembly	47	4%	0	1	0	\$1,885,600
Residential	845	69%	12	55	52	\$25,618,602
Storage	104	8%	0	0	2	\$11,364,357
Total	1,228	100%	12	71	61	\$60,626,394

#### **ALARM PERFOMANCE**



This pie graph gives
an overview of the
alarm
performance/presence
for all non-confined
structure fires.

Property Use Type	Alarm Operated	Did Not Operate	Fire Too Small	None Present	Unknown	Total
Educational	2	0	0	0	2	4
Health Care	6	0	5	2	1	14
Industrial	1	0	1	5	1	8
Manufacturing, Proc.	0	0	1	2	0	3
Mercantile	7	1	1	19	8	36
Other or Special	1	0	0	38	6	45
Public Assembly	3	1	2	5	6	17
Residential	156	32	40	114	168	510
Storage	3	0	3	87	10	103
Total	179	34	53	272	202	740

The majority of structure fires in Alaska occur in the home. In 2014, there were 845 **reported residential structure fires (included structures confined and/or contained inside the structure)**. These fires caused an estimated direct loss of **\$26 million**. There were 55 **civilian injuries**, **12 civilian deaths and 52 firefighter injuries** caused by these fires. The total number of reported residential structure fires decreased by 9% from the 931 reported in 2013.

Occupancy	Count	%	Civ. Deaths	Civ. Injuries	FF Injuries	Total Dollar Loss
Multifamily	180	22%	1	17	23	\$4,906,237
Board and Care	11	1%	0	0	1	\$478,511
Hotels & Motels	9	1%	0	0	0	\$26,400
1 & 2 Family Homes	621	73%	11	38	28	\$20,029,434
Dormitories	8	1%	0	0	0	\$26,505
Unclassified	16	2%	0	0	0	\$151,515
Total	845	100%	12	55	52	\$25,618,602

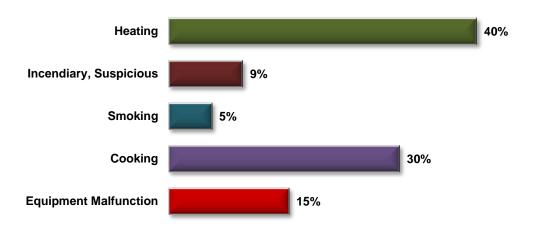
#### Residential Occupancy Sub-Group

- Multi-family dwellings: This category includes apartments, condominiums, townhouses, row houses and tenements.
- Board Care: This category includes long-term care facilities, halfway houses and assisted care housing facilities.
- Hotels & Motels: This occupancy group includes commercial hotels, motels or inns.
- 1 & 2 Family Homes: This category includes one or two family homes, manufactured homes, cabins and mobile homes.
- Dormitories: This category includes dormitory type residences and sorority or fraternity houses. It also includes barracks; nurses' quarters, military barracks, monastery/convent, dormitories, bunk houses and workers' barracks.
- Unclassified: Any type of residential occupancy that is not defined above.

#### **LEADING CAUSES (Top Five)**

The top three leading causes of residential structures (excluding unknown which was a reported 21% of all residential structure fires) in 2014 were heating, cooking and equipment malfunction.

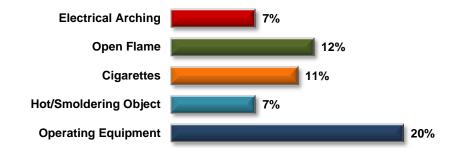
#### **2014 Residential Structure Fire Causes**



#### **HEAT SOURCE**

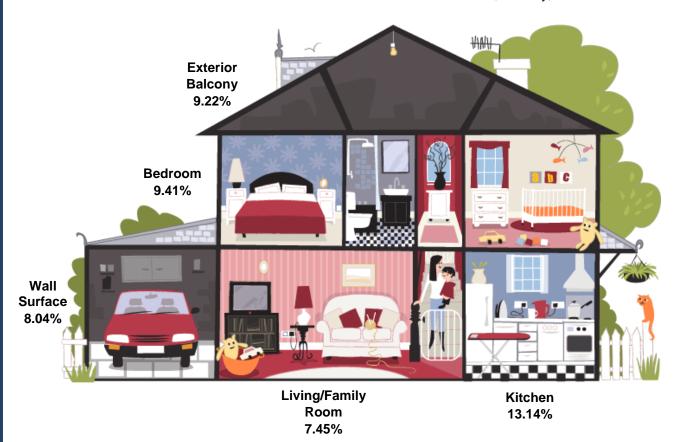
The two most common heat sources in residential structure fires resulted from human acts of intention, error or carelessness. Operating equipment was the number one heat source with open flame being the second (this excludes undetermined which accounted for 27% reported heat sources).





#### **AREA OF FIRE ORIGIN**

The "area of fire origin" element describes the room or area where the fire originated in the structure. The three most common areas of fires in residential structures for 2014 were in the kitchen, balcony, and bedroom areas.

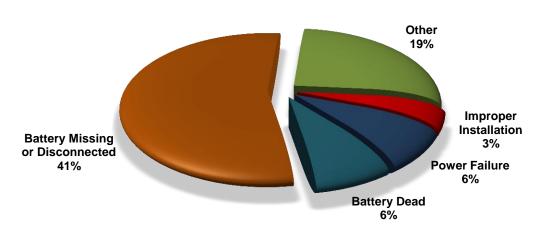


#### SMOKE ALARM PRESENCE AND PERFORMANCE

Smoke alarm performance shows the existence and location of smoke detection equipment relative to the area of fire origin and whether the detection equipment worked. The purpose is to provide information on the usage, reliability and effectiveness of automatic detection equipment. Even though modern codes require all new dwellings to have smoke alarms, the performance relies on proper maintenance by the occupant/owner.

In 2014, 31% of all reported residential structure (non-confined) fires the alarm operated, 22% there was no alarm present, 6% the alarm failed, 8% the fire was too small to activate the alarm, and 33% was reported as undetermined.

