



State Fire Marshal's Office

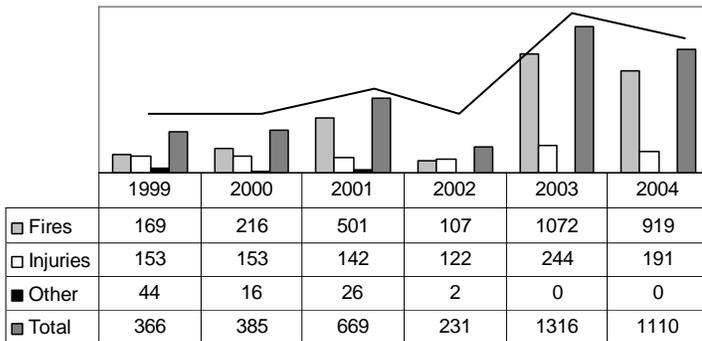


2004 Fireworks Statistical Report

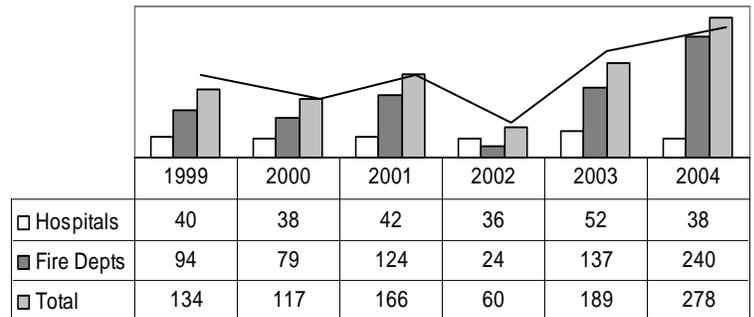
Mission: To implement a comprehensive and effective educational and enforcement program for fireworks injury prevention and fire safety.

There were 1,110 fireworks related injuries and/or fires reported to the State Fire Marshal in 2004 by fire departments and hospital emergency rooms. This is a 16% reduction from the previous year total of 1,316, but a 49% increase over the five year average of 742. Of the 1,110 reports, there were 919 fires, and 191 injuries. These incidents resulted in nearly \$1 million in property loss. Of the 535 fire departments in Washington, 80 fire departments reported having no fireworks related incidents.

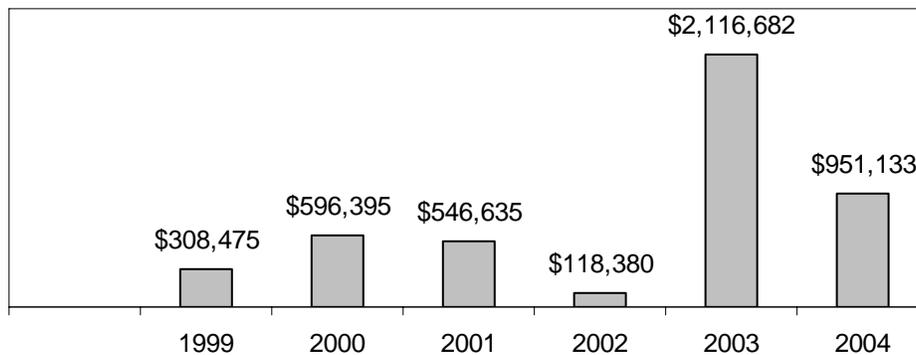
Six Year Incident Trend



Agencies Reporting



Reported Fireworks Dollar Loss from Fire



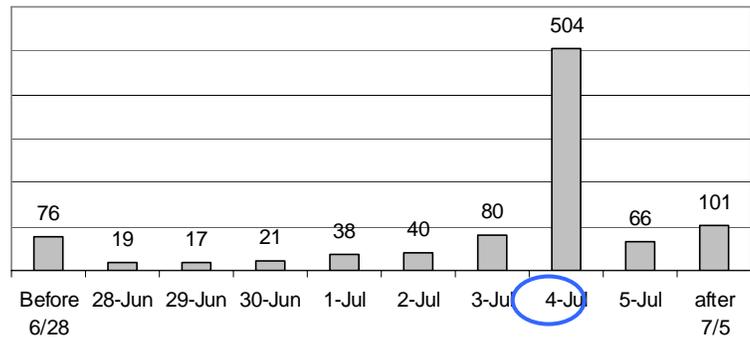
Fireworks related fires caused an estimated loss of \$951,133. Based on the reports received, illegal fireworks were identified as the cause in 19% of all reported firework related fires and caused \$336,073 in property loss, or 35% of the estimated total loss from fireworks related fires. Legal fireworks were identified in 51% of the reported fires, with a loss of \$481,951. The type of fireworks was not identified by the reporting fire department in 60% of the fire incidents. (Table #1).

