June 27, 2017

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Fire Chiefs: Safest way to celebrate the Fourth is to attend a public display

(KING COUNTY, WASH) - Fire Chiefs from around King County remind people the safest way to celebrate the Fourth of July is to attend one of the many public displays in the region. Since 2012, fireworks related injuries continue to surpass fireworks related fires.

According to the Washington State Fire Marshals' Office, in 2016 there were 242 injuries related to fireworks. The average age was 25 with 71% being male and 32% being under the age of 18. "What is most alarming is the number of injuries to children under the age of 7," said Dave Nelson, spokesman for the King County Fire Chiefs Association. "Last year, 35 young children suffered injuries from fireworks and 25 were between the ages of 8-14. We must remember fireworks, especially sparklers, can be dangerous to children as they can burn at temperatures of about 2,000 degrees."

There are many child-safe celebration activities children can enjoy and leave the fireworks in the hands of a responsible adult. Search the web for activities such as; patriotic arts and crafts, glow-in-the-dark sticks, foil pinwheels, confetti poppers, streamers, piñatas or bubble machines.

"Fireworks of all kinds, legal or illegal, can cause injury. Sixty-one percent of the injuries last year resulted from legal fireworks," said Nelson.

We have some of the best fireworks shows in the region, including 19 in King County. A complete list of fireworks displays in the state can be found here:
http://www.wsp.wa.gov/fire/docs/fireworks/fireshow.pdf

Laws differ from area to area in King County and around the state, a complete list can be found here:
http://www.wsp.wa.gov/fire/docs/fireworks/ordinances.pdf

Please check your local ordinances, have fun, and most importantly be safe!

Xxx

Attached:
Washington State Fire Marshal's Annual Fireworks Report

Prepared by the Washington State Patrol - Office of the State Fire Marshal

Washington State Fireworks-Related INJURY AND FIRE REPORT 2016



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A MESSAGE FROM THE STATE FIRE MARSHAL

The following report provides an objective overview and analysis of the fireworks-related injuries and fires that took place in Washington State during 2016.

The information contained in this annual report details the following:

- Fireworks-related injuries were slightly up in 2016, with 242 injuries reported.
- There were no fatalities involving consumer fire works.
- Injury data showed that males, 36 years and older were most often injured by fireworks.
- There were 85 fireworks-related fires reported, resulting in $265,000 in property loss.
- Overall, fireworks-related incidents continue to occur most often on the Fourth of July.

The ongoing assistance of many hospitals, fire and law enforcement agencies have made this publication possible. Special thanks are due to them for their support, collective wisdom, and commitment to advancing public safety and the fireworks programs in Washington State.

Sincerely,



State Fire Marshal Charles P. LeBlanc
Fire Protection Bureau

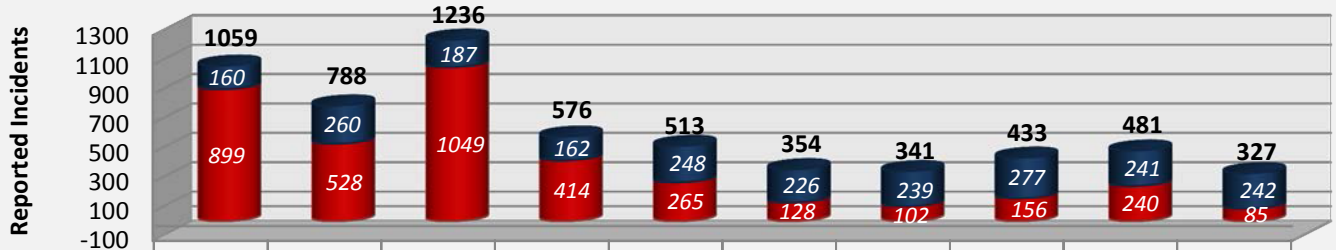
SNAPSHOT OF 2016 FIREWORK-RELATED INCIDENTS

A total of 327 fireworks-related incidents were reported to the State Fire Marshal's Office by hospitals and fire and law enforcement agencies in 2016. This number is down from 481 reported incidents in 2015, a decline of 32 percent in Washington State. While the number of reported incidents dropped overall from 2015 to 2016, fireworks-related injuries remained slightly above the 10-year average (224) with 242 injuries reported.

The following graphs and charts provide a snapshot of the reported fireworks-related incidents that occurred in Washington State during 2016:

Figure 1.