#### **Alarm Falure Reasons**



#### SMOKE ALARM PERFORMANCE IN RESIDENTIAL NON-CONFINED FIRES

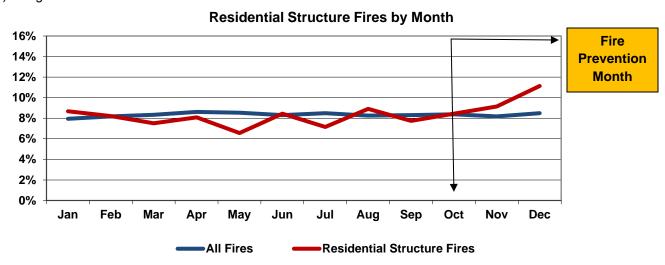
Smoke Alarm Operation	Count	%	Civ. Deaths	Civ. Injuries	FS Injuries
Failed to Operate	32	8%	2	5	15
Operated	156	39%	4	19	12
Fire too Small to Operate	40	10%	0	2	0
Undetermined	168	43%	5	11	22
Total	396	100%	11	52	52

Smoke Alarm Failure Reason	Count	%	Civ. Deaths	Civ. Injuries	FS Injuries
Battery Discharged/Dead	2	6%	0	0	0
Battery Missing/Disconnected	13	41%	1	1	0
Other/Defective	6	19%	0	1	0
Improper Installation	1	3%	0	0	0
Power Failure	2	6%	0	1	1
Undetermined	8	25%	1	3	14
Total	32	100%	2	5	15

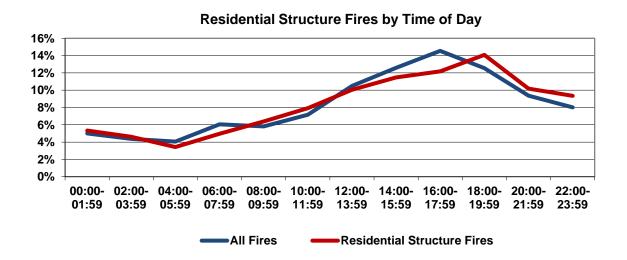
#### WHEN RESIDENTIAL FIRES OCCUR

Fires in residential structures were more common in the winter than in the summer in 2014. This trend is related to the leading cause of all residential structure fires, heating. Clearly there are other seasonal factors in addition to winter residential fires – perhaps a greater propensity to stay at home.

For 2013, there were more residential structure fires in the month of December (11%) with the month of May (7%) being the least amount of fires.



When analyzed by time of day, as illustrated below, the highest number of residential structure fires occurred in the evening, similar to the trend for fires generally. The residential structure fire time trend is related to the second leading cause of residential structure fires in Alaska – cooking – since many people prepare dinner in their homes during the early evening. These fires can often be prevented by teaching people to be more vigilant while cooking. Also, the public should be aware that cooking fires can be extinguished by a pot or pan lid or by dousing with baking soda. The wearing of loose-fitted clothing can also be dangerous around cooking areas.



#### **Intentionally Set Fires**

One hundred and seventy-six (176) or 7% of all reported fires were reported as intentionally set. Alaska seen a small increase in intentionally set fires from (percentage of intentionally set fires) previous years; however, it is known that intentionally set fires continue to be severely under reported.

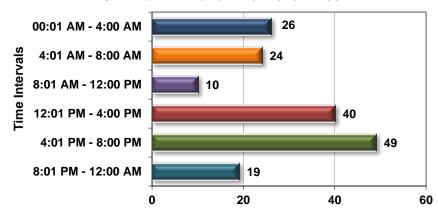
It has been reported there was an increase in property loss due to intentionally set fires from 2013 to 2014 (5%).

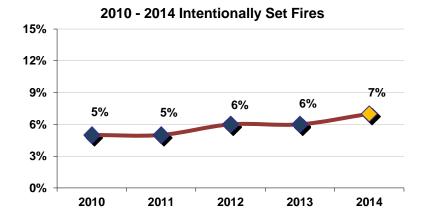
In accordance with NFIRS, intentionally set fires are those fires set deliberately by the misuse of a heat source or the intentional ignition of property. Intentionally set fires result in hundreds of thousands dollars in our state each year. The total dollar loss in intentionally set fires was \$4,452,180.

Almost 35% of all reported intentionally set fires occurred in structure fires. Natural vegetation fires came in second at 34%. Intentionally set fires in structures caused a property loss of \$4,373,757 in 2014. The main areas of origin for intentionally set fires in a structure were in the bathroom, bedroom, and the exterior wall surface areas. Cigarette lighters and matches were the heat source in over 32% of the incidents.

#### 2014 Alarm Time for Intentional Fires

This chart shows the time for all reported intentional fires.





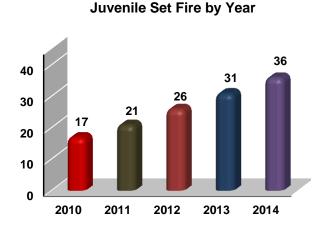
This chart indicates the percentage of fires that have been reported as intentional for the indicated year.

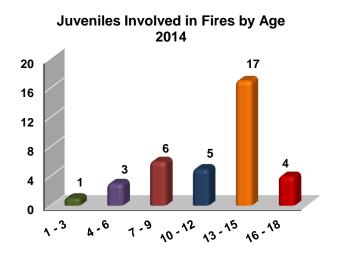
#### **Juveniles Involved With Fire**

Juvenile firesetting is best defined as any unsanctioned use of or involvement with ignition materials with the intent to produce a flame or fire.

In 2014, children playing with matches, lighters and other heat sources caused 36 reported fires and estimated dollar loss of \$1,600,525.

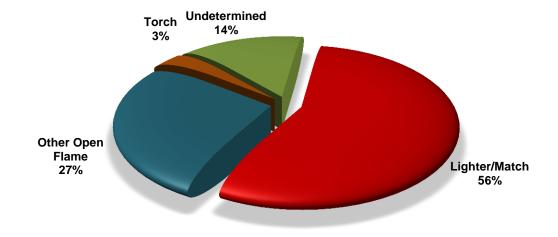
The fires set by children in 2014 included: 15 structure fires, 17 natural vegetation fires (consuming a total of approximately 19 acres of land), 2 mobile vehicle fires, 1 special outside fire and 1 outside rubbish fire.





#### **Heat Source**

In 2014, fifty-six (56%) of juvenile-set fires were started by lighters or matches. Twenty-seven (27%) were started with some type of other open flame, three (3%) were started with a torch, and the remanding fourteen (14%) was reported as undetermined. This demonstrates a need for education to both parents and children on the danger of matches, lighters and other open flame.



In primitive times, people discovered fire and learned the benefits it could provide. Unfortunately, they also learned the troubles it could cause when it was not controlled. In many ways, we have advanced in our use of fire since those distant times; however, we still continue to be troubled by the threat it can present. In 2014, Alaskans suffered 146 injuries and 12 deaths directly caused by fire.

