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No. T-2030-13

FEDERAL COURT

BETWEEN:

**NEIL ALLARD
TANYA BEEMISH
DAVID HEBERT
SHAWN DAVEY**

PLAINTIFFS

AND:

HER MAJESTY THE QUEEN IN RIGHT OF CANADA

DEFENDANTS

AFFIDAVIT OF TIM MOEN

I, Tim Moen, Fire Captain and Acting Battalion Chief, of the City of Fort McMurray, in the Province of Alberta, MAKE OATH AND SAY AS FOLLOWS, THAT:

1. I make this affidavit of my own personal knowledge, information and belief. Where matters are stated to be on information and belief, I so indicate and believe them to be true.
2. I have been asked to provide a rebuttal expert report to the Defendants' expert report of Len Garis of October 8, 2014 and this affidavit constitutes my rebuttal expert report.

**SERVICE OF A TRUE COPY
HEREOF ADMITTED**

DEC 22 2014

**WILLIAM F. PENTNEY /
Solicitor for
A.G.C.**



(a) Statement of the issues addressed in the report:

The issues I address in this report pertain to the issues of fire safety at residences that contain licensed medical marijuana grow operations.

Respectfully, I provide a rebuttal to specific items as noted in the Affidavits and reports of:

Len Garis of October 8, 2014

(b) Qualifications:

3. I have been in the fire service in various capacities since 1993 and a Fire officer since 2004. In my career as a municipal fire fighter and officer I have responded to hundreds of structure fires and inspected thousands of occupancies including residential, commercial and industrial structures.
4. I have an Masters of Arts degree in leadership from Royal Roads University wherein I was trained in qualitative research methods. Part of the requirement for this degree was completion of a thesis wherein I had to control for logical fallacies such as confirmation bias.
5. Details of my qualifications and experience are provided in my curriculum vitae, as addressed below.

(c) Curriculum Vitae:

I produce and attach a true copy of my Curriculum Vitae, marked as Exhibit "A" to this my Affidavit. I confirm that I drafted the attached Exhibit "A" and that the contents are true and accurate.

(d) The facts and assumptions on which the opinions in the report are based

6. In preparation for this affidavit, I have read and reviewed the affidavit of Len Garis and statistical information published online by the BC Fire Commissioners office.

7. I am responding to specific facts and assumptions addressed by Len Garis in his Affidavit.

(e) A summary of the opinions expressed

8. In my respectful opinion, the affidavit of Len Garis contains numerous methodological and analytical issues and contains a number of assertions of fact that directly contradict my experience as a fire safety professional.

9. I provide the following comments as a summary response to the whole of the affidavit and analysis of Len Garis: his expert report is undermined by the well-known phenomena of confirmation bias, cultural confirmation bias and the Texas sharpshooter fallacy.

Confirmation Bias

10. When a fire is investigated to determine root cause there is the immediate proximate cause of ignition and combustion and fire spread and then there are a number of categories one could identify as contributing factors. Faulty wiring is one possible cause of a fire, and if it is the cause of the fire in question, the cause of the faulty wiring could be one of many things. For example, one could walk into a house and notice that fire codes and standards are not being followed with regards to wiring because that the house is very old, one could notice that the house is under renovation and poor safety practices are being used, one could notice that the wiring has been clearly done by an amateur, and one could notice that the homeowners or occupants belong to a low income demographic. It is highly problematic to say that faulty wiring was caused by the fact that the occupant was growing cannabis without addressing any of the other possible causes of the faulty wiring.

11. If an individual is of the belief that marijuana grow ops are a hazard, which Mr. Garis clearly does, then he is biased and is likely to notice all the evidence that confirms his bias and ignore all evidence to the contrary, and in fact is likely to never even look for evidence to the contrary. Mr. Garis's expert report and opinions say more about his bias more dangerous than another conceivable category of causes of fire.

12. What results and opinion would the chief have if instead of walking into a fire scene and asking how grow ops created this problem he said "How has low income contributed to non-compliance with fire codes which led to this fire?" If this were his starting question he would likely come up with a different answer. In my opinion his bias determined his results.

