

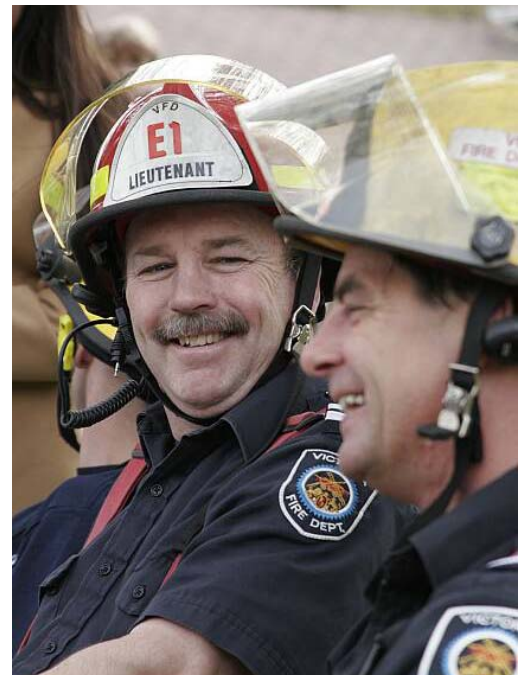


Ministry of  
Public Safety  
and Solicitor General

# Annual Statistical FIRE REPORT 2001-2003

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Office of the Fire Commissioner



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# MESSAGES

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## Minister's Message

British Columbia's Office of the Fire Commissioner (OFC) is committed to working with the province's fire services to continue keeping communities in B.C. safe.

The OFC is leading the way in addressing the challenges facing fire and emergency services by developing training standards and working on Innovations Projects that encourage alternative regional solutions to providing support to local fire departments.

Your partnership with the OFC is vital to the promotion of fire safety and fire prevention in our province, and I thank you for your dedication and commitment to the safety of all British Columbians.



John Les  
Solicitor General of British Columbia

## Fire Commissioner's Message

I am pleased to release the Office of the Fire Commissioner's (OFC) Annual Statistical Report for 2001-2003. This report provides a high light of fire-related statistics for British Columbia. The year 2003 was particularly devastating due to the *Firestorm 2003*.

An overview of fire activity in British Columbia from 2001-2003 is as follows: we've had 19,002 fires-resulting in 770 injuries and 108 fire-related deaths-and more than \$900 million in property losses.

The OFC is committed to working with local fire departments to collect data so that we can maintain a detailed record of statistical fire information. This information enables us to determine the fire safety needs of British Columbians and also serves as a valuable resource for communities in determining their own needs. Should you have any questions or comments concerning this report, we would encourage you to contact the OFC at 1-888-988-9488.



E. David Hodgins  
Fire Commissioner of British Columbia

# 2001 ANNUAL STATISTICAL REPORT

## British Columbia Fire Injury and Fatality Rates

Year	Population	BC Fire Injuries	BC Fire Deaths*	BC Fire Death Rate**
1992	3,501,832	479	47	1.3
1993	3,601,360	409	33	0.9
1994	3,711,072	428	30	0.8
1995	3,805,056	414	36	0.9
1996	3,899,213	432	27	1.0
1997	3,964,637	373	41	1.0
1998	3,990,414	333	30	0.8
1999	4,021,567	298	32	0.8
2000	4,069,264	343	42	1.0
2001	4,090,659	288	44	1.1
<b>10 Year Average of Injuries/Deaths</b>		<b>379.7</b>	<b>36.2</b>	<b>0.96</b>

\*A Fire Death is death directly due to fire or death within one year of a fire injury

\*\*Fire Death Rate = number of Fire Deaths per 100,000 population

Source of Population Statistics: Statistics Canada, CANSIM.

Prepared by: Population Section, BC Stats, Ministry of Labour and Citizens' Services, Government of British Columbia

### LOCATION OF FIRE DEATHS - 2001

Burnaby	5	Lake Country District	1
Nelson	4	Masset	1
Vancouver	4	Mission	1
Chilliwack	3	Prince George	1
Merritt	3	Sooke	1
Langley	2	Spallumcheen	1
New Hazelton	2	Squamish	1
Richmond	2	Swan Lake	1
Salt Spring Island	2	Thornhill	1
Surrey	2	West Vancouver District	1
Courtenay	1	Westbank	1
Kamloops	1	White Rock	1
Kitimat-Stikine R.D.	1	<b>TOTAL</b>	<b>44</b>

### FIRE FACTS

- 90% of injuries and 93% of deaths occur in structural fires.
- July and December have the most injuries and fatalities. July had 13.6% of the year's injuries and 13.6% of the year's fatalities; December had 13.2% of the year's injuries and 20% of the year's fatalities.
- 57% of the injuries in BC were considered minor, meaning the casualty spent less than 1 day in the hospital and took less than 1 day off work due to their injury.
- 45.5% of injuries were caused because the casualties voluntarily entered or remained within the site of the fire; 20% were injured while attempting to escape.
- 53% of the injured casualties were awake without physical or mental impairment at the time of the fire; 17% were asleep and 6% were impaired by alcohol/drugs/medication.
- The main cause of fires in both 1-2 family dwellings (22%) and apartments (25%) are cooking fires.
- 18% of structures that were involved in a fire did not have a smoke alarm installed.
- 43% of arson fires involve vehicles; 12% involve 1-2 family dwellings.
- Almost \$40 million in losses were due to arson fires, 30% of that dollar loss is due to damage to 1-2 family dwellings.
- Statistically B.C. has 4.8 arson fires each day.

## Circumstances Contributing to Fire Casualties

CODE & DESCRIPTION	FIRES	INJURIES	DEATHS	\$ LOSS
<b>NATURE OF CASUALTY</b>				
FC001 - DEATH	34	0	44	4,181,030
FC002 - LIGHT INJURY (HOSPITALIZED 1-2 DAYS AND/OR OFF WORK 1-15 DAYS)	73	85	0	3,168,401
FC003 - MINOR INJURY (LESS THAN ONE DAY IN HOSPITAL OR OFF WORK)	129	163	0	36,584,580
FC004 - SERIOUS INJURY (HOSPITALIZED 3+ DAYS AND/OR OFF WORK 15+ DAYS)	31	40	0	27,641,150
<b>SUBTOTAL</b>	<b>267</b>	<b>288</b>	<b>44</b>	<b>71,575,161</b>
<b>CONDITION OF CASUALTY</b>				
FC010 - CONDITION OF CASUALTY UNKNOWN	31	24	11	2,861,535
FC011 - ASLEEP AT TIME OF FIRE	43	48	15	2,092,300
FC012 - BEDRIDDEN OR OTHER PHYSICAL HANDICAP	5	1	4	689,100
FC013 - IMPAIRMENT BY ALCOHOL, DRUGS, OR MEDICATION	16	16	3	1,270,700
FC014 - AWAKE OR NO PHYSICAL OR MENTAL IMPAIRMENT AT TIME OF FIRE	134	153	4	32,301,806
FC015 - UNDER RESTRAINT OR DETENTION	0	0	0	0
FC016 - TOO YOUNG TO REACT TO FIRE EMERGENCY	2	1	1	263,500
FC017 - MENTAL HANDICAP - INCLUDES SENILITY	1	1	0	1,500
FC018 - CHILD LEFT UNATTENDED	0	0	0	0
FC019 - UNCLASSIFIED	33	44	6	7,354,220
<b>SUBTOTAL</b>	<b>265</b>	<b>288</b>	<b>44</b>	<b>46,834,661</b>
<b>ACTION OF CASUALTY</b>				
FC020 - ACTION OF CASUALTY UNKNOWN	44	34	18	2,047,295
FC021 - INJURED WHILE ATTEMPTING TO ESCAPE	40	48	9	27,651,050
FC022 - OVER-EXERTION, HEART ATTACK	7	5	2	553,860
FC023 - VOLUNTARILY ENTERED OR REMAINED FOR RESCUE PURPOSE	5	7	0	422,200
FC024 - VOLUNTARILY ENTERED OR REMAINED FOR FIRE FIGHTING	88	108	0	29,633,398
FC025 - VOLUNTARILY ENTERED OR REMAINED TO SAVE PERSONAL PROPERTY	17	16	1	896,520
FC026 - LOSS OF JUDGEMENT OR PANIC	7	6	2	1,583,038
FC027 - RECEIVED DELAYED WARNING	4	4	0	383,700
FC028 - DID NOT ACT	18	12	8	1,298,650
FC029 - UNCLASSIFIED	45	48	4	8,134,950
<b>SUBTOTAL</b>	<b>275</b>	<b>288</b>	<b>44</b>	<b>72,604,661</b>

## Major Causes of Fire Injuries

CODE & DESCRIPTION	FIRES	INJURIES	DEATHS	\$ LOSS
<b>INITIAL CAUSE OF INJURY OF DEATH</b>				
FC100 - SMOKE INHALATION	19	23	8	1,189,650
FC101 - BURNS RESULTING FROM FIRE AND FLAMES	15	13	5	826,975
FC102 - BURNS RESULTING FROM HOT SUBSTANCES	4	4	0	173,110
FC103 - STRUCK BY OBJECTS OR PERSONS	1	1	0	300,000
FC104 - INJURY CAUSED BY FALLS	0	0	0	0
FC105 - INJURY CAUSED BY EXPLOSIVES	0	0	0	0
FC107 - UNCLASSIFIED	9	11	0	276,600
FC108 - UNKNOWN	208	236	31	42,851,326
<b>SUBTOTAL</b>	<b>256</b>	<b>288</b>	<b>44</b>	<b>45,617,661</b>