#### **2014 FIREFIGHTER INJURIES**

There were 66 reported firefighter injuries associated with the suppression of fires in 2014. As in previous years, the majority of the injured were men, while the age of the injured ranged from 20 to 59.

Firefighters were injured more frequently at structure fires than any other fire incident type.

Of the 66 firefighter injuries where the primary symptom was known, 37% reported strains or sprains as their primary symptom, 37% reported smoke inhalation, 6% reported burns, 6% reported dizziness, 4% were reported fractures with the remaining incidents were miscellaneous or multiple symptoms.

Cause of Injury	
Contact with Object	10%
Exposure to Hazard	40%
Jump	0%
None Reported/Undetermined	8%
Other	10%
Overexertion/Strain	15%
Slip/Trip	17%
Struck or Assaulted	0%

FF Activity at Time of Injury	
Extinguishing	37%
Handling Charged Hose	7%
Moving Tools or Equipment	2%
None Reported	2%
Operating Engine or Pumper	2%
Laying Hose	7%
Overhaul	18%
Access/Egress, Other	2%
Raising Ground Ladder	7%
Suppression Support, Other	5%
Using Hand Tools	5%
Picking up Tools	2%
Salvage	2%
Catching Hydrant	2%

Types of Fires	
Motor Mobile Property	6%
Structure Fires (Not a Building)	1%
Structure Fires	93%

Severity of Injury	
First Aid Only	11%
Moderate (Lost Time)	20%
Report Only	52%
Treated by Physician	17%
Life Threatening	0%

Time of Day	
00:00 - 06:00	34%
06:01 – 12:00	15%
12:01 – 18:00	32%
18:01 – 23:59	19%

Age of	f FF
18 – 29	22%
30 – 39	32%
40 – 49	34%
50 – 59	12%
60+	0%

#### **2014 CIVILIAN FIRE INJURIES**

There were 80 civilians injured by fire in Alaska in 2014. The majority, 88%, were the result of structure fires. Almost 27% of these injuries took place on the weekend.

The top causes of fires that resulted in injuries continue to be:

- Misuse of Material or Product
- Intentional
- Operational Deficiency

#### The Top Categories

Type of Fire	
Structure Fire	88%
Fire, Other	0%
Motor Mobile Property (Vehicle)	7%
Outside Fire	5%

Severity of Injury	
Minor	68%
Moderate	22%
Severe	4%
Life Threatening	4%
Not Reported	3%

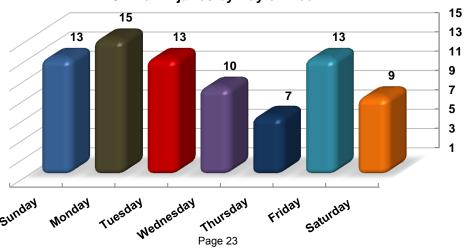
Human Factors	
Asleep	14%
Impaired by Alcohol/Drugs	11%
Unconscious	18%
Physically Restrained	5%
Physically or Mentally Disabled	12%
None Reported	41%

Cause of Injury	
Jumped to Escape	1%
Exposed to Fire Products	67%
Exposed to Haz. Materials	1%
Fell, Slipped, or Tripped	1%
Multiple Causes	5%
Overexertion or Strain	2%
None Reported	23%

Age of Injured Civilian	
0 – 17	5%
18 - 29	19%
30 – 39	19%
40 – 49	20%
50 – 59	18%
60+	18%

Time of Day	
00:00 - 06:00	21%
06:01 – 12:00	19%
12:01 – 18:00	28%
18:01 – 23:59	33%

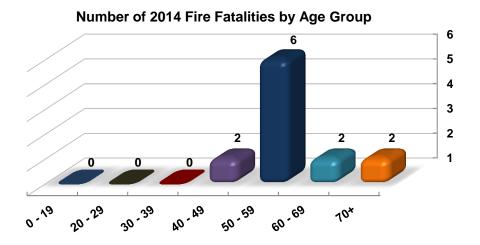
#### Civilian Injuries by Day of Week



#### **2014 CIVILIAN FATALITIES**

Even though Alaska experienced 146 fire injuries and \$66 million in estimated losses, the real tragedy was the loss of 12 Alaskans from fire in 2014. Alaska experienced 4.7 fire deaths for each 1,000 fires during this year. In terms of Alaska's increasing population, the 2014 fire death rate was 1.6 deaths for each one hundred thousand Alaskans.

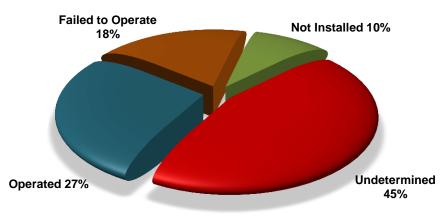
#### **Causes of Fire Fatalities Undetermined** 75% In 59% percent of Combustibules Alaska's 2014 civilian too Close to **Heat Source** fatalities, alcohol and/or 8% drugs were contributing factor to the fire. Misuse of Material or **Product** 17% Fire Fatalities by Gender In 2014, 58% percent of all civilian fire fatalities were Male 42% female. **Female** From 2010 - 2014, 66% of 58% all civilian fire fatalities were male.



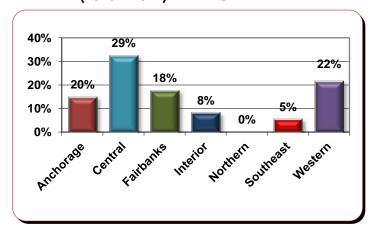
One hundred or 100%, of civilian fire fatalities occurred in residential structures. These 12 fire deaths occurred in 8 single residential homes, 3 residential trailers, and 1 multi-dwelling (18 residential units) that was also used as commercial property.

A continuing problem is the lack of working smoke alarms in homes and other residential property. The 12 civilian residential fire deaths occurred in 11 separate fire incidents. Of these 11 residential structures 6 had a smoke alarm present and only 3 operated. In the remaining 5 residential homes, the smoke alarm presence was not installed, did not operate, or was reported as undetermined.

#### **Smoke Alarm Presence/Operation**

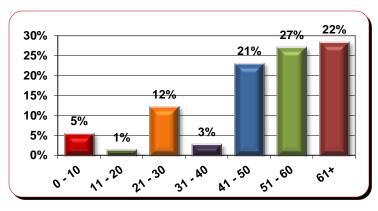


#### **FIVE-YEAR (2010 - 2014) TRENDS**



#### By Region

Central Region had the most fatalities over the rest of the state, however, per 500 capita; Interior Alaska has a higher rate.