NUMBER OF FIREWORKS-RELATED INCIDENTS - 10 YEAR TREND



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Total	1059	788	1236	576	513	354	341	433	481	327
Injury	160	260	187	162	248	226	239	277	241	242
Fire	899	528	1049	414	265	128	102	156	240	85

THE INCIDENTS OF GREATEST CONCERN:

- In Washington State, 55 injuries were caused by devices which are illegal to own or possess.
- 10 sparkler bombs resulted in one (1) amputation and multiple trauma injuries to the arms, legs, face and torso. These devices are considered improvised explosive devices (IEDs) which are illegal to manufacture and possess. Multiple trauma injuries that result from the detonation of one of these devices may include: burns, lacerations, avulsions, and metal puncture wounds.
- 75 percent of all fireworks-related injuries involving minors occurred while under the supervision of an adult.
- Fireworks-related incidents continue to occur most often on July Fourth.

Table 2.

2016 FIREWORKS INJURY TRENDS	
Total Fireworks-Related Injuries	242
Average Age of Victim	25
Female	29%
Male	71%
% Under Age 18	32%

Figure 2.

2016 SPARKLER BOMB INCIDENTS

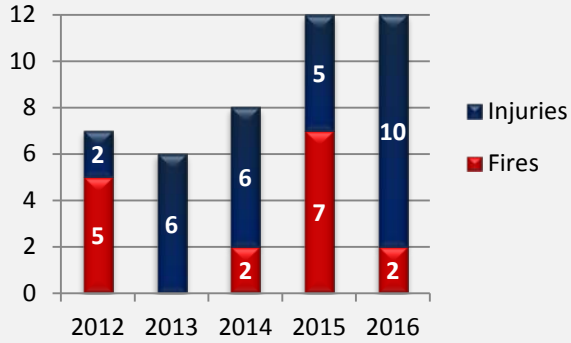
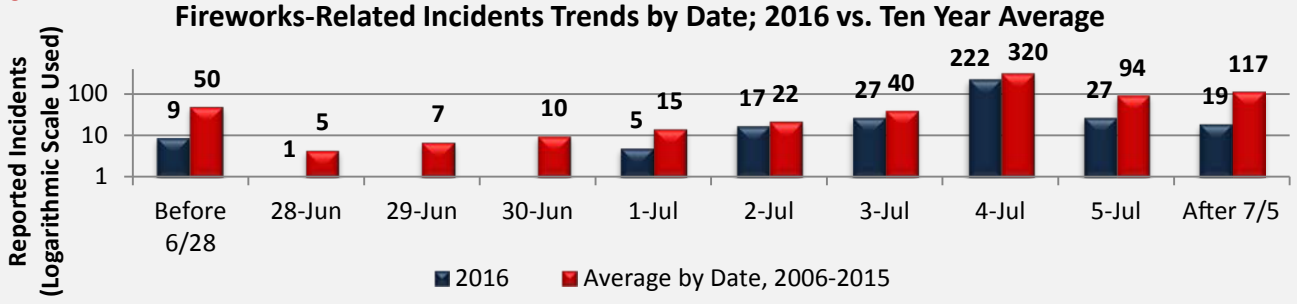


Figure 3.

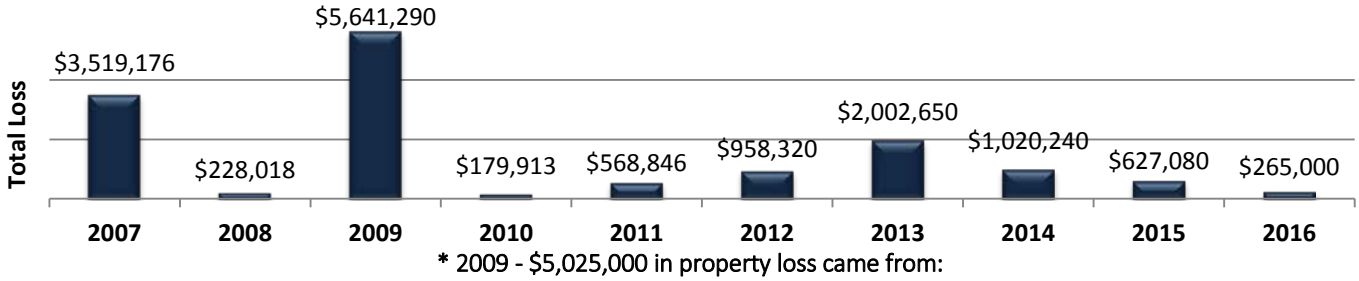
Fireworks-Related Incidents Trends by Date; 2016 vs. Ten Year Average



FIREWORKS-RELATED PROPERTY LOSS

State Fire Marshal records show that the total reported property damage due to fireworks use in 2016 was an estimated $265,000; this amount is down 58 percent from the previous year.