Property Type Table #1	Dollar Loss by Classification of Fireworks Device				Number of Fires by Classification of Device			
	Legal	Illegal	Unidentified	Total	State Legal	State Illegal	Unknown	Total
Vegetation/Wildland	\$278,575	\$8,973	\$8,710	\$296,258	108	140	500	748
Residential	\$195,650	\$321,600	\$121,400	\$638,650	11	18	50	79
Commercial	\$225	\$500	0	\$725	7	3	12	22
Vehicle	\$7,500	\$4,500	\$3,000	\$15,000	5	9	9	23
Other/Unknown	0	\$500	0	\$500	7	10	30	47
Totals	\$481,950	\$336,073	\$133,110	\$951,133	138	180	601	919

Wildland areas are at great risk from fires caused by fireworks. Of the fire incidents reported, 68% resulted in vegetation or wildland fires, with a fire loss of \$296,258, 7% were residential with a fire loss of \$638,650 and 2% were vehicle fires with a fire loss of \$15,000 (Table #1).

Firework related incidents most often occur on the date that they are most widely used, July 4. This has remained constant over the past five years.

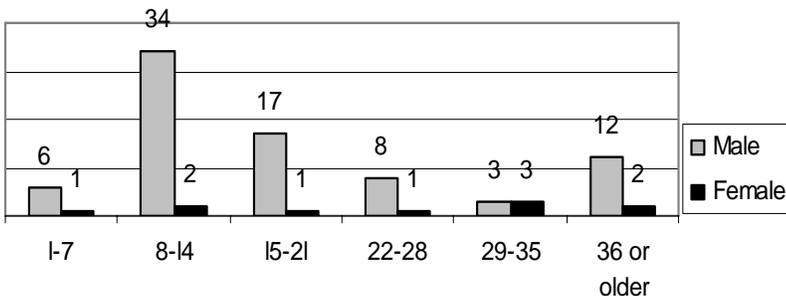
Fireworks Related Fires by Time of Day



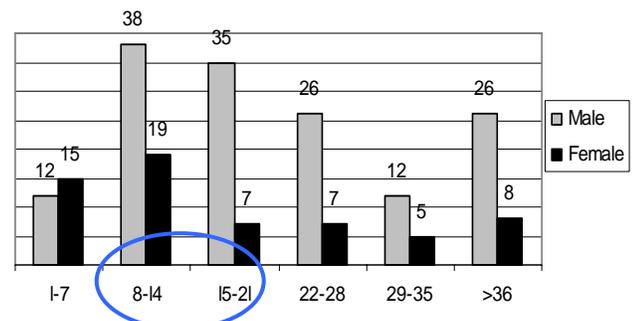
Everyone that discharges fireworks should be aware of safety precautions to follow.

Fireworks related fires by age and gender clearly shows that male juveniles are causing most (89%) of the fireworks related fires. Fireworks related injuries by age and gender show that male youth and young adults are most often injured in fireworks related injury incidents. There was no adult supervision in 12% of these incidents. According to the Center for Disease Control, children are 11 times more likely to be injured by fireworks if they are unsupervised.

Fireworks Related Fires by Age and Gender



Fireworks Related Injuries by Age and Gender



The type of injury caused most often was burns at 58%. The next leading injury was trauma at 30%, followed by amputations at less than 1%. When discharging fireworks a first aid kit should be on hand.

<i>Legal Classification of Firework Table #2</i>									
<i>Type of Injury</i>					<i>Injury Location</i>				
	<i>Illegal</i>	<i>Legal</i>	<i>Unk</i>	<i>Total</i>	<i>Body Part</i>	<i>Legal</i>	<i>Illegal</i>	<i>Unk</i>	<i>Total</i>
Trauma	27	12	17	56	Head	30	33	0	63
First Degree Burn	10	21	20	51	Hand	16	17	0	33
Second Degree Burn	16	19	14	49	Arm	3	9	0	12
Not Marked	12	3	8	23	Leg	7	6	0	13
Third Degree Burn	2	5	3	10	Torso	4	4	0	8
Amputation	1		1	2	Unknown	0	0	62	62
Total	68	60	63	191	Totals	60	69	62	191

Table #3 shows the type of fireworks devices that were involved in injury incidents. Illegal fireworks were the cause of 61 incidents or 35% and legal fireworks were also responsible for 61 incidents or 35%. Of the 61 incidents involving legal devices, roman candles caused 17, or 28% of the incidents followed by sparklers at 14, or 23% and third is multi aerials at 13, or 21% of the incidents. The remaining miscellaneous fireworks caused 17 or 28% of the incidents. Bottlerockets and firecrackers lead the list of illegal devices causing injuries.