#### By Age

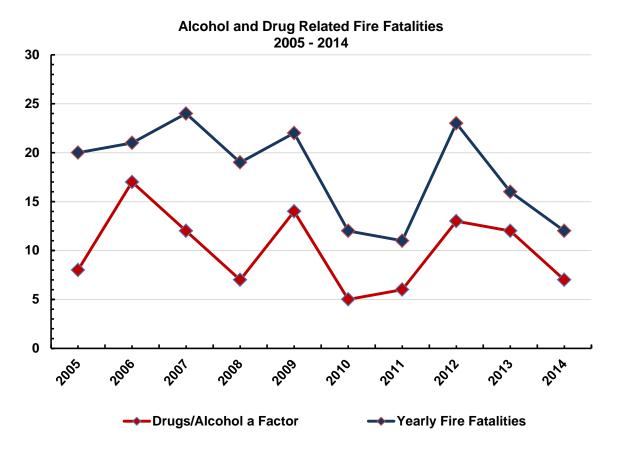
Alaska's highest death age group is 60 years old and older.

### **Alcohol and Drug Related Fire Fatalities**

Alcohol is a major human contributing factor to fire fatalities in Alaska. Studies have estimated that over half of alcohol-related deaths are the result of injuries sustained from not only fires but also motor vehicle crashes, falls, drowning's, homicides and suicides.

Alcohol intoxication may increase the risk of initiating a fire by impairing one's judgment and coordination. An intoxicated individual who is smoking may also succumb to the depressant effects of alcohol, fall asleep and drop a lit cigarette on upholstery or clothing. Intoxication also acutely diminishes one's ability to detect a fire. Under the sedative effects of alcohol, an alcohol-impaired person may fail to notice the smell of smoke, or fail to hear a smoke alarm. Escape from a fire can be hampered by the loss of motor coordination and mental clarity caused by alcohol, even when warning signs are heeded. Furthermore, burns are more physiologically damaging in the presence of alcohol.

In the last decade, Alaska has seen 180 fire fatalities. Out of these unfortunate victims, 56% percent were reported as being under the influence alcohol and/or drugs. Statistically, men have been found to consistently outnumber women among fire casualties and do so with even greater disparity for fire victims under the influence of alcohol. This holds true to Alaskan's as 66% percent of these victims were male.



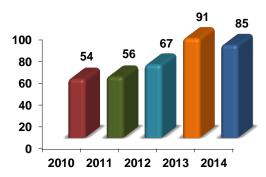
Fire fatalities and injuries can be prevented if a concerted effort is made to identify and modify high-risk drinking patterns. It also may be possible to minimize fire risk by increasing the awareness of those who drink and those who are surrounded by regular drinkers.

#### **Burn Injuries**

All burn injuries that have been treated by a health care professional must be reported to the Division of Fire and Life Safety within three working days. In 2014, health care professionals reported 85 burn injuries. This is a decrease of 6% from the 91 incidents that was reported in 2013.

The data is being collected to identify problems that need to be addressed by public education or development of appropriate intervention strategies. To develop and implement effective prevention programs, we need to know what type of activity injures whom, if the injuries are seasonal and how old the victims are. We appreciate the efforts of the many dedicated doctors, nurses, health aides, paramedics, and clerical personnel who report the burn injuries promptly and completely. They make the program work.

#### **Burn Injuries Reported 2010 - 2014**



Burn injuries are among some of the most catastrophic injuries that a person can suffer. Depending on the type and severity of the burn, there can be internal injuries, skin damage, infections, cardiac arrest, and other complications. Aside from emergency care, many burn victims require continuous medical treatment, counseling, and rehabilitation.

#### Types of Burn Injuries Reported in 2014

**Thermal Burns** – This is the result of direct contact with heat sources such as hot liquids, fire, steam, hot metals, or any other hot objects. An estimated 27% of all burn incidents were fire/flame related, 51% were related to scalding, while another 6% came from contact with a hot object.

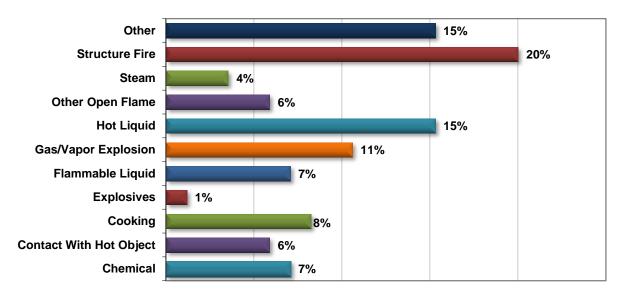
*Electrical Burns* – Electrical burns occur when electric currents pass through the body. A significant part of the damage is done under the surface of the skin. Some of the factors that affects the extent of the injury include the duration of exposure, type of current, intensity of the current, amount of moisture on the body, and the area of the body where the current passed through. Some consequences include cardiac problems, muscle spasms, oral burns, severe skin burns, fractures, and seizures/coma. It can also result to neurological deficits and even death. An estimated 2% was reported with an electrical burn.

**Chemical Burns** – This type represented 7% of burn injury cases. Chemical burns occur when alkaloids, acids, and other types of chemicals come into contact with human skin. There are caustic chemicals that are used in certain industries such as agriculture, construction, medical, and automotive industries. Most cases occur in the workplace. But it is important to note that household cleaners that contain sulfuric acid, phenol, lye, and sodium hypochlorite are also dangerous.

**Other Types of Burns** – Around 7% of patients suffered from other types of burns. Friction, cold, and radiation (from the sun, tanning beds, or radiation therapy) can cause burn injuries.

### **Burn Injuries**

#### Causes of 2014 Reported Burn Injuries:

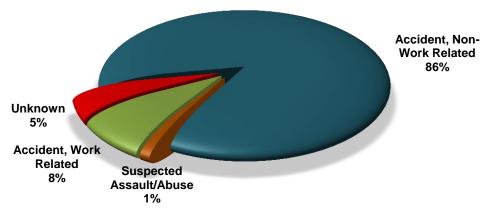


Top Two Causes of Reported Burn Injuries by Age Group in 2014:

Age Group	# 1 Injury Cause	#2 Injury Cause
0 - 4	Hot Liquid	Electrical
5 - 9	Structure Fire	Fireworks
10 - 19	Structure Fire	Gas/Vapor Explosion
20 - 29	Outside Fire	Cooking
30 – 39	Gas/Vapor Explosion	Structure Fire
40 – 49	Chemical	Structure Fire
50 – 59	Structure Fire	Hot Liquid
60 – 69	Outside Fire	Vehicle Fire
70+	Hot Liquid	Cooking

#### Circumstances of Injury:

The circumstances surrounding flame burns are the highest risk to all other burn injuries. The circumstances surrounding flame burns are most commonly non-work related accidents (86%), followed by work related injuries (8%).