## Casualties by Month

MONTH	FIRES	\$ LOSS	INJURED	DEATHS
JANUARY	477	11,558,764	27	4
FEBRUARY	443	13,433,674	26	2
MARCH	505	10,298,582	23	4
APRIL	466	15,191,347	18	4
MAY	547	13,686,961	9	1
JUNE	515	14,867,551	28	3
JULY	635	47,183,111	39	6
AUGUST	520	12,944,425	19	0
SEPTEMBER	472	8,127,508	18	3
OCTOBER	477	17,848,379	24	3
NOVEMBER	467	22,200,640	19	5
DECEMBER	511	15,548,287	38	9
<b>TOTAL</b>	<b>6,035</b>	<b>202,889,229</b>	<b>288</b>	<b>44</b>

## Fire Related Injuries and Deaths by Major Property Classification

Property Classification	Fire Injuries	%	Fire Deaths	%
Structural	258	89.6	41	93.2
Vehicle	23	8.0	3	6.8
Outdoor	3	1.0	0	0
Other	4	1.4	0	0
<b>TOTAL</b>	<b>288</b>	<b>100.0</b>	<b>44</b>	<b>100.0</b>

## Per Capita Losses

Year	Population	Fires	Fire Rate*	\$ Loss	\$ Loss/Capita
1992	3,501,832	7,787	2.22	167,949,108	47.96
1993	3,601,360	7,561	2.10	175,916,213	48.85
1994	3,711,072	7,436	2.00	176,198,076	47.48
1995	3,805,056	7,282	1.91	147,356,211	38.73
1996	3,899,213	7,494	1.92	165,040,632	42.33
1997	3,964,637	6,415	1.62	202,644,692	51.11
1998	3,990,414	6,674	1.67	167,096,340	41.87
1999	4,021,567	6,037	1.50	167,334,641	41.61
2000	4,069,264	6,315	1.55	157,866,569	38.79
2001	4,090,659	6,035	1.48	202,889,229	49.60

\*Fire Rate = Number of fires per 1,000 population

## Fire Losses by Property Type (PT)

PROPERTY TYPE	FIRES	INJ	DEA	\$ LOSS	% OF \$ LOSS
BUILDING WITH ONE SPECIFIC PROPERTY USE, E.G. RESIDENTIAL	2,612	239	39	141,113,245	69.56
BUILDING WITH TWO OR MORE SPECIFIC PROPERTY USES, E.G. SHOPPING MALL WITH RESTAURANT	284	19	2	23,519,022	11.59
VEHICLE	2,286	23	3	18,043,428	8.89
PROPERTY TYPE - UNCLASSIFIED	202	4	0	9,110,779	4.49
CANNOT BE DETERMINED	151	0	0	4,241,670	2.09
PIER, WHARF, OPEN PLATFORM	10	0	0	3,410,600	1.68
OPEN STRUCTURE	42	0	0	2,657,607	1.31
OUTDOOR AREA	445	1	0	778,378	0.38
UNDERGROUND STRUCTURE, MINE	2	2	0	13,500	0.01
TENT, AIR SUPPORTED STRUCTURE	1	0	0	1,000	0
<b>TOTAL</b>	<b>6,035</b>	<b>288</b>	<b>44</b>	<b>202,889,229</b>	<b>100.00</b>

## Fire Losses by Major Property Classes (PR)

MAJOR PROPERTY CLASSES	FIRES	INJ	DEA	\$ LOSS	% OF \$ LOSS
RESIDENTIAL	2,147	236	39	99,453,061	49.02
STORAGE PROPERTIES	167	4	0	35,483,962	17.49
SPECIAL PROPERTY - TRANSPORTATION EQUIPMENT, MISCELLANEOUS PROPERTY	3,099	27	5	29,275,690	14.43
MERCANTILE	139	5	0	15,717,052	7.75
INDUSTRIAL	122	0	0	12,161,895	5.99
ASSEMBLY	246	13	0	7,516,737	3.70
BUSINESS AND PERSONAL SERVICE	72	1	0	2,128,097	1.05
INSTITUTIONAL	42	1	0	1,152,685	0.57
PERSON	1	1	0	50	0
<b>TOTAL</b>	<b>6,035</b>	<b>288</b>	<b>44</b>	<b>202,889,229</b>	<b>100.00</b>

## Fire Losses by Major Sources of Ignition (IG)

MAJOR SOURCES OF IGNITION	FIRES	INJ	DEA	\$ LOSS	% OF \$ LOSS
NOT DETERMINED	2,015	43	21	72,345,498	35.66
SMOKER'S MATERIAL AND 'OPEN' FLAMES	1,238	109	13	40,499,528	19.96
MISCELLANEOUS	891	21	2	40,494,794	19.96
COOKING EQUIPMENT	532	66	7	14,192,711	7.00
HEATING EQUIPMENT	327	17	1	11,923,088	5.88
ELECTRICAL DISTRIBUTION EQUIPMENT	479	15	0	10,552,824	5.20
EXPOSURE	207	0	0	3,851,775	1.90
OTHER ELECTRICAL EQUIPMENT	153	8	0	3,782,155	1.86
APPLIANCES AND EQUIPMENT	150	9	0	3,234,310	1.59
NO IGNITING OBJECT	43	0	0	2,012,546	0.99
<b>TOTAL</b>	<b>6,035</b>	<b>288</b>	<b>44</b>	<b>202,889,229</b>	<b>100.00</b>

## Fire Losses by Major Acts or Omissions (AO)

MAJOR ACTS OR OMISSIONS	FIRES	INJ	DEA	\$ LOSS	% OF \$ LOSS
NOT DETERMINED	1,262	33	9	54,664,284	26.94
ARSON OR SET FIRES	1,736	38	6	39,850,804	19.64
HUMAN FAILING	1,002	129	15	32,904,470	16.22
MISCELLANEOUS	188	7	1	29,423,346	14.50
MECHANICAL, ELECTRICAL FAILURE, MALFUNCTION	1,225	23	0	20,578,183	10.14
MISUSE OF SOURCE OF IGNITION	327	42	9	16,640,851	8.20
MISUSE OF MATERIAL IGNITED	119	11	0	3,990,629	1.97
CONSTRUCTION, DESIGN, INSTALLATION DEFICIENCY	115	3	3	3,505,586	1.73
VEHICLE ACCIDENT	40	2	1	820,975	0.41
MISUSE OF EQUIPMENT	21	0	0	510,101	0.25
<b>TOTAL</b>	<b>6,035</b>	<b>288</b>	<b>44</b>	<b>202,889,229</b>	<b>100.00</b>

## Fire Losses by Major Materials First Ignited (MI)

Major Materials First Ignited	FIRES	INJ	DEA	\$ LOSS	% OF \$ LOSS
NOT DETERMINED	2,324	64	18	74,676,217	36.81
WOOD, PAPER PRODUCTS	544	11	0	49,201,491	24.25
BUILDING COMPONENTS	571	21	0	25,987,052	12.81
FLAMMABLE AND COMBUSTIBLE LIQUIDS	871	72	5	21,760,804	10.73
MISCELLANEOUS	825	22	4	10,147,438	5.00
FURNITURE, FURNISHINGS	307	56	11	9,766,866	4.81
CLOTHING, TEXTILES	171	19	4	3,341,875	1.65
CHEMICALS	216	13	1	3,270,389	1.61
AGRICULTURAL PRODUCTS	146	2	0	2,989,813	1.47
FLAMMABLE GASES	60	8	1	1,747,284	0.86
<b>TOTAL</b>	<b>6,035</b>	<b>288</b>	<b>44</b>	<b>202,889,229</b>	<b>100.00</b>

## Initial Detection of Fires (ID)

INITIAL DETECTION	FIRES	%
VISUAL SIGHTING	5,312	88.02
INITIAL DETECTION UNKNOWN	260	4.31
SMOKE ALARM DEVICE	181	3.00
SMOKE DETECTOR DEVICE	86	1.43
AUTOMATIC SPRINKLER SYSTEM	73	1.22
INITIAL DETECTION - UNCLASSIFIED	57	0.95
NONE	32	0.54
HEAT DETECTOR DEVICE	22	0.37
HEAT ALARM DEVICE	9	0.16
AUTOMATIC SYSTEM - OTHER THAN SPRINKLER	3	0
<b>TOTAL</b>	<b>6,035</b>	<b>100.00</b>