<i>Table #3 Injury by Type of Device</i>			
Legal	# of Incidents	Illegal	# of Incidents
Roman Candle	17	Bottlerocket	13
Sparkler	14	Firecracker	12
Multi Aerial	13	Missiles/Rocket	11
Smoke bomb	7	Homemade Explosive Device	8
Cone Fountain	7	Public Display Mortars	7
Ground Bloom Flower	2	M80	4
Novelties	1	Altered Fireworks	3
Helicopter	0	Tennis Ball	1
Wheel	0	M-100's or larger	1
Total Legal Devices	61	Pipe Bomb	1
		Total Illegal Devices	61
		Unknown Device Type	69
		Total - All Devices	191

<i>Table #4 Cause of Injury</i>	
Holding	29
Leaning	13
Delayed Ignition	12
Altered/Tampering	11
Surface	9
Throwing	6
Other/unknown	111
Total	191

As shown in Table #4, the leading cause of fireworks related injuries is “holding” at 29 incidents followed by “leaning” at 13 incidents and “delayed ignition” at 12 incidents.

Education and Enforcement Make a Difference

In an effort to reduce fireworks related losses, the City of Kent Fire and Police Departments, designed a campaign where education and enforcement proved to be a winning combination. Components of the campaign included:

- Combined police and fire emphasis patrols 6/28-7/4
- A voluntary amnesty program with a drop off for illegal fireworks
- Multi-lingual signage and flyers
- Media releases and media event
- A letter to all residents, flyer to schools

The campaign resulted in a significant reduction in fire loss and a reduction in response by emergency services.



State Illegal fireworks collected by the Kent amnesty program.

The safest way to prevent fireworks related injuries is to leave fireworks displays to trained professionals.¹ Their shows are spectacular but safe. There are over 100 professional displays on July 4 in Washington State, and other Independence Day activities.

Fireworks Incident Reports Received by County

County	Fire Agencies No Incidents	Fire Dept.		Total	Fire District		Total	Hospital	Grand Total
		Fire	Injury		Injury				
Adams	1	3		3	4		4		7
Benton	3	17		17			0		17
Chelan	0	7		7	2		2	5	14
Clallam	1	2		2			0	6	8
Clark	0	47	3	50	10		10	2	62
Columbia	0			0			0	1	1
Cowlitz	1	4	1	5	13	1	14	3	22
Douglas	2			0	4		4		4
Franklin	1	0	0	0	0	0	0	0	0
Garfield	0	1		1			0		1
Grant	3	16	1	17	10		10	2	29
Grays Harbor	4	7	5	12	1	1	2	12	26
Island	2	6		6	2		2	2	10
Jefferson	1	1		1	1	1	2		3
King	4	245	3	248	99	2	101	33	382
Kitsap	0	16	4	20	34	3	37		57
Kittitas	4	1		1	2		2		3
Klickitat	2	3		3	1		1		4
Lewis	2	1		1	2	2	4	2	7
Lincoln	4	4		4			0		4
Mason	0	3		3	7	1	8	5	16
Okanogan	4	6		6	7		7		13
Pacific	1	1		1	1	1	2	2	5
Pend Oreille	4	0	0	0	0	0	0	0	0
Pierce	7	16		16	57		57	8	81
San Juan	0	1		1	1		1		2
Skagit	4	20		20	1		1	9	30
Snohomish	14	29		29	30	2	32	31	92
Spokane	0	16	1	17	4		4	8	29
Stevens	0	1		1	7		7	1	9
Thurston	1	6	2	8	16	2	18	4	30
Wahkiakum	0			0			0	1	1
Walla Walla	2	1		1	7		7	2	10
Whatcom	0	3		3	20		20	11	34
Whitman	3	2		2			0	2	4
Yakima	5	32		32	57	1	58	3	93
Grand Total	80	518	20	538	400	17	417	155	1110

¹ National Fire Protection Association, Fireworks are Too Risky, NFPA Position Paper, On Line at <http://www.nfpa.org/Research/NFPAFactSheets/Fireworks/Risky/risky.asp>; printed 11/24/2003