Figure 4. **FIREWORKS-RELATED PROPERTY LOSS - TEN YEAR TREND**



* 2009 - $5,025,000 in property loss came from:

- 6 residential fires totaling $4,775,000
- 1 wildland fire totaling $250,000

Over the last five years, reported property loss in Washington State resulting from fireworks-related use totaled $4.79 million. The annual property loss average from 2012 to 2016 was more than $958,000 per year; with an average of $6,874 in property loss, per incident.

Table 2. **REPORTED PROPERTY LOSS – FIVE YEAR TREND**

	2012	2013	2014	2015	2016	TOTAL
JUNE – JULY	$898,320	$2,002,400	$1,020,240	$604,980	$265,000	$4,790,940
Total Fire Incidents	125	96	155	236	85	697
% of Total $ Loss	93%	99%	100%	96%	100%	98%
Average Dollar Loss	**$7,187**	**$20,858**	**$6,582**	**$2,563**	**$3,118**	**$6,874**
TOTAL $ LOSS/YEAR	$958,320	$2,002,650	$1,020,240	$627,080	$265,000	$4,873,290
Total Fire Incidents	128	102	156	240	85	711
Average Dollar Loss	**$7,487**	**$19,634**	**$6,540**	**$2,613**	**$3,118**	**$6,854**

ANALYSIS OF FIRES DUE TO FIREWORKS USE

The firework types listed below were identified as causing the following incidents (Table 3):

- ILLEGAL FIREWORKS
  - 17 fires (20 percent of total); most were wildland or vegetation fires
  - $2,400 in property loss reported – most due to a dumpster fire
- LEGAL FIREWORKS
  - 21 fires (25 percent of total); most were wildland or vegetation fires
  - $113,150 in property loss reported – most due to two (2) residential fires
- UNKNOWN TYPE OF FIREWORKS
  - 47 fires (55 percent of total); most were wildland or vegetation fires
  - $149,450 in property loss – most due to two (2) residential and vehicle fires

Table 3. **FIRES AND PROPERTY LOSS BY CLASSIFICATION OF FIREWORKS DEVICE - 2016**

	Number of Fires				Property Loss			
	Firework Type				Firework Type			
Property	**Illegal**	**Legal**	**Unknown**	**Total**	**Illegal**	**Legal**	**Unknown**	**Total**
Commercial	1	0	1	2	$ -	$ -	$ -	$ -
Residential	3	4	5	12	$ -	$ 110,250	$ 81,000	$ 191,250
School/Grounds	2	0	0	2	$ -	$ -	$ -	$ -
Vehicle	1	0	2	3	$ 100	$ -	$ 65,000	$ 65,100
Wildland/Vegetation	7	15	29	51	$ -	$ 1,400	$ 1,750	$ 3,150
Other*	3	2	10	15	$ 2,300	$ 1,500	$ 1,700	$ 270,500
Total	**17**	**21**	**47**	**85**	**$ 2,400**	**$ 113,150**	**$ 149,450**	**$ 530,000**

* Other fires include dumpsters, fences, beauty bark, fences, etc.

Table 4. **FIRES & PROPERTY LOSS BY CLASSIFICATION OF FIREWORKS DEVICE - 2011 to 2015**

	Number of Fires				Property Loss			
	Firework Type				Firework Type			
Property	**Illegal**	**Legal**	**Unknown**	**Total**	**Illegal**	**Legal**	**Unknown**	**Total**
Commercial	4	3	4	11	$ 91,902	$ 90,000	$ 33,000	$ 214,902
Residential	25	19	26	70	$1,442,900	$ 315,794	$1,167,600	$2,926,294
School/Grounds	9	2	7	18	$ 2,200	$ 500	$ 20,000	$ 22,700
Vehicle	6	3	6	15	$ 8,050	$ 12,000	$ 64,300	$ 84,350
Wildland/Vegetation	108	184	344	636	$ 18,355	$ 73,530	$ 118,300	$ 210,185
Other*	24	17	98	139	$1,626,200	$ 1,875	$ 90,630	$1,718,705
Total	**176**	**228**	**485**	**889**	**$3,189,607**	**$ 493,699**	**$1,493,830**	**$9,971,772**

* Other fires include vessels, dumpsters, fences, beauty bark, etc.