#### **Burn Injuries**

#### **Levels of Burn Severity**

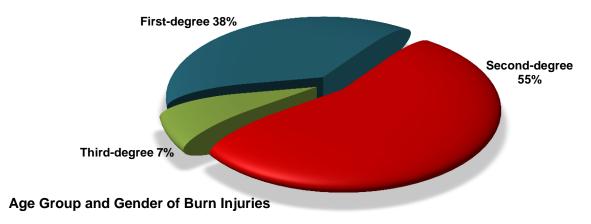
Burns are classified by level of severity.

*First Degree* – Most common are first-degree or superficial burns which are the least serious and cause tenderness that is similar to sunburn.

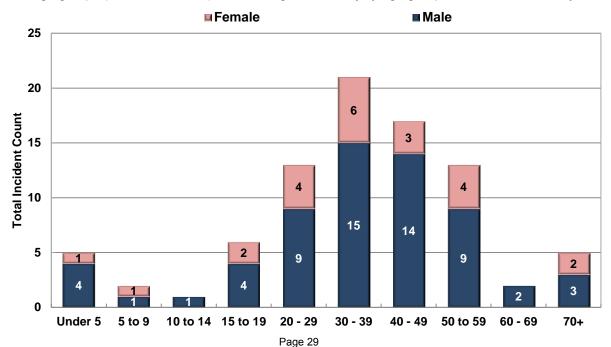
**Second Degree** – Second-degree burns, known as partial thickness burns, are deeper than first-degree burns and are characterized by blotchy white, pink or red patches which cause blisters.

**Third Degree** – The most severe type of burn, a third-degree, known as a full thickness burn, penetrates through all layers of the skin and may injure tissue beneath skin, so the skin is not capable of healing itself. The skin is leathery and dry and has a white, brown, charcoal-gray or deep red appearance.

#### Levels of Burn Serverity Reported in 2014



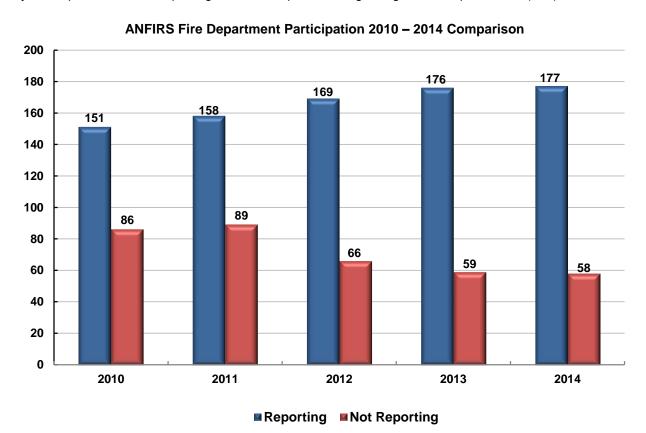
Alaska is unique in the age of group burn injuries. While most states have more reported burn injuries in vulnerable age groups (0 –9 and over 70) Alaska's highest burn injury age group in 2014 was 30 – 39 years old.



#### **ANFIRS Participants**

The following pages are a listing of fire department fire responses submitted to the Alaska National Fire Incident Reporting System (ANFIRS) during 2014. Totals are inclusive of all reports received by April 1, 2014. Department name will **NOT** appear on the listing if they failed to submit ANFIRS for the full year of 2014.

This annual report is a compilation of the information that the State of Alaska, Department of Public Safety, Division of Fire and Life Safety received from reporting departments and/or agencies. Without the input from each of the individual fire departments, this report would not be possible and we appreciate all of their support. If any fire department is not reporting and/or has questions regarding ANFIRS, please call (907) 269-5625.



Page 30

Fire Department Name	Total	Structure	Other	Civil	ian	Fire S	ervice	Fire Dollar
Fire Department Name	Fires	Fires	Fires	Dths.	lnj.	Dths.	lnj.	Loss
Akhiok VFD	0	0	0	0	0	0	0	0
Akutan VFD	2	1	1	0	0	0	0	150
Aleknagik Fire & EMS Dept.	2	2	0	0	0	0	0	302,000
Anchor Point Fire & Emerg. Medical Service Area	20	13	7	0	0	0	0	378,450
Anchorage FD	775	409	366	2	28	0	23	10,317,304
Angoon VFD	3	2	1	0	0	0	0	0
Aniak VFD	4	2	2	0	1	0	0	35,500
Anton Anderson Mem Tun. FD	0	0	0	0	0	0	0	0
Atka VFD	2	0	2	0	0	0	0	0
Bear Creek Fire/EMS Dept.	7	6	1	0	0	0	0	360,400
***Beaver, Community of	1	1	0	0	0	0	0	4,000
Bethel FD	37	25	12	0	5	0	0	13,197,750
Brevig Mission FD	0	0		0	0	0	0	0
Bristol Bay Borough Emerg. Svs.	10	3	7	0	0	0	0	130,100
Butte VFD	10	6	4	0	0	0	0	95,000
Cantwell VFD	1	0	1	0	0	0	0	1,500
Capital City Fire/Rescue	101	50	51	1	0	0	2	544,441
Caswell Lakes FSA #135	6	4	2	0	0	0	0	226,380
Central Emergency Services	62	37	25	0	2	0	0	1,079,500
Central Mat-Su FD	125	53	72	0	1	0	2	1,112,825
***Chefornak VFD	1	1	0	0	0	0	0	0
Chena Goldstream Fire & Res.	38	10	28	0	0	0	0	647,450
Chenega Bay FD	1	1	0	0	0	0	1	12,000
Chickaloon Fire Service, Inc.	0	0	0	0	0	0	0	0
Chitina VFD	0	0	0	0	0	0	0	0
***Chuathbaluk, Community of	1	1	0	0	0	0	0	8,000
Chugiak Vol. Fire & Rescue	61	22	39	0	0	0	0	460,900
City of Anderson FD	3	0	3	0	0	0	0	0

<sup>\*\*</sup> Indicates the Department did NOT report for the full year of 2014.

<sup>\*\*\*</sup> Indicates report(s) was completed by the Division of Fire and Life Safety after a serious incident.