## Arson Fires

Property Class Codes	Property Group	# of Fires	\$ Loss	# of Injuries	# of Deaths
<b>ASSEMBLY</b>					
131-139	Educational	86	770,255	3	0
172-173	Nightclub, tavern	1	25,000	0	0
171, 174, 179	Restaurant, eating establishment	11	712,950	0	0
111-129,141-169 or 181-199	Other	36	668,200	0	0
<b>INSTITUTIONAL</b>					
221-229	Home for the aged	2	1,500	0	0
231-249	Hospital, day-centre, home	9	963,150	0	0
211-219, 299	Other	7	3,500	0	0
<b>RESIDENTIAL</b>					
311-319	One & two-family dwelling	214	11,992,598	23	5
321-329	Apartment	93	2,282,263	4	0
331-359	Hotel, motel, rooming house	15	698,708	0	0
361-369	Dormitory	0	0	0	0
371	Mobile Home	7	73,250	0	0
373-376	Recreational vehicle	16	143,250	0	0
372, 377-399	Other	5	8,921	0	0
411-499	Business and personal service	16	1,214,492	0	0
511-599	Mercantile	45	4,880,000	0	0
611-699	Industrial manufacturing	8	250,300	0	0
711-799	Industrial storage	59	5,637,972	1	0
<b>MISCELLANEOUS</b>					
811-829, 891	Outdoor property, pier, wharf	207	1,189,002	2	0
841-849	Watercraft	9	970,400	0	0
851-859	Rail transport and equipment	2	750	0	0
861	Automobile	710	5,450,897	3	1
862-869, 881-889	Other ground transport & special vehicle	30	465,050	0	0
871-879	Aircraft	0	0	0	0
831-839, 899 or 911-999	Others	147	1,448,346	1	0
<b>TOTAL</b>		<b>1,735</b>	<b>39,850,804</b>	<b>37</b>	<b>6</b>

## Comparison of 1-2 Family Dwellings to Apartments

TOTAL NUMBER OF FIRES IN PROPERTY GROUP	1-2 Family Dwelling	Apartment Building
	1,457	462
<b>COOKING FIRES</b>	<b>328</b>	<b>129</b>
As a percentage of all fires in group	22.5	27.9
As a percentage of total \$ loss in property group	10.2	8.3
Number of fatalities over total in property group	1/22	1/7
<b>HEATING EQUIPMENT FIRES</b>	<b>230</b>	<b>14</b>
As a percentage of all fires in group	15.8	3.0
As a percentage of total \$ loss in property group	13.8	2.1
Number of fatalities over total in property group	0/22	1/7
<b>SMOKING MATERIAL FIRES</b>	<b>76</b>	<b>77</b>
As a percentage of all fires in group	5.2	16.7
As a percentage of total \$ loss in property group	3.9	7.4
Number of fatalities over total in property group	8/22	2/7
<b>ARSON FIRES</b>	<b>214</b>	<b>93</b>
As a percentage of all fires in group	14.7	20.1
As a percentage of total \$ loss in property group	19.5	10.2
Number of fatalities over total in property group	5/22	0/7
<b>OTHER</b>	<b>609</b>	<b>149</b>
As a percentage of all fires in group	41.8	32.3
As a percentage of total \$ loss in property group	52.6	72.0
Number of fatalities over total in property group	8/22	3/7

## Smoke Alarm Operation

CODE	DESCRIPTION	FIRES	INJURIES	DEATHS	\$ LOSS
SD000	NO SMOKE ALARM INSTALLED	1,087	77	14	60,900,328
SD001	ALARM ACTIVATED - ASSISTED OCCUPANTS IN EVACUATING	414	55	4	26,933,957
SD002	ALARM ACTIVATED - INAUDIBLE	7	0	1	528,000
SD003	ALARM ACTIVATED - OCCUPANTS UNABLE TO RESPOND	21	5	2	1,680,500
SD004	ALARM ACTIVATED - UNNECESSARY TO EVACUATE	166	14	0	3,628,165
SD005	ALARM ACTIVATED - OCCUPANT ACTION UNKNOWN	80	13	3	2,166,044
SD006	ALARM NOT ACTIVATED - UNSUITABLE LOCATION	66	3	0	6,078,082
SD007	ALARM NOT ACTIVATED - NO OR DEAD BATTERY	78	11	3	2,412,371
SD008	ALARM NOT ACTIVATED - AC POWER NOT CONNECTED OR OFF	34	2	0	1,061,125
SD009	ALARM NOT ACTIVATED - MECHANICAL FAILURE	12	0	0	524,008
SD010	ALARM NOT ACTIVATED - UNKNOWN	230	23	0	6,552,367
SD011	NOT APPLICABLE EG. OUTSIDE AREA	3,267	36	4	32,952,367
SD099	SMOKE ALARM OPERATION UNKNOWN	573	49	13	57,471,915
<b>TOTAL</b>		<b>6,035</b>	<b>288</b>	<b>44</b>	<b>202,889,229</b>

# 2002 ANNUAL STATISTICAL REPORT

## British Columbia Fire Injury and Fatality Rates

Year	Population	BC Fire Injuries	BC Fire Deaths*	BC Fire Death Rate**
1993	3,601,360	409	33	1.1
1994	3,711,072	428	30	0.9
1995	3,805,056	414	36	1.0
1996	3,899,213	432	27	0.7
1997	3,964,637	373	41	0.8
1998	3,990,414	333	30	0.8
1999	4,021,567	298	32	0.9
2000	4,069,264	343	42	0.7
2001	4,090,659	288	44	1.0
2002	4,126,608	270	41	1.0
<b>10 Year Average of Injuries/Deaths</b>		<b>358.8</b>	<b>35.6</b>	<b>0.89</b>

\*A Fire Death is death directly due to fire or death within one year of a fire injury

\*\*Fire Death Rate = number of Fire Deaths per 100,000 population

Source of Population Statistics: Statistics Canada, CANSIM.

Prepared by: Population Section, BC Stats, Ministry of Labour and Citizens' Services, Government of British Columbia

### LOCATION OF FIRE DEATHS - 2002

Mount Waddington R.D.	7	Kelowna	1
Vancouver	7	Maple Ridge	1
North Vancouver	2	Penticton	1
Port Coquitlam	2	Prince George	1
Richmond	2	Sechelt	1
Sahtlam	2	Songhees First Nation	1
Summerland	2	Squamish	1
Beaver Creek	1	Terrace	1
Burnaby	1	Ucluelet	1
Courtenay	1	Vernon	1
Creston	1	Westside	1
Denman Island	1		
Hope District	1	<b>TOTAL</b>	<b>41</b>

### FIRE FACTS

- The most injuries occurred in October (39 injuries, 14%) and March (32 injuries, 12%), the most fatalities occurred in March (8 deaths, 19%), August (5 deaths, 12%) and September (5 deaths, 12%).
- 54% of the fire related injuries in BC were considered minor, meaning the casualty spent less than 1 day in hospital and took less than 1 day off work due to their injuries.
- 48.5% of the casualties were injured because they voluntarily chose to remain at the site of the fire to fight the fire, rescue another person, or save personal property.
- 34% of fires occurred in residential buildings.
- 20% of the fires were ignited by smoker's materials and "open" flames.
- Only 5% of fires were detected by an alarm, 83% were detected by visual sighting/human senses.
- 43% of arson fires involve vehicles, 11% involve 1-2 family dwellings.
- Almost \$42 million in losses were due to arson fires.
- Statistically, BC has 5.3 arson fires every day.
- The main cause of fires in both 1-2 family dwellings (22%) and apartments (25%) are cooking fires.
- 18% of structures that were involved in a fire did not have a smoke alarm installed.

## Circumstances Contributing to Fire Casualties

CODE & DESCRIPTION	FIRES	INJURIES	DEATHS	\$ LOSS
<b>NATURE OF CASUALTY</b>				
FC001 - DEATH	32	0	41	4,669,727
FC002 - LIGHT INJURY (HOSPITALIZED 1-2 DAYS AND/OR OFF WORK 1-15 DAYS)	81	94	0	3,952,697
FC003 - MINOR INJURY (LESS THAN ONE DAY HOSPITAL OR OFF WORK)	117	146	0	10,328,072
FC004 - SERIOUS INJURY (HOSPITALIZED 3+ DAYS AND/OR OFF WORK 15+ DAYS)	29	30	0	2,688,650
<b>SUBTOTAL</b>	<b>259</b>	<b>270</b>	<b>41</b>	<b>21,639,146</b>
<b>CONDITION OF CASUALTY</b>				
FC010 - CONDITION OF CASUALTY UNKNOWN	37	29	14	3,873,623
FC011 - ASLEEP AT TIME OF FIRE	37	41	9	2,181,400
FC012 - BEDRIDDEN OR OTHER PHYSICAL HANDICAP	5	2	3	776,550
FC013 - IMPAIRMENT BY ALCOHOL, DRUGS, OR MEDICATION	18	16	4	1,435,377
FC014 - AWAKE OR NO PHYSICAL OR MENTAL IMPAIRMENT AT TIME OF FIRE	128	149	5	9,084,637
FC015 - UNDER RESTRAINT OR DETENTION	0	0	0	0
FC016 - TOO YOUNG TO REACT TO FIRE EMERGENCY	1	1	0	10,000
FC017 - MENTAL HANDICAP - INCLUDES SENILITY	2	2	0	10,500
FC018 - CHILD LEFT UNATTENDED	0	0	0	0
FC019 - UNCLASSIFIED	33	30	6	2,897,059
<b>SUBTOTAL</b>	<b>261</b>	<b>270</b>	<b>41</b>	<b>20,269,146</b>
<b>ACTION OF CASUALTY</b>				
FC020 - ACTION OF CASUALTY UNKNOWN	46	38	17	7,158,670
FC021 - INJURED WHILE ATTEMPTING TO ESCAPE	36	39	5	2,623,105
FC022 - OVER-EXERTION, HEART ATTACK	5	5	0	159,825
FC023 - VOLUNTARILY ENTERED OR REMAINED FOR RESCUE PURPOSE	10	11	0	1,049,859
FC024 - VOLUNTARILY ENTERED OR REMAINED FOR FIRE FIGHTING	91	104	1	8,770,041
FC025 - VOLUNTARILY ENTERED OR REMAINED TO SAVE PERSONAL PROPERTY	17	16	1	752,377
FC026 - LOSS OF JUDGEMENT OR PANIC	13	12	2	726,700
FC027 - RECEIVED DELAYED WARNING	1	1	0	90,000
FC028 - DID NOT ACT	13	10	9	344,475
FC029 - UNCLASSIFIED	34	34	6	1,748,094
<b>SUBTOTAL</b>	<b>266</b>	<b>270</b>	<b>41</b>	<b>23,423,146</b>