FIREWORKS-RELATED INJURIES

In 2016, there were 241 fireworks-related injuries reported to the State Fire Marshal's Office—this number is slightly above the 10-year average of 224 injuries per year. The tables and chart below detail the annual reported injuries, leading types of injuries reported, and provide a breakdown of the 2016 injuries by age and gender:

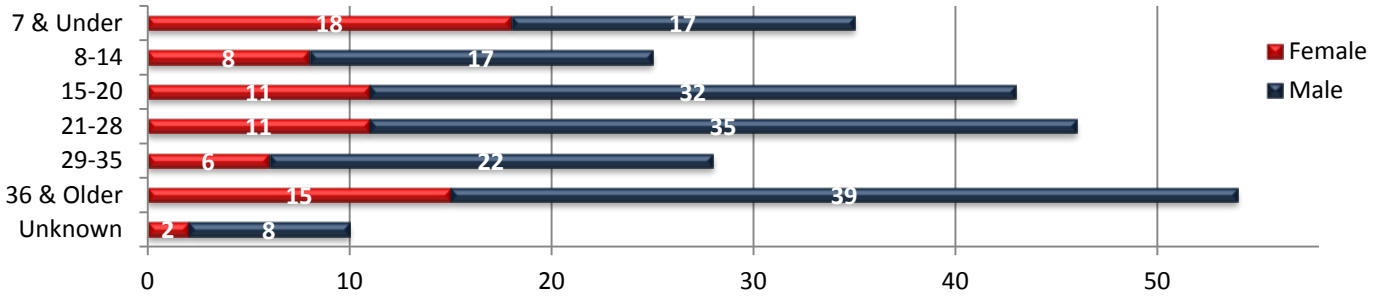
Table 6. **ANNUAL REPORTED INJURIES – FIVE YEAR TREND**

	2012	2013	2014	2015	2016	TOTAL	AVERAGE
JUNE – JULY	214	231	259	226	233	**1,163**	**232**
% OF TOTAL	95%	97%	94%	93%	96%	**95%**	**95%**
TOTAL INJURIES	**226**	**239**	**277**	**241**	**242**	**1,225**	**245**

Table 5. **INJURIES BY CLASSIFICATION OF FIREWORKS DEVICE - 2016**

	Firework Type					Firework Type			
Type of Injury	**Illegal**	**Legal**	**Unknown**	**Total**	**Injury Site**	**Illegal**	**Legal**	**Unknown**	**Total**
Amputation	9	12	2	23	Hand or Arm	24	58	13	95
First Degree Burn	3	21	7	31	Head or Face	10	47	12	69
Second Degree Burn	16	39	10	65	Leg or Foot	4	11	6	21
Third Degree Burn	4	5	1	10	Multiple Locations	16	25	6	47
Multiple Injury/Trauma	21	66	17	104	Torso	1	6	3	10
Fatality	0	0	0	0	**Total**	**55**	**147**	**40**	**242**
Unknown	2	4	3	9					
Total	**55**	**147**	**40**	**242**					

2016 INJURIES BY AGE AND GENDER



FIREWORK TYPES CAUSING INJURIES

Table 7 shows the types of firework devices that caused injuries in 2016.

- Illegal fireworks; 55 injuries or 23percent
- Legal fireworks; 147 injuries or 61percent
- Unknown fireworks; 40 injuries, or 16 percent

Most commonly used fireworks causing injuries:

LEGAL FIREWORKS:

- Aerials; 32 percent
- Sparklers; 13 percent
- Roman Candles; 2 percent

ILLEGAL FIREWORKS:

- Firecrackers; 7 percent
- Bottle Rockets; 6 percent
- M-80/M-100, etc.; 3 percent

Table 7.

INJURIES BY DEVICE TYPE

Device Type	Illegal	Legal	Unknown	Total
Bottle Rockets	7			7
Firecrackers and Chasers	13			13
Homemade Explosive Devices	17			17
M-80's, M-100's, Cherry Bombs	5			5
Missiles and Rockets	3			3
Cones and Fountains	0	5		5
Multi Aerials / Aerial Shells/ Mortars		74		74
Novelties		4		4
Public Display Mortars (1.3g)	7	2		9
Roman Candles	0	20		20
Smoke Items	0	2		2
Sparklers (Sparkler Bombs under Homemade)	0	35		35
Other	3	5		8
Unknown			40	40
Total	**55**	**147**	**40**	**242**

ANALYSIS OF INJURY CAUSE

Table 8 shows the leading causes of fireworks-related injuries.