Pressure Ruptures	Rescue Calls	Haz. Cond.	Service Calls	Good Intent Calls	Special Inc.	False Calls	Aid Given	Total Calls
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	2
0	0	0	0	0	0	0	0	2
0	14	2	4	24	0	7	4	75
6	20,556	385	1,841	5,185	40	2,142	32	30,962
0	0	0	0	0	0	0	0	3
0	0	0	0	0	0	0	0	4
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	2
1	5	3	8	2	1	1	67	95
0	0	0	0	0	0	0	0	1
0	2	4	66	18	5	25	0	157
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	10
0	59	8	16	22	0	10	16	141
0	0	0	0	0	0	0	0	1
0	2,783	68	163	357	14	349	1	3,836
0	1	6	0	7	1	0	9	30
4	1,878	69	91	221	0	174	17	2,516
4	659	60	132	471	2	202	75	1,730
0	0	0	0	0	0	0	0	1
0	251	17	9	61	1	17	38	432
0	0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	1
1	654	13	41	135	2	45	7	959
0	0	0	0	0	0	0	0	3

Fire Denoutment Name	Total	Structure	Other	Civil	ian	Fire S	ervice	Fire Dollar
Fire Department Name	Fires	Fires	Fires	Dths.	lnj.	Dths.	lnj.	Loss
City of Fairbanks FD	133	64	69	1	3	0	4	3,818,077
City of False Pass VFD	0	0	0	0	0	0	0	0
***City of Fort Yukon VFD	4	2	2	0	0	0	0	411,200
City of Kasaan VFD	1	0	1	0	0	0	0	0
City of Kodiak FD	31	17	14	1	0	0	1	204,520
City of Kotzebue FD	12	9	3	0	1	0	1	239,200
City of Palmer FD	14	9	5	1	1	0	1	690,660
Coffman Cove VFD	0	0	0	0	0	0	0	0
ConocoPhillips Alaska Alpine	1	0	1	0	0	0	0	150
ConocoPhillips Alaska Kuparuk	10	5	5	0	0	0	0	1,125,800
**Cooper Landing VFD	4	2	2	0	0	0	0	15,000
Cordova VFD	6	3	3	0	1	0	1	472,400
Craig VFD	7	4	3	0	0	0	0	35,000
Delta Junction VFD	2	2	0	0	0	0	0	243,000
Dillingham VFD & Rescue	7	6	1	1	3	0	0	533,100
**Diomede VFD	2	2	0	0	0	0	0	3,000
Division of Forestry	83	0	83	0	0	0	0	0
Eagle VFD	1	1	0	0	0	0	0	30,000
Edna Bay VFD	0	0	0	0	0	0	0	0
Egegik VFD	0	0	0	0	0	0	0	0
Elfin Cove FD	0	0	0	0	0	0	0	0
Elim VFD	1	1	0	0	0	0	0	350
Emmonak VFD	3	3	0	0	3	0	0	39,000
Ester VFD	15	5	10	0	0	0	0	28,400
Fairbanks Airport Police & Fire	6	1	5	0	0	0	0	9,000
***Fairbanks Area, Other	1	0	1	0	0	0	0	13,882
Gakona VFD	0	0	0	0	0	0	0	0
Galena VFD	0	0	0	0	0	0	0	0

<sup>\*\*</sup> Indicates the Department did NOT report for the full year of 2014.

<sup>\*\*\*</sup> Indicates report(s) was completed by the Division of Fire and Life Safety after a serious incident.

Pressure Ruptures	Rescue Calls	Haz. Cond.	Service Calls	Good Intent Calls	Special Inc.	False Calls	Aid Given	Total Calls
1	3,237	56	204	189	1	281	39	4,141
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	4
0	0	0	0	0	0	0	0	1
0	64	26	16	24	3	72	3	239
0	4	3	43	3	0	52	0	117
1	94	8	21	42	1	33	144	358
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	1
0	0	1	0	1	0	1	0	13
0	2	0	0	1	0	0	0	7
2	9	11	3	3	0	23	0	57
0	1	0	2	1	0	4	1	16
0	0	0	0	0	1	1	17	21
0	3	0	1	3	0	1	2	17
0	0	0	0	0	0	0	0	2
0	0	0	59	11	0	0	104	257
0	0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	3
0	28	13	5	14	0	13	73	161
2	46	45	0	3	0	0	2	104
0	0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0

Fire Department Name	Total Fires	Structure Fires	Other Fires	Civil Dths.	ian Inj.	Fire S Dths.	ervice Inj.	Fire Dollar Loss
**Gambell VFD	1	1	0	0	0	0	0	250
Girdwood FD	21	4	17	0	0	0	0	132,000
Glennrich Fire Rescue	4	2	2	0	0	0	0	500
***Golovin, Community of	1	0	1	0	0	0	0	0
Greater Prudhoe Bay FD	11	6	5	0	0	0	1	446,100
Gulkana VFD	0	0	0	0	0	0	0	0
Gustavus VFD	2	1	1	0	0	0	0	150
Haines VFD	8	4	4	0	0	0	0	82,500
Hollis VFD	1	1	0	0	0	0	0	0
Homer VFD	25	5	20	1	0	0	0	127,120
Hoonah VFD	1	1	0	0	0	0	0	0
**Hooper Bay VFD	1	0	1	0	0	0	0	2,000
Hope/Sunrise VFD	1	0	1	0	0	0	0	0
Houston FD	10	5	5	0	0	0	0	39,020
Huslia VFD	1	0	1	0	0	0	0	500
**Igiugig VFD	0	0	0	0	0	0	0	0
Iliamana VFD	1	0	1	0	0	0	0	9,000
Kachemak Emerg. Services	18	7	11	0	1	0	1	738,600
Kake VFD	2	2	0	0	0	0	0	0
Kenai FD	20	10	10	0	0	0	0	247,750
Kennicott/McCarthy VFD	0	0	0	0	0	0	0	0
***Kenny Lake VFD	1	1	0	0	0	0	0	200,000
Ketchikan FD	38	24	14	0	1	0	2	585,106
Ketchikan Int'l Airport FD	1	0	1	0	0	0	0	0
King Cove Fire & Rescue	0	0	0	0	0	0	0	0
**Kipnuk VFD	0	0	0	0	0	0	0	0
Klawock VFD	6	2	4	0	0	0	0	2,050
Klehini Valley VFD	1	1	0	0	1	0	0	200,000

<sup>\*\*</sup> Indicates the Department did NOT report for the full year of 2014.

<sup>\*\*\*</sup> Indicates report(s) was completed by the Division of Fire and Life Safety after a serious incident.