## Casualties by Month

MONTH	FIRES	\$ LOSS	INJURED	FATALITIES
JANUARY	438	20,060,077	21	3
FEBRUARY	428	13,598,907	16	2
MARCH	472	23,320,080	32	8
APRIL	539	13,592,014	26	1
MAY	549	25,500,773	16	4
JUNE	612	21,197,135	17	2
JULY	634	12,936,839	23	2
AUGUST	641	13,225,314	15	5
SEPTEMBER	529	13,661,763	20	5
OCTOBER	738	16,967,219	39	4
NOVEMBER	601	17,726,917	21	2
DECEMBER	522	22,269,033	24	3
<b>TOTAL</b>	<b>6,703</b>	<b>214,056,071</b>	<b>270</b>	<b>41</b>

## Major Causes of Fire Injuries

CODE & DESCRIPTION	FIRES	INJURIES	DEATHS	\$ LOSS
<b>INITIAL CAUSE OF INJURY OF DEATH</b>				
FC100 - SMOKE INHALATION	21	21	6	2,459,277
FC101 - BURNS RESULTING FROM FIRE AND FLAMES	33	32	3	1,070,150
FC102 - BURNS RESULTING FROM HOT SUBSTANCES	9	9	0	137,770
FC103 - STRUCK BY OBJECTS OR PERSONS	1	1	0	125,000
FC104 - INJURY CAUSED BY FALLS	1	1	0	2,600
FC105 - INJURY CAUSED BY EXPLOSIVES	1	1	0	4,000
FC107 - UNCLASSIFIED	14	12	3	700,100
FC108 - UNKNOWN	167	193	29	14,273,249
<b>SUBTOTAL</b>	<b>247</b>	<b>270</b>	<b>41</b>	<b>18,772,146</b>
<b>CAUSE OF FAILURE TO ESCAPE</b>				
FC050 - UNKNOWN	53	50	12	6,062,207
FC051 - TRAPPED BY RAPID SPREADING OF FIRE/SMOKE THROUGH VERTICAL OPENINGS	2	0	2	421,000
FC052 - TRAPPED BY RAPID SPREADING OF FIRE/SMOKE THROUGH HORIZONTAL OPENINGS	9	6	4	530,177
FC053 - HIGH FLAME SPREAD OF COMBUSTIBLE INTERIOR FINISH OF WALLS, CEILINGS	11	5	6	933,500
FC054 - BUILDING COLLAPSE	0	0	0	0
FC055 - FALLING DEBRIS	1	1	0	180,000
FC056 - EXPLOSION	7	6	2	1,058,000
FC057 - EXIT LOCKED, BLOCKED OR OBSTRUCTED	1	1	0	60,000
FC058 - OUTDOOR FIRE INCLUDES FOREST/BRUSH FIRES	3	2	1	500,400
FC059 - UNCLASSIFIED OR NOT APPLICABLE	165	199	14	9,712,862
<b>SUBTOTAL</b>	<b>252</b>	<b>270</b>	<b>41</b>	<b>19,458,146</b>

## Fire Related Injuries and Deaths by Major Property Classification

Property Classification	Fire Injuries	%	Fire Deaths	%
Structural	239	88.5	32	76.0
Vehicle	16	6.0	7	17.2
Outdoor	9	3.3	1	3.4
Other	6	2.2	1	3.4
<b>TOTAL</b>	<b>270</b>	<b>100.0</b>	<b>41</b>	<b>100.0</b>

## Per Capita Losses

Year	Population	Fires	Fire Rate*	\$ Losses	\$ Loss/Capita
1993	3,601,360	7,561	2.10	\$175,916,213	\$48.85
1994	3,711,072	7,436	2.00	\$176,198,076	\$47.48
1995	3,805,056	7,282	1.91	\$147,356,211	\$38.73
1996	3,899,213	7,494	1.92	\$165,040,632	\$42.33
1997	3,964,637	6,415	1.62	\$202,644,692	\$51.11
1998	3,990,414	6,674	1.67	\$167,096,340	\$41.87
1999	4,021,567	6,037	1.50	\$167,334,641	\$41.61
2000	4,069,264	6,315	1.55	\$157,866,569	\$38.79
2001	4,090,659	6,035	1.48	\$202,889,229	\$49.60
2002	4,126,608	6,703	1.62	\$214,056,071	\$51.87

\*Fire Rate = Number of fires per 1,000 population

## Fire Losses by Property Type (PT)

PROPERTY TYPE	FIRES	INJ	DEA	\$ LOSS	% OF \$ LOSS
BUILDING WITH ONE SPECIFIC PROPERTY USE, E.G. RESIDENTIAL	2,644	213	32	146,045,216	68.23
BUILDING WITH TWO OR MORE SPECIFIC PROPERTY USES, E.G. SHOPPING MALL WITH RESTAURANT	286	25	0	30,120,096	14.07
VEHICLE	2,188	16	7	18,513,887	8.65
CANNOT BE DETERMINED	471	0	0	8,565,511	4.00
PROPERTY TYPE - UNCLASSIFIED	198	6	1	4,348,874	2.03
OUTDOOR AREA	861	9	1	3,657,509	1.71
OPEN STRUCTURE	34	1	0	2,089,103	0.98
PIER, WHARF, OPEN PLATFORM	15	0	0	556,000	0.26
TENT, AIR SUPPORTED STRUCTURE	5	0	0	159,375	0.07
UNDERGROUND STRUCTURE, MINE	1	0	0	500	0
<b>TOTAL</b>	<b>6,703</b>	<b>270</b>	<b>41</b>	<b>214,056,071</b>	<b>100.00</b>

## Fire Losses by Major Property Classes (PR)

MAJOR PROPERTY CLASSES	FIRES	INJ	DEA	\$ LOSS	% OF \$ LOSS
RESIDENTIAL	2,263	215	30	98,462,908	46.00
SPECIAL PROPERTIES – TRANSPORTATION EQUIPMENT, MISCELLANEOUS PROPERTY	3,569	27	8	41,497,225	19.39
MERCANTILE	179	6	0	22,407,479	10.47
INDUSTRIAL	183	5	0	21,036,627	9.83
ASSEMBLY	241	3	0	15,414,541	7.20
STORAGE PROPERTIES	166	9	0	8,355,575	3.90
BUSINESS AND PERSONAL SERVICE	60	2	0	6,298,940	2.94
INSTITUTIONAL	39	3	3	578,926	0.27
PERSON	3	0	0	3,850	0
<b>TOTAL</b>	<b>6,703</b>	<b>270</b>	<b>41</b>	<b>214,056,071</b>	<b>100.00</b>

## Fire Losses by Major Sources of Ignition (IG)

MAJOR SOURCES OF IGNITION	FIRES	INJ	DEA	\$ LOSS	% OF \$ LOSS
NOT DETERMINED	2,321	45	19	102,838,779	48.04
SMOKER'S MATERIAL AND "OPEN" FLAMES	1,344	91	7	30,359,536	14.18
MISCELLANEOUS	1,015	11	6	15,511,470	7.25
ELECTRICAL DISTRIBUTION EQUIPMENT	530	23	2	15,191,816	7.10
OTHER ELECTRICAL EQUIPMENT	161	7	0	13,821,938	6.46
HEATING EQUIPMENT	317	16	0	12,342,325	5.76
COOKING EQUIPMENT	549	69	4	11,853,014	5.54
EXPOSURE	273	1	1	7,548,276	3.53
APPLIANCES AND EQUIPMENT	139	5	2	3,508,596	1.64
NO IGNITING OBJECT	54	2	0	1,080,321	0.50
<b>TOTAL</b>	<b>6,703</b>	<b>270</b>	<b>41</b>	<b>214,056,071</b>	<b>100.00</b>