TOP 3 ACTIONS CAUSING INJURY:

- Holding fireworks in hand; 83 injuries or 34 percent
- Too close to lit fireworks/hit by fireworks; 58 injuries or 24 percent
- Lighting fireworks; 32 injuries or 13 percent

Table 8.

INJURIES BY DEVICE

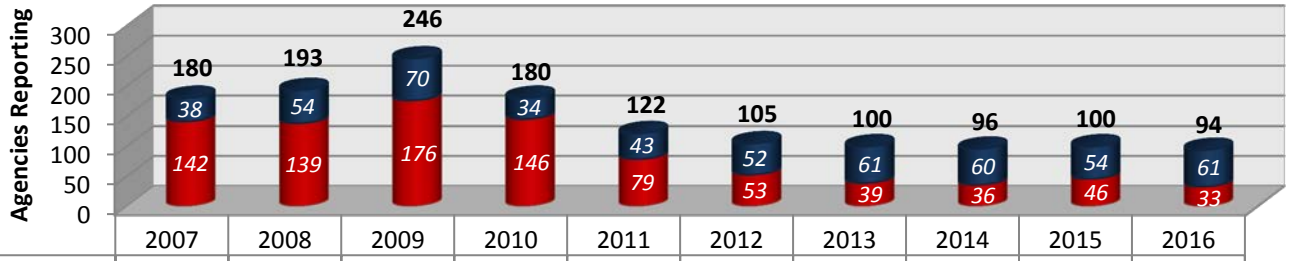
Action	Total
Holding Fireworks	83
Too Close; Hit by Fireworks Debris	58
Lighting/Relighting	32
Leaning Over Fireworks	15
Unsafe surface for lighting	6
Unknown	5
Other	43
Total	**242**

INCIDENT TRACKING

Throughout the state, a total of 94 reporting entities voluntarily participated in the State Fire Marshal's annual survey of fireworks-related incidents; reporting fires, property damage and injuries. The following provides a summary of the incident data received from entities across Washington State during 2016.

Figure 5.

Number of Entities Reporting Data - 10 Year Trend



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Total	180	193	246	180	122	105	100	96	100	94
Hospitals	38	54	70	34	43	52	61	60	54	61
Fire Agencies	142	139	176	146	79	53	39	36	46	33

Table 9.

Incident Summary by County and Reporting Agency Type

County	Fire Agencies			Hospitals		Total
	Fire	Injury	Total	Injury	Total	
Asotin	4	0	4	0	0	4
Benton	0	0	0	5	5	5
Chelan	2	0	2	1	1	3
Clallam	2	0	2	1	1	3
Clark	0	0	0	18	18	18
Cowlitz	5	0	5	0	0	5
Douglas	1	0	1	0	0	1
Franklin	5	0	5	0	0	5
Garfield	0	0	0	1	1	1
Grant	3	0	3	3	3	6
Grays Harbor	0	0	0	16	16	16
Island	2	0	2	0	0	2
Jefferson	0	1	1	0	0	1
King	16	1	17	44	44	61
Kitsap	4	0	4	7	7	11
Klickitat	0	0	0	1	1	1
Lewis	0	0	0	6	6	6
Lincoln	0	0	0	1	1	1
Mason	0	1	1	3	3	4
Pacific	0	0	0	1	1	1
Pend Oreille	0	0	0	3	3	3
Pierce	18	2	20	27	27	47
San Juan	0	0	0	1	1	1
Skagit	1	0	1	5	5	6
Snohomish	13	1	14	41	41	55
Spokane	1	0	1	2	2	3
Stevens	0	0	0	3	3	3
Thurston	1	3	4	4	4	8
Walla Walla	5	0	5	3	3	8
Whatcom	2	4	6	14	14	20
Yakima	0	0	0	18	18	18
Total	**85**	**13**	**98**	**229**	**229**	**327**

ACKNOWLEDGEMENTS

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Data Collection

Special thanks to the hospitals, and fire and law enforcement agencies for submitting data.

PREVENT FIRES
IT'S YOUR JOB!