Pressure Ruptures	Rescue Calls	Haz. Cond.	Service Calls	Good Intent Calls	Special Inc.	False Calls	Aid Given	Total Calls
0	0	0	0	0	0	0	0	1
0	184	12	101	59	0	28	15	420
0	4	0	0	2	0	0	2	12
0	0	0	0	0	0	0	0	1
2	42	6	1	3	0	6	1	72
0	0	0	0	0	0	0	0	0
0	1	0	0	0	1	0	2	6
1	9	0	0	1	1	3	2	25
0	0	0	0	0	0	0	0	1
1	471	7	24	25	0	28	11	592
0	0	0	0	0	0	1	0	2
0	0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	1
0	133	13	38	26	0	7	88	315
0	0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	1
1	22	4	3	23	0	4	14	89
0	0	0	0	0	0	0	0	2
1	893	27	98	56	3	67	38	1,203
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	1
0	1,408	27	81	119	3	116	9	1,801
0	0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	6
0	0	0	0	0	0	0	0	1

Fire Department Name	Total	Structure	Other	Civil	ian	Fire S	ervice	Fire Dollar
Fire Department Name	Fires	Fires	Fires	Dths.	lnj.	Dths.	lnj.	Loss
**Klukwan VFD	1	1	0	0	0	0	0	0
***Kodiak Island, Other	2	1	1	0	2	0	0	20,000
Kokhanok Village Council	1	0	1	0	1	0	0	0
***Koyuk, Community of	2	2	0	1	1	0	0	35,500
Kwethluk VFD	0	0	0	0	0	0	0	0
**Lake Louise VFD	0	0	0	0	0	0	0	0
***Levelock, Community of	1	1	0	1	1	0	0	180,000
Louise, Susitna, Tyone VFD	0	0	0	0	0	0	0	0
Lowell Point VFD	0	0	0	0	0	0	0	0
Lower Kalskag VFD	0	0	0	0	0	0	0	0
Manley Hot Springs VFD	0	0	0	0	0	0	0	0
***Mat-Su Borough, Other	2	2	0	0	0	0	0	170,000
McGrath VFD	3	1	2	0	0	0	0	25,500
McKinley VFD	2	0	2	0	0	0	0	33,000
**Minto VFD	0	0	0	0	0	0	0	0
Moose Pass Vol. Fire Company	3	1	2	0	0	0	0	4,350
**Mountain Village Vol. Dept.	3	1	2	0	0	0	0	1,000
***Napakiak, Community of	1	1	0	0	0	0	0	120,000
Naukati VFD	2	2	0	0	0	0	0	70,000
Nel/Mel VFD	1	1	0	0	0	0	0	170,000
Nelson Lagoon Fire & Rescue	1	1	0	0	0	0	0	2,000
Nenana Fire/EMS Dept.	5	2	3	0	1	0	0	30,020
Nikiski FD	27	17	10	0	1	0	0	1,225,701
Ninilchik Emergency Services	7	4	3	0	0	0	0	18,000
Nome VFD	17	11	6	0	3	0	0	484,300
North Pole FD	15	3	12	0	0	0	0	86,500
North Slope Borough FD	24	11	13	0	0	0	0	0
North Star VFD	102	39	63	0	0	0	0	1,505,551

<sup>\*\*</sup> Indicates the Department did NOT report for the full year of 2014.

<sup>\*\*\*</sup> Indicates report(s) was completed by the Division of Fire and Life Safety after a serious incident.

Pressure Ruptures	Rescue Calls	Haz. Cond.	Service Calls	Good Intent Calls	Special Inc.	False Calls	Aid Given	Total Calls
0	0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	2
0	0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	2
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	2
0	0	0	0	0	0	0	0	3
0	0	0	0	0	0	0	0	2
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	3
0	0	0	0	0	0	0	0	3
0	0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	2
0	0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	5
0	518	32	141	85	2	22	16	843
0	0	4	0	0	0	1	1	13
2	39	3	2	2	0	8	0	73
0	799	8	6	49	0	30	26	933
3	823	5	21	10	0	16	65	967
0	593	42	28	110	0	44	49	968

Fire Department Name	Total	Structure	Other	Civil	ian	Fire S	ervice	Fire Dollar
Fire Department Name	Fires	Fires	Fires	Dths.	lnj.	Dths.	lnj.	Loss
North Tongass VFD	15	8	7	0	0	0	0	562,000
***Northway Village, Comm. Of	1	1	0	0	0	0	0	1,000
Northwest Arctic Borough FD	14	8	6	0	1	0	0	1,039,300
Nulato VFD	1	0	1	0	0	0	0	20
Nunapitchuk VFD	0	0	0	0	0	0	0	0
Old Harbor VFD	0	0	0	0	0	0	0	0
***Ouzinkie VFD	1	1	0	0	0	0	0	20,000
Palmer Fire and Rescue	40	23	17	0	1	0	3	1,618,930
Panguingue VFD	0	0	0	0	0	0	0	0
Pedro Bay VFD	1	1	0	0	0	0	0	2,000
Pelican Vol. Fire & EMS	1	1	0	0	0	0	0	0
Petersburg VFD	15	9	6	0	0	0	0	4,606,000
Pilot Point VFD	0	0	0	0	0	0	0	0
***Pilot Station Dept.	1	1	0	0	0	0	0	500
Port Alexander VFD	0	0	0	0	0	0	0	0
Port Alsworth VFD	0	0	0	0	0	0	0	0
Port Graham VFD	0	0	0	0	0	0	0	0
Port Lions VFD	0	0	0	0	0	0	0	0
**Port Protection VFD	0	0	0	0	0	0	0	0
Red Dog Mine Emerg. Services	0	0	0	0	0	0	0	0
Rural Deltana VFD	16	6	10	0	0	0	0	2,915,500
Salcha Fire & Rescue	10	6	4	0	0	0	0	661,500
Sand Point VFD	0	0	0	0	0	0	0	0
Seldovia Vol. Fire & Rescue	3	2	1	0	0	0	0	2,004,500
Seward FD	10	2	8	0	0	0	0	191,400
**Shishmaref VFD	0	0	0	0	0	0	0	0
Sitka FD	8	4	4	0	0	0	0	25,120
Skagway VFD	12	4	8	0	0	0	0	136,484

<sup>\*\*</sup> Indicates the Department did NOT report for the full year of 2014.

<sup>\*\*\*</sup> Indicates report(s) was completed by the Division of Fire and Life Safety after a serious incident.