## Fire Losses by Major Acts or Omissions (AO)

MAJOR ACTS OR OMISSIONS	FIRES	INJ	DEA	\$ LOSS	% OF \$ LOSS
NOT DETERMINED	1,467	47	10	69,034,584	32.25
HUMAN FAILING	1,148	110	8	42,630,442	19.92
ARSON OR SET FIRES	1,928	31	9	41,662,093	19.46
MECHANICAL OR ELECTRICAL FAILURE	1,314	31	3	31,517,872	14.72
MISCELLANEOUS	219	4	0	9,668,235	4.52
MISUSE OF SOURCE OF IGNITION	333	32	4	9,046,546	4.23
CONSTRUCTION DESIGN OR INSTALLATION DEFICIENCY	102	6	2	4,353,759	2.03
MISUSE OF MATERIAL IGNITED	116	6	0	3,627,367	1.69
VEHICLE ACCIDENT	48	2	5	1,729,045	0.81
MISUSE OF EQUIPMENT	28	1	0	786,128	0.37
<b>TOTAL</b>	<b>6,703</b>	<b>270</b>	<b>41</b>	<b>214,056,071</b>	<b>100.00</b>

## Fire Losses by Major Materials First Ignited (MI)

MAJOR MATERIALS FIRST IGNITED	FIRES	INJ	DEA	\$ LOSS	% OF \$ LOSS
NOT DETERMINED	2,629	74	13	97,623,499	45.61
BUILDING COMPONENTS	700	27	3	31,709,546	14.81
WOOD, PAPER PRODUCTS	577	22	0	24,803,983	11.59
MISCELLANEOUS	930	26	0	24,369,432	11.38
FLAMMABLE AND COMBUSTIBLE LIQUIDS	915	68	15	16,106,266	7.52
FURNITURE, FURNISHINGS	260	36	4	8,292,812	3.87
CLOTHING, TEXTILES	200	7	5	3,460,274	1.62
CHEMICALS	204	4	1	2,923,737	1.37
AGRICULTURAL PRODUCTS	217	1	0	2,883,185	1.35
FLAMMABLE GASES	71	5	0	1,883,337	0.88
<b>TOTAL</b>	<b>6,703</b>	<b>270</b>	<b>41</b>	<b>214,056,071</b>	<b>100.00</b>

## Initial Detection of Fires (ID)

INITIAL DETECTION	FIRES	%
VISUAL SIGHTING	5,610	83.69
INITIAL DETECTION UNKNOWN	597	8.91
SMOKE ALARM DEVICE	181	2.71
SMOKE DETECTOR DEVICE	104	1.55
INITIAL DETECTION - UNCLASSIFIED	66	0.98
AUTOMATIC SPRINKLER SYSTEM	62	0.93
NONE	43	0.64
HEAT DETECTOR DEVICE	15	0.22
AUTOMATIC SYSTEM - OTHER THAN SPRINKLER	14	0.21
HEAT ALARM DEVICE	11	0.16
<b>TOTAL</b>	<b>6,703</b>	<b>100.00</b>

## Arson Fires

Property Class Codes	Property Group	# of Fires	\$ Loss	# of Injuries	# of Deaths
<b>ASSEMBLY</b>					
131-139	Educational	69	454,371	0	0
172-173	Nightclub, tavern	2	2,500	0	0
171, 174, 179	Restaurant, eating establishment	23	2,659,630	0	0
111-129, 141-169 or 181-199	Other	31	1,446,136	1	0
<b>INSTITUTIONAL</b>					
221-229	Home for the aged	1	1	0	0
231-249	Hospital, day-centre, home	3	12,200	0	0
211-219, 299	Other	6	27,775	0	0
<b>RESIDENTIAL</b>					
311-319	One & two-family dwelling	219	15,578,094	12	8
321-329	Apartment	89	2,017,661	10	1
331-359	Hotel, motel, rooming house	17	1,059,799	1	0
361-369	Dormitory	1	2,000	0	0
371	Mobile Home	4	146,000	0	0
373-376	Recreational vehicle	13	76,626	0	0
372, 377-399	Other	10	226,150	0	0
411-499	Business and personal service	23	2,697,090	1	0
511-599	Mercantile	60	2,702,147	0	0
611-699	Industrial manufacturing	19	740,851	0	0
711-799	Industrial storage	81	1,787,590	2	0
<b>MISCELLANEOUS</b>					
811-829, 891	Outdoor property, pier, wharf	320	221,101	2	0
841-849	Watercraft	6	59,000	0	0
851-859	Rail transport and equipment	1	500	0	0
861	Automobile	784	6,124,260	2	0
862-869, 881-889	Other ground trans. & special vehicle	34	1,096,278	0	0
871-879	Aircraft	0	0	0	0
831-839, 899 or 911-999	Others	112	2,524,333	0	0
<b>TOTAL</b>		<b>1,928</b>	<b>41,662,093</b>	<b>31</b>	<b>9</b>

## Comparison of 1-2 Family Dwellings to Apartments

TOTAL NUMBER OF FIRES IN PROPERTY GROUP	1-2 Family Dwelling	Apartment Building
	1,518	518
<b>COOKING FIRES</b>	<b>331</b>	<b>130</b>
As a percentage of all fires in group	21.8	25.1
As a percentage of total \$ loss in property group	7.1	19.3
Number of fatalities over total in property group	2/22	2/4
<b>HEATING EQUIPMENT FIRES</b>	<b>235</b>	<b>13</b>
As a percentage of all fires in group	15.5	2.5
As a percentage of total \$ loss in property group	14.4	1.3
Number of fatalities over total in property group	0/22	0/4
<b>SMOKING MATERIAL FIRES</b>	<b>77</b>	<b>76</b>
As a percentage of all fires in group	5.1	14.7
As a percentage of total \$ loss in property group	3.6	8.4
Number of fatalities over total in property group	1/22	1/4
<b>ARSON FIRES</b>	<b>219</b>	<b>89</b>
As a percentage of all fires in group	14.4	17.2
As a percentage of total \$ loss in property group	22.5	9
Number of fatalities over total in property group	8/22	1/4
<b>OTHER FIRES</b>	<b>656</b>	<b>210</b>
As a percentage of all fires in group	43.2	59.5
As a percentage of total \$ loss in property group	52.4	70.4
Number of fatalities over total in property group	11/22	0/4

## Smoke Alarm Operation

CODE	DESCRIPTION	FIRES	INJURIES	DEATHS	\$ LOSS
SD000	NO SMOKE ALARM INSTALLED	1,336	59	5	68,060,548
SD001	ALARM ACTIVATED - ASSISTED OCCUPANTS IN EVACUATING	405	72	2	26,886,070
SD002	ALARM ACTIVATED - INAUDIBLE	10	2	1	592,100
SD003	ALARM ACTIVATED - OCCUPANTS UNABLE TO RESPOND	19	6	4	1,078,075
SD004	ALARM ACTIVATED - UNNECESSARY TO EVACUATE	144	14	0	4,469,322
SD005	ALARM ACTIVATED - OCCUPANT ACTION UNKNOWN	81	5	0	1,778,055
SD006	ALARM NOT ACTIVATED - UNSUITABLE LOCATION	71	4	1	907,778
SD007	ALARM NOT ACTIVATED - NO OR DEAD BATTERY	70	4	0	2,132,236
SD008	ALARM NOT ACTIVATED - AC POWER NOT CONNECTED OR OFF	36	4	0	871,188
SD009	ALARM NOT ACTIVATED - MECHANICAL FAILURE	15	1	0	93,950
SD010	ALARM NOT ACTIVATED - UNKNOWN	231	15	0	7,991,889
SD011	NOT APPLICABLE EG. OUTSIDE AREA	3,633	38	9	31,348,520
SD099	SMOKE ALARM OPERATION UNKNOWN	652	46	19	67,846,340
<b>TOTAL</b>		<b>6,703</b>	<b>270</b>	<b>41</b>	<b>\$214,056,071</b>

# 2003 ANNUAL STATISTICAL REPORT

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## Firestorm 2003

The summer of 2003 was the worst to date for forest fires in British Columbia. Abnormally hot, dry weather resulted in over 2,500 wildfire starts over a vast area, mostly in the interior of the province. Interface fires, which occur in places where wildland meets urban development, were at an all-time record high. The interface fires of 2003 destroyed over 334 homes and many businesses, and forced the evacuation of over 45,000 people. The total cost of the Firestorm is estimated at \$700 million. The greatest cost of all was the loss of the lives of three pilots who died in the line of duty.

A Firestorm Provincial Review was performed and chaired by Hon. Gary Filmon P.C., O.M. The result was the Firestorm 2003 Provincial Review report, and a detailed account of what occurred during Firestorm 2003. The information and the report can be accessed digitally by this link: [www.2003firestorm.gov.bc.ca/default.htm](http://www.2003firestorm.gov.bc.ca/default.htm).

Due to the overwhelming nature of this emergency, fire departments were unable to record exact figures and information about each structure, business, or vehicle that was affected by the Firestorm. The information retrieved by the Firestorm Provincial Review is the most accurate recording of what occurred during this stressful time.

Data in this report will not include the details of the damage that resulted from Firestorm 2003, but does incorporate all other fire activity that occurred in the province for 2003. Refer to the link provided above if more information about Firestorm 2003 is required.

## British Columbia Fire Injury and Fatality Rates

Year	Population	BC Fire Injuries	BC Fire Deaths*	BC Fire Death Rate**
1994	3,711,072	428	30	0.8
1995	3,805,056	414	36	1.0
1996	3,899,213	432	27	0.7
1997	3,964,637	373	41	1.0
1998	3,990,414	333	30	0.8
1999	4,021,567	298	32	0.8
2000	4,069,264	343	42	1.0
2001	4,090,659	288	44	1.1
2002	4,126,608	270	41	1.0
2003	4,154,591	212	23	0.6
<b>10 Year Average of Injuries/Deaths</b>		<b>381.9</b>	<b>34.6</b>	<b>0.88</b>

\*A Fire Death is death directly due to fire or death within one year of a fire injury

\*\*Fire Death Rate = number of Fire Deaths per 100,000 population

Source of Population Statistics: Statistics Canada, CANSIM.