Pressure Ruptures	Rescue Calls	Haz. Cond.	Service Calls	Good Intent Calls	Special Inc.	False Calls	Aid Given	Total Calls
0	151	2	3	7	1	4	4	187
0	0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	14
0	0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	1
1	2	20	5	52	0	41	59	220
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	1
3	3	9	9	5	0	14	0	58
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	10	0	0	11	0	2	4	43
0	0	1	1	0	1	5	0	18
0	0	0	0	0	0	0	0	0
0	11	1	0	0	0	0	0	15
0	219	7	21	27	0	49	18	351
0	0	0	0	0	0	0	0	0
0	15	17	15	11	4	46	18	134
0	101	0	14	1	0	43	0	171

Fire Department Name	Total	Structure	Other	Civil			ervice	Fire Dollar
The Department Name	Fires	Fires	Fires	Dths.	lnj.	Dths.	lnj.	Loss
Slana VFD	0	0	0	0	0	0	0	0
South Tongass VFD	11	7	4	0	4	0	0	525,130
St. George VFD	2	0	2	0	0	0	0	0
St. Mary's VFD	3	3	0	0	0	0	0	1,005
St. Paul Dept. of Public Safety	2	1	1	0	0	0	0	35,000
Steese Area VFD	36	11	25	0	3	0	1	212,270
Stony River VFD	0	0	0	0	0	0	0	0
Strelna VFD	1	1	0	0	0	0	0	50
Sutton VFD	3	1	2	2	1	0	0	124,700
SVT Barabara Heights FD	2	1	1	0	0	0	0	372,300
Talkeetna VFD	10	4	6	0	0	0	0	294,000
**Tanana VFD	2	2	0	0	0	0	0	1,100
Ted Steven's Arpt. Police/Fire	21	15	6	0	0	0	0	73,050
Tenakee Springs VFD	0	0	0	0	0	0	0	0
**Tetlin VFD	1	0	1	0	0	0	0	0
Thorne Bay VFD	1	1	0	0	0	0	0	0
Togiak VFD	2	0	2	0	0	0	0	500
Tok VFD	4	2	2	0	0	0	0	69,200
***Toksook Bay VFD	1	0	1	0	0	0	1	0
Tolsona FD	1	0	1	0	0	0	0	0
**Tri-Valley VFD	2	1	1	0	0	0	0	17,000
Unalaska Fire/EMS	9	7	2	0	0	0	0	4,018,531
University FD	50	19	31	0	0	0	0	625,325
Valdez FD	16	8	8	0	2	0	0	170,500
**Venetie VFD	0	0	0	0	0	0	0	0
West Lakes FD	60	33	27	0	3	0	1	1,472,250
**Whale Pass VFD	1	0	1	0	0	0	0	4,500
**White Mountain VFD	2	2	0	0	0	0	0	325,050

<sup>\*\*</sup> Indicates the Department did NOT report for the full year of 2014.

<sup>\*\*\*</sup> Indicates report(s) was completed by the Division of Fire and Life Safety after a serious incident.

Pressure Ruptures	Rescue Calls	Haz. Cond.	Service Calls	Good Intent Calls	Special Inc.	False Calls	Aid Given	Total Calls
0	0	0	0	0	0	0	0	0
1	135	0	9	14	2	8	11	191
0	0	0	0	0	0	0	0	2
0	0	0	0	0	0	0	0	3
0	0	0	0	0	0	0	0	2
0	335	22	30	51	0	11	55	540
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	1
0	20	1	1	25	1	0	4	55
0	0	0	0	0	0	0	0	2
0	12	9	0	5	1	2	32	71
0	0	0	0	0	0	0	0	2
0	407	105	68	2	1	25	0	629
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	2
0	0	1	0	0	0	0	1	6
0	0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	1
0	0	0	0	1	0	9	2	14
0	227	3	0	20	0	20	0	279
0	827	33	49	77	0	179	167	1,382
2	246	31	36	14	0	51	1	397
0	0	0	0	0	0	0	0	0
1	169	25	28	115	0	41	52	491
0	0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	2

Fire Department Name	Total	Structure	Other	Civilian		Fire Service		Fire Dollar
The Department Name	Fires	Fires	Fires	Dths.	lnj.	Dths.	lnj.	Loss
Whittier VFD	4	4	0	0	2	0	0	20
Willow VFD	9	6	3	0	0	0	0	81,800
Womens Bay VFD	1	0	1	0	0	0	0	0
Wrangell VFD	13	6	7	0	0	0	0	157,500
Total Exposures	109	52	57	0	0	0	0	n/a
Grand Total:								
	2,543	1,228	1,315	12	80	0	66	66,184,492

<sup>\*\*</sup> Indicates the Department did NOT report for the full year of 2014.

<sup>\*\*\*</sup> Indicates report(s) was completed by the Division of Fire and Life Safety after a serious incident.

Pressure	Rescue	Haz.	Service	Good Intent	Special	False	Aid	Total	
Ruptures	Calls	Cond.	Calls	Calls	Inc.	Calls	Given	Calls	
0	0	0	1	0	0	0	0	5	
0	46	8	5	30	1	4	65	168	
0	11	2	5	6	0	0	1	26	
0	1	4	1	3	0	8	0	30	
No Exposures									
Grand Total:									
41	39,237	1,289	3,570	7,828	94	4,396	1,454	60,452	

#### Per Capita, Rates and Comparisons

Fire service leaders are often asked to show the effectiveness of the services that they perform. This is especially true in today's era of decreased budgets. All too often managers and leaders count "things" such as number of responses or number of hours spent doing key functions.

While counting the number of responses made, the number of inspections conducted, the number of inspection violations cited, or the numbers of hours spent on training are all important "things" to count, they really do not show effectiveness.

One method of showing effectiveness is to track fire rates over time. Are fires, deaths, or injuries going up or down? When doing so, one must be careful to use a large enough data set so as not to be impacted by an unusually high or low years' worth of data.

The fire problem within Alaska varies from area to area. This often is a result of climate, poverty, education, demographics, and other factors. Perhaps the most useful way to assess fires across the State is to determine the relative risk of having a fire. Relative risk compares the per capita rate for a particular fire department to the overall per capita rate for the area. This figure helps us compare values among groups of different size.

The following tables on the following pages are lists of fire departments total reported fires, estimated 2013 population for the area, and what the fire department fires per 500 population was. This will indicate if an area and/or areas have more of a fire problem and may need more public education in the community.

The 2013 estimated population has been taking from State of Alaska, Department of Commerce, Community, and Economic Development, Community and Regional Affairs website.

## Alaska's 2010 - 2014 Average Fires per Capita (by Region)