Prepared by: Population Section, BC Stats, Ministry of Labour and Citizens' Services, Government of British Columbia

### LOCATION OF FIRE DEATHS 2003

Surrey	3
Westside District	3
Cariboo R.D.	2
Chilliwack	2
Vancouver	2
Abbotsford	1
Burnaby	1
Coquitlam	1
Kelowna	1
Kitimat-Stitkine R.D.	1
Langley	1
Logan Lake	1
Mill Bay	1
North Cowichan	1
North Vancouver	1
Parksville	1
<b>TOTAL</b>	<b>23</b>

### FIRE FACTS

- The most injuries occurred in July (15%) and August (12%); the most fatalities occurred in January and February (both 17%).
- 47% of the casualties were injured because they chose to remain at the site of the fire to either fight the fire, rescue another person, or save personal property.
- 31% of fires occurred in vehicles.
- 35% of fires occurred in residential homes.
- The dollar loss per person in BC for 2003 is \$116.49.
- 22% of fires were ignited by smoker's materials and "open" flames.
- Only 5% of fires were detected by an alarm, 83% were detected by visual sighting/human senses.
- 39% of arson fires involve vehicles, 25% involve residential structures.
- Over \$60 million in losses were due to arson fires.
- Statistically, B.C. had 4.75 arson fires every day in 2003.

## Circumstances Contributing to Fire Casualties

CODE & DESCRIPTION	FIRES	INJURIES	DEATHS	\$ LOSS
<b>NATURE OF CASUALTY</b>				
FC001 - DEATH	22	0	23	2,114,001
FC002 - LIGHT INJURY (HOSPITALIZED 1-2 DAYS AND/OR OFF WORK 1-15 DAYS)	65	74	0	12,985,573
FC003 - MINOR INJURY (LESS THAN ONE DAY HOSPITAL OR OFF WORK)	96	114	0	10,562,649
FC004 - SERIOUS INJURY (HOSPITALIZED 3+ DAYS AND/OR OFF WORK 15+ DAYS)	22	24	0	3,393,862
<b>SUBTOTAL</b>	<b>205</b>	<b>212</b>	<b>23</b>	<b>29,056,085</b>
<b>CONDITION OF CASUALTY</b>				
FC010 - CONDITION OF CASUALTY UNKNOWN	42	33	11	6,687,692
FC011 - ASLEEP AT TIME OF FIRE	28	31	3	2,889,502
FC012 - BEDRIDDEN OR OTHER PHYSICAL HANDICAP	1	0	1	87,089
FC013 - IMPAIRMENT BY ALCOHOL, DRUGS, OR MEDICATION	9	7	2	1,447,446
FC014 - AWAKE OR NO PHYSICAL OR MENTAL IMPAIRMENT AT TIME OF FIRE	84	99	4	10,198,487
FC015 - UNDER RESTRAINT OR DETENTION	0	0	0	0
FC016 - TOO YOUNG TO REACT TO FIRE EMERGENCY	0	0	0	0
FC017 - MENTAL HANDICAP - INCLUDES SENILITY	3	2	1	69,500
FC018 - CHILD LEFT UNATTENDED	0	0	0	0
FC019 - UNCLASSIFIED	33	40	1	9,709,871
<b>SUBTOTAL</b>	<b>200</b>	<b>212</b>	<b>23</b>	<b>31,089,587</b>
<b>ACTION OF CASUALTY</b>				
FC020 - ACTION OF CASUALTY UNKNOWN	36	28	13	6,835,617
FC021 - INJURED WHILE ATTEMPTING TO ESCAPE	32	36	3	4,878,014
FC022 - OVER-EXERTION, HEART ATTACK	2	1	1	262,810
FC023 - VOLUNTARILY ENTERED OR REMAINED FOR RESCUE PURPOSE	14	17	0	5,356,307
FC024 - VOLUNTARILY ENTERED OR REMAINED FOR FIRE FIGHTING	66	76	0	5,055,867
FC025 - VOLUNTARILY ENTERED OR REMAINED TO SAVE PERSONAL PROPERTY	6	7	0	460,984
FC026 - LOSS OF JUDGEMENT OR PANIC	12	9	3	650,500
FC027 - RECEIVED DELAYED WARNING	1	1	0	500
FC028 - DID NOT ACT	13	11	2	1,233,329
FC029 - UNCLASSIFIED	24	26	1	7,212,040
<b>SUBTOTAL</b>	<b>206</b>	<b>212</b>	<b>23</b>	<b>31,945,968</b>

## Casualties by Month

MONTH	FIRES	\$ LOSS	INJURED	FATALITIES
JANUARY	452	39,868,915	20	4
FEBRUARY	462	11,680,755	19	4
MARCH	455	23,614,950	19	1
APRIL	440	16,114,219	21	2
MAY	457	67,081,406	10	1
JUNE	606	36,569,693	13	1
JULY	776	36,193,261	32	1
AUGUST	667	116,796,097	25	1
SEPTEMBER	498	23,528,353	11	2
OCTOBER	514	18,540,680	11	1
NOVEMBER	533	33,447,197	13	3
DECEMBER	404	60,535,421	18	2
<b>TOTAL</b>	<b>6,264</b>	<b>483,970,947</b>	<b>212</b>	<b>23</b>

## Major Causes of Fire Injuries

CODE & DESCRIPTION	FIRES	INJURIES	DEATHS	\$ LOSS
<b>INITIAL CAUSE OF INJURY OF DEATH</b>				
FC100 - SMOKE INHALATION	43	42	7	2,686,339
FC101 - BURNS RESULTING FROM FIRE AND FLAMES	27	31	3	2,862,538
FC102 - BURNS RESULTING FROM HOT SUBSTANCES	21	23	0	873,787
FC103 - STRUCK BY OBJECTS OR PERSONS	0	0	0	0
FC104 - INJURY CAUSED BY FALLS	8	10	0	1,632,400
FC105 - INJURY CAUSED BY EXPLOSIVES	0	0	0	0
FC107 - UNCLASSIFIED	12	10	5	6,224,116
FC108 - UNKNOWN	80	96	8	12,379,313
<b>SUBTOTAL</b>	<b>191</b>	<b>212</b>	<b>23</b>	<b>26,658,493</b>
<b>CAUSE OF FAILURE TO ESCAPE</b>				
FC050 - UNKNOWN	48	39	11	3,180,149
FC051 - TRAPPED BY RAPID SPREADING OF FIRE/SMOKE THROUGH VERTICAL OPENINGS,	4	0	4	618,792
FC052 - TRAPPED BY RAPID SPREADING OF FIRE/SMOKE THROUGH HORIZONTAL OPENINGS	5	7	1	540,389
FC053 - HIGH FLAME SPREAD OF COMBUSTIBLE INTERIOR FINISH OF WALLS, CEILINGS	2	2	0	11,000
FC054 - BUILDING COLLAPSE	0	0	0	0
FC055 - FALLING DEBRIS	0	0	0	0
FC056 - EXPLOSION	6	9	0	628,592
FC057 - EXIT LOCKED, BLOCKED OR OBSTRUCTED	5	5	1	705,585
FC058 - OUTDOOR FIRE INCLUDES FOREST/BRUSH FIRES	5	6	0	232,820
FC059 - UNCLASSIFIED OR NOT APPLICABLE	123	144	6	20,981,835
<b>SUBTOTAL</b>	<b>198</b>	<b>212</b>	<b>23</b>	<b>26,899,162</b>

## Fire Related Injuries and Deaths by Major Property Classification

Property Classification	Fire Injuries	%	Fire Deaths	%
Structural	195	92	18	78
Vehicle	10	5	4	17
Outdoor	5	2	1	5
Other	2	1	0	0
<b>TOTAL</b>	<b>212</b>	<b>100.0</b>	<b>23</b>	<b>100.0</b>

## Per Capita Losses

Year	Population	Fires	Fire Rate*	\$ Losses	\$ Loss/Capita
1994	3,711,072	7,436	2.00	176,198,076	47.48
1995	3,805,056	7,282	1.91	147,356,211	38.73
1996	3,899,213	7,494	1.92	165,040,632	42.33
1997	3,964,637	6,415	1.62	202,644,692	51.11
1998	3,990,414	6,674	1.67	167,096,340	41.87
1999	4,021,567	6,037	1.50	167,334,641	41.61
2000	4,069,264	6,315	1.55	157,866,569	38.79
2001	4,090,659	6,035	1.48	202,889,229	49.60
2002	4,126,608	6,703	1.62	214,056,071	51.87
2003	4,154,591	6,264	1.51	483,970,947	116.49

\*Fire Rate = Number of fires per 1,000 population

## Fire Losses by Property Type (PT)

PROPERTY TYPE	FIRES	INJ	DEA	\$ LOSS	% OF \$ LOSS
BUILDING WITH ONE SPECIFIC PROPERTY USE, E.G. RESIDENTIAL	2,361	180	17	370,284,970	76.51
BUILDING WITH TWO OR MORE SPECIFIC PROPERTY USES, E.G. SHOPPING MALL WITH RESTAURANT	229	15	1	41,600,851	8.60
OUTDOOR AREA	879	4	1	31,542,023	6.52
VEHICLE	1,969	10	4	25,506,307	5.27
CANNOT BE DETERMINED	584	0	0	12,994,258	2.68
PROPERTY TYPE - UNCLASSIFIED	204	2	0	1,427,298	0.30
OPEN STRUCTURE	25	0	0	440,840	0.09
UNDERGROUND STRUCTURE, MINE	2	0	0	110,050	0.02
PIER, WHARF, OPEN PLATFORM	10	1	0	44,350	0.01
TENT, AIR SUPPORTED STRUCTURE	1	0	0	20,000	0
<b>TOTAL</b>	<b>6,264</b>	<b>212</b>	<b>23</b>	<b>483,970,947</b>	<b>100.00</b>

## Fire Losses by Major Property Classes (PR)

MAJOR PROPERTY CLASSES	FIRES	INJ	DEA	\$ LOSS	% OF \$ LOSS
RESIDENTIAL	2,163	172	18	235,609,496	48.68
INSTITUTIONAL	30	3	0	71,491,876	14.77
ASSEMBLY	219	2	0	69,168,664	14.30
SPECIAL PROPERTIES - TRANSPORTATION EQUIPMENT, MISCELLANEOUS PROPERTY	3,376	15	4	45,898,832	9.48
MERCANTILE	143	1	1	23,170,066	4.79
INDUSTRIAL	162	7	0	15,692,011	3.24
BUSINESS AND PERSONAL SERVICE	52	5	0	14,752,071	3.05
STORAGE PROPERTIES	119	7	0	8,187,931	1.69
PERSON	0	0	0	0	0
<b>TOTAL</b>	<b>6,264</b>	<b>212</b>	<b>23</b>	<b>483,970,947</b>	<b>100.00</b>

## Fire Losses by Major Sources of Ignition (IG)

MAJOR SOURCES OF IGNITION	FIRES	INJ	DEA	\$ LOSS	% OF \$ LOSS
SMOKER'S MATERIAL AND "OPEN" FLAMES	1,370	61	7	120,417,603	24.88
EXPOSURE	258	3	0	98,087,158	20.27
COOKING EQUIPMENT	520	55	2	89,433,465	18.48
NOT DETERMINED	2,135	47	10	83,551,990	17.26
ELECTRICAL DISTRIBUTION EQUIPMENT	418	8	0	25,412,627	5.25
OTHER ELECTRICAL EQUIPMENT	132	2	0	22,655,518	4.68
MISCELLANEOUS	948	14	2	20,440,052	4.22
HEATING EQUIPMENT	302	18	1	15,366,658	3.18
APPLIANCES AND EQUIPMENT	115	4	0	7,166,291	1.48
NO IGNITING OBJECT	66	0	1	1,439,585	0.30
<b>TOTAL</b>	<b>6,264</b>	<b>212</b>	<b>23</b>	<b>483,970,947</b>	<b>100.00</b>

## Fire Losses by Major Acts or Omissions (AO)

MAJOR ACTS OR OMISSIONS	FIRES	INJ	DEA	\$ LOSS	% OF \$ LOSS
HUMAN FAILING	1,190	110	5	134,721,374	27.84
MISCELLANEOUS	232	7	0	99,123,998	20.48
NOT DETERMINED	1,281	46	7	64,620,386	13.35
ARSON OR SET FIRES	1,734	16	4	60,328,065	12.47
MISUSE OF SOURCE OF IGNITION	403	16	3	55,115,656	11.39
MECHANICAL OR ELECTRICAL FAILURE	1,141	7	0	40,747,613	8.42
CONSTRUCTION DESIGN OR INSTALLATION DEFICIENCY	103	3	0	17,754,391	3.67
MISUSE OF MATERIAL IGNITED	100	6	1	7,714,764	1.59
VEHICLE ACCIDENT	43	0	3	1,963,272	0.41
MISUSE OF EQUIPMENT	37	1	0	1,881,428	0.39
<b>TOTAL</b>	<b>6,264</b>	<b>212</b>	<b>23</b>	<b>483,970,947</b>	<b>100.00</b>

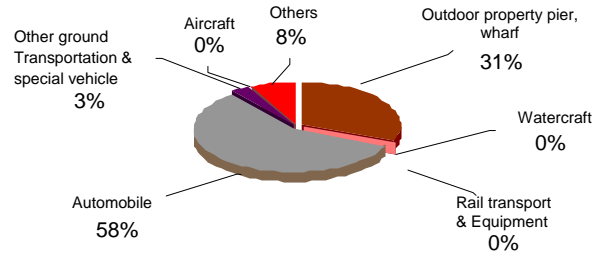
## Fire Losses by Major Materials First Ignited (MI)

Major Materials First Ignited	FIRES	INJ	DEA	\$ LOSS	% OF \$ LOSS
NOT DETERMINED	2,370	54	7	169,683,629	35.06
AGRICULTURAL PRODUCTS	437	5	0	77,871,791	16.09
WOOD, PAPER PRODUCTS	602	14	1	67,928,670	14.04
FLAMMABLE AND COMBUSTIBLE LIQUIDS	788	52	7	47,972,689	9.91
BUILDING COMPONENTS	620	18	1	35,243,999	7.28
CLOTHING, TEXTILES	159	10	1	27,792,141	5.74
MISCELLANEOUS	823	18	0	22,489,200	4.65
CHEMICALS	194	2	0	17,285,058	3.57
FURNITURE, FURNISHINGS	206	32	6	13,971,954	2.89
FLAMMABLE GASES	65	7	0	3,731,816	0.77
<b>TOTAL</b>	<b>6,264</b>	<b>212</b>	<b>23</b>	<b>483,970,947</b>	<b>100.00</b>

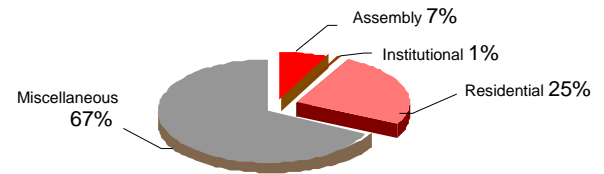
## Initial Detection of Fires (ID)

INITIAL DETECTION	FIRES	%
VISUAL SIGHTING	5,190	82.85
INITIAL DETECTION UNKNOWN	632	10.09
SMOKE ALARM DEVICE	167	2.67
SMOKE DETECTOR DEVICE	85	1.36
INITIAL DETECTION - UNCLASSIFIED	61	0.97
AUTOMATIC SPRINKLER SYSTEM	49	0.78
NONE	38	0.61
HEAT DETECTOR DEVICE	22	0.35
HEAT ALARM DEVICE	12	0.19
AUTOMATIC SYSTEM - OTHER THAN SPRINKLER	8	0.13
<b>TOTAL</b>	<b>6,264</b>	<b>100.00</b>

## Property Class Percentage Affected by Arson:



## Miscellaneous Property Class Percentages:



## Arson Fires

Property Class Codes	Property Group	# of Fires	\$ Loss	# of Injuries	# of Deaths
<b>ASSEMBLY (7%)</b>					
131-139	Educational	77	4,827,535	0	0
172-173	Nightclub, tavern	2	2,050,000	0	0
171, 174, 179	Restaurant, eating establishment	14	1,496,070	0	0
111-129, 141-169 or 181-199	Other	27	1,675,643	0	0
<b>INSTITUTIONAL (1%)</b>					
221-229	Home for the aged	3	97,001	0	0
231-249	Hospital, day-centre, home	3	3,050	0	0
211-219, 299	Other	6	158,850	0	0
<b>RESIDENTIAL (25%)</b>					
311-319	One & two-family dwelling	216	11,992,486	10	0
321-329	Apartment	69	4,589,750	4	2
331-359	Hotel, motel, rooming house	8	8,500	0	0
361-369	Dormitory	0	0	0	0
371	Mobile Home	5	71,000	0	0
373-376	Recreational vehicle	12	60,668	0	0
372, 377-399	Other	7	139,520	0	1
411-499	Business and personal service	13	5,878,767	0	0
511-599	Mercantile	50	4,657,609	0	0
611-699	Industrial manufacturing	22	2,200,925	0	0
711-799	Industrial storage	31	4,179,972	0	0
<b>MISCELLANEOUS (67%)</b>					
811-829, 891	Outdoor property, pier, wharf	363	3,637,355	1	1
841-849	Watercraft	4	35,650	0	0
851-859	Rail transport and equipment	0	0	0	0
861	Automobile	678	10,599,897	0	0
862-869, 881-889	Other ground trans. & special vehicle	35	498,223	0	0
871-879	Aircraft	1	70,000	0	0
831-839, 899 or 911-999	Others	88	1,399,594	1	0
<b>TOTAL</b>		<b>1,734</b>	<b>60,328,065</b>	<b>16</b>	<b>4</b>

## Comparison of 1-2 Family Dwellings to Apartments

TOTAL NUMBER OF FIRES IN PROPERTY GROUP	1-2 Family Dwelling	Apartment Building
	1,533	420
<b>COOKING FIRES</b>	<b>316</b>	<b>126</b>
As a percentage of all fires in group	20.6	30.0
As a percentage of total \$ loss in property group	6.8	38.5
Number of fatalities over total in property group	0/10	2/6
<b>HEATING EQUIPMENT FIRES</b>	<b>223</b>	<b>12</b>
As a percentage of all fires in group	14.5	2.9
As a percentage of total \$ loss in property group	5.9	0.5
Number of fatalities over total in property group	1/10	0/6
<b>SMOKING MATERIAL FIRES</b>	<b>93</b>	<b>67</b>
As a percentage of all fires in group	6.1	16.0
As a percentage of total \$ loss in property group	2.6	19.6
Number of fatalities over total in property group	4/10	1/6
<b>ARSON FIRES</b>	<b>216</b>	<b>69</b>
As a percentage of all fires in group	14.1	16.4
As a percentage of total \$ loss in property group	6.8	9.0
Number of fatalities over total in property group	0/10	2/6
<b>OTHER FIRES</b>	<b>685</b>	<b>272</b>
As a percentage of all fires in group	44.7	34.7
As a percentage of total \$ loss in property group	77.9	32.4
Number of fatalities over total in property group	5/10	1/6

## Smoke Alarm Operation

CODE	Description	Fires	Injuries	Deaths	\$ LOSS
SD000	NO SMOKE ALARM INSTALLED	1,336	58	4	65,970,338
SD001	ALARM ACTIVATED - ASSISTED OCCUPANTS IN EVACUATING	320	36	1	57,729,457
SD002	ALARM ACTIVATED - INAUDIBLE	10	1	0	580,400
SD003	ALARM ACTIVATED - OCCUPANTS UNABLE TO RESPOND	19	2	4	1,313,238
SD004	ALARM ACTIVATED - UNNECESSARY TO EVACUATE	143	10	0	63,733,650
SD005	ALARM ACTIVATED - OCCUPANT ACTION UNKNOWN	70	7	2	10,557,273
SD006	ALARM NOT ACTIVATED - UNSUITABLE LOCATION	58	0	0	19,989,421
SD007	ALARM NOT ACTIVATED - NO OR DEAD BATTERY	56	11	0	2,346,236
SD008	ALARM NOT ACTIVATED - AC POWER NOT CONNECTED OR OFF	42	0	0	1,137,253
SD009	ALARM NOT ACTIVATED - MECHANICAL FAILURE	16	2	0	2,749,416
SD010	ALARM NOT ACTIVATED - UNKNOWN	222	18	0	27,649,047
SD011	NOT APPLICABLE EG. OUTSIDE AREA	3,410	24	5	70,764,665
SD099	SMOKE ALARM OPERATION UNKNOWN	562	43	7	159,450,553
<b>TOTAL</b>		<b>6,264</b>	<b>212</b>	<b>23</b>	<b>483,970,947</b>

## Glossary

### Act or omission (AO)

*The human element by which someone has done something (an act) or failed to do something (an omission). The act or omission indicates whether the fire was deliberate, neglectful or accidental.*

#### Incendiary or Set Fires:

Includes arson, suspected incendiarism, riot, mischief or vandalism.

#### Misuse of Source of Ignition:

Includes disposal of smoker's material, thawing, inadequate control of an open fire, children playing with source of ignition, welding or cutting too close to combustible material or torch too close to combustible material.

#### Misuse of Material Ignited:

Includes fuel spilled accidentally, improper fuelling technique, cleaning or washing parts, improper container, overheated cooking oil, combustible placed too close to heat, and improper storage.

#### Construction, Design or Installation

##### Deficiency:

Includes construction or design deficiency, installation too close to a combustible, other installation deficiency or over-fusing.

##### Misuse of Equipment:

Overfuelling, includes any misuse of equipment or tools.

##### Human Failing:

Includes person asleep, temporary loss of judgement, physical disability, panic, influence of alcohol or drugs and ignorance of hazard.

### Area of origin (OA)

*The area of a building or vehicle where the fire started.*

### Casualty

*A person injured or killed accidentally as a direct result of a fire.*

### Death

*A person killed as a direct result of a fire or a person who dies from a fire injury within one year following the date on which the injury was sustained.*

### Fuel or energy (FU)

*The fuel associated with the source of ignition. Includes coal, wood, fuel oil, gasoline, natural gas or other fuel gases, smoker's material, electricity, lightning or exposures.*

### Injury

*A person injured as a direct result of a fire.*

#### Minor Injury:

An injury that does not require hospitalization of more than a 24-hour period or absence from work of not more than one full day.

#### Light Injury:

An injury that required admission to a hospital for between 24 hours to 48 hours and/or absence from work for a period of two to fifteen days.

#### Serious Injury:

An injury that required admission to a hospital for a period of more than 48 hours and/or an absence from work for a period exceeding fifteen days.

### Initial Detection (ID)

*The means by which the fire was first detected.*

### Material first ignited (MI)

*The actual material that ignites and creates the fire condition.*

### Property classification (PR)

*The principal use or occupancy of the building.*

#### Assembly:

Property for the gathering of persons for civic, political, travel, religious, social, educational or recreational purposes. Includes theatres, amusement or recreation places, schools, colleges, universities, churches, social or sport clubs, libraries and museums, eating establishments and passenger terminals.

#### Institutional:

Property for medical treatment, or care of persons suffering from illness, disease or infirmity, for the care of infants, convalescents or aged persons and for penal or corrective purposes. Includes prisons, jails, reformatories, homes for

## GLOSSARY

the aged, children's hospitals, hospitals and clinics.

### **Residential:**

Property in which sleeping accommodation is provided for normal residential purposes. Includes one and two family dwellings, apartments, rooming or boarding houses, hotels, motels, dormitories and mobile homes.

### **Business and Personal Service:**

Property for conducting business. Includes offices, personal services such as hairdressing and data processing or storage facilities.

### **Mercantile:**

Property used for the display and sale of merchandise. Includes food and beverage sales, textile and clothing sales, furniture and appliance sales, books and specialty sales, recreational and hobby supply sales, repair shops, laundries, vehicle and boat sales and department or variety stores.

### **Industrial Manufacturing Properties:**

Property where raw materials are transformed into new products and where the component parts of manufactured products are assembled. Includes chemical, petroleum, paint and plastic manufacturing; wood, furniture, and paper manufacturing; metal product and electrical equipment manufacturing; food processing; beverage, tobacco, soap and margarine manufacturing; textile manufacturing; footwear and wearing apparel manufacturing; and vehicle and related equipment manufacturing.

### **Storage Properties:**

Property used primarily for the storage or sheltering of goods, merchandise, products, vehicles, or animals. Includes agricultural product storage; textile, fibre and clothing storage; processed food and beverage storage; flammable liquids, gas and petroleum products storage; wood, furniture, and paper products storage; chemical, paint and plastic storage; metal products, machinery, and electrical appliance storage and vehicle storage.

### **Special Property and Transportation Equipment:**

Mainly outdoor property and transport equipment. Includes outdoor property, piers, buildings under construction or demolition, watercraft, rail transport vehicles, ground transport vehicles, aircraft and other special equipment.

### **Miscellaneous:**

Includes laboratories, farm facilities, outbuildings, utilities, glass and pottery manufacturing, mining, communications and nucleonics.

## **Property Type (PT)**

*The type of property involved in the fire, i.e. building, vehicle, outside area.*

## **Source of ignition (IG)**

*The actual equipment, device or object which brings about ignition.*

### **Cooking Equipment:**

includes stove, range, food warming appliance, deep fat fryer, broiler and portable cooking unit.

### **Heating Equipment:**

Includes central heating unit, service water heater, space heater, fireplace, chimney, flue pipe and steam or hot water pipe.

### **Appliances and Equipment:**

includes dryer, air conditioning equipment, pressing iron and incinerator.

### **Smoker's Material and 'Open' Flames:**

Includes cigarettes, pipes, cigars and/or matches, lighters when used in conjunction with smoking. Includes matches and lighters not associated with smoker's material, candles, cutting torches, welding equipment and hot ashes.

### **Exposure:**

Includes exposure from an attached or detached structure, lumber yard, open fire, forest, grass and brush.

### **Miscellaneous:**

Includes internal combustion engine, heat treatment equipment, industrial oven, tar pot, fireworks, conveyors, commercial and industrial machinery and chemical reactions.

# OFFICE OF THE FIRE COMMISSIONER

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## CONTACT INFORMATION TO THE OFFICE OF THE FIRE COMMISSIONER

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PO Box 9491 Stn Prov Govt  
Victoria BC V8W 9N7

Toll Free: 1-888-988-9488

Phone: 250-356-9000

Fax: 250-356-9019

E-mail: [ofc@gov.bc.ca](mailto:ofc@gov.bc.ca)

Website: <http://www.pssg.gov.bc.ca/firecom/>

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### ACKNOWLEDGEMENTS

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Thank you to the Victoria Fire Department for providing the photo on front cover of this print version of the report.  
(photo taken by Aaron McMillan)

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Fire Reporting Systems Officer, Jennifer Bresciani 1-888-944-9488  
[ofc@gov.bc.ca](mailto:ofc@gov.bc.ca)