Cultural Confirmation Bias

13. First of all Fire Chief Garis is highly unlikely to ever receive a positive report of exemplary compliance or occupancies that exceed safety standards with regard to any segment of the population, all he will ever hear about is unsafe conditions. This is because Fire Chiefs respond to reports of fires, which generally occur at residences that have unsafe conditions. Homeowners renovating their homes without proper licenses and inspections, which in my experience is very common, may be far more likely to have unsafe fire practices than cannabis growers but the Fire Chief will never hear about them because nobody notices and or reports those deficiencies. One would expect a group of individuals who have been inculcated with negative messaging about cannabis to pay more attention to and notice all the evidence that supports this bias and to not notice or actively ignore and even suppress information that contradicts their bias.

14. The chief, by nature of his job and by virtue of the cultural confirmation bias he expresses in his report, that marijuana grow operations are dangerous, is likely never exposed to any information other than that marijuana grow operations are the cause of a fire in question. There is no mention in his report of other possible causes, such as unapproved renovations of a residence that do not meet fire code or other building standards. As a result, the only possible cause mentioned in his report is marijuana grow operations. Again, correlation is not causation.

15. Mr. Garis does not address such alternative theories for the cause of the fires such as whether homes under renovation are more or less likely to catch fire and kill people than grow operations.

Texas Sharpshooter Fallacy

16. The Texas Sharpshooter Fallacy is a well recognized but informal fallacy wherein one identifies an item one would like to be the "bullseye" and then draws a bullseye around it. It comes from the image of a Texan shooting at the side of barn and drawing a bullseye around the greatest cluster of bullets after the fact.

17. The questions Len Garris was asked to consider are asking for fallacious results. They say "here is your target: Marijuana grow operations", now provide all the evidence that supports our thesis that they are a fire hazard. Mr. Garis then proceeds to selectively consider only a small selection of medical marijuana grow operations, extrapolates data from illegal grow operations and applies it to medical marijuana grow operations, and then concludes that medical marijuana grow operations are dangerous.

18. One could pick any target and ask the same question and get essentially the same results. For example, in the fire safety industry it is thought by many that "carpets" are a potential fire hazard. With this idea as an assumption, one could then conduct an investigation to find all the evidence necessary that supports the thesis that carpets are dangerous fire hazards, by for example considering the percentage of house fires where carpets were present without considering the percentage of houses in total that have carpets. The report would then show only the evidence that carpets cause fires. Replace "carpets" or "marijuana grow operations" with any target that could be a cause of fires and you will get the same results.

19. I have reviewed the statistics provided in Mr. Garis's report with respect to the incidence of fires at licensed grow sites and I disagree with his conclusion that licensed grow operations at residential properties have a higher incidence of fires than other residential properties. If about 20% of the 196 fires happened at a licensed grow site, this amounts to 39 fires. As of the end of 2013, there were 16,010 licensed marijuana grow sites in BC. The (estimated) 39 fires amounts to 0.24% of that number. In other words, as of the end of 2013, 99.76% of the licensed marijuana grow sites in BC had not experienced a fire since they had been set up. Most importantly, there appears to be

no difference between this estimated fire risk and the fire risk for residences in general. Table 3.8 of Appendix O of Mr. Garis's report indicates that 173 out of 73,118 single family homes in Surrey experienced a fire in 2003. This works out to 0.24%: the same level of fire risk.

(f) In the case of a report that is provided in response to another expert's report, an indication of the points of agreement and of disagreement with the other expert's opinions:

20. I disagree with all of the findings and conclusions in Mr. Garis' report with respect to medical marijuana grow operations that have been properly constructed in accordance with all laws as posing an increased risk of fire to residential buildings.

(g) The reasons for each opinion expressed follow the sequential points of agreement and of disagreement:

21. I make the following comments in rebuttal to the specified paragraphs of Mr. Garis' expert report:

22. In response to paragraph 17: Any serious examination of public health and safety concerns should also take into account the health and safety concerns of the alternative, namely prohibiting the manufacturing or growing of medical marijuana by individual patients or caregivers in their residences or Outbuildings or elsewhere. The author does not address this at all. In my opinion, licensing and regulation will reduce risks and prohibition will increase them once again.

23. In response to paragraph 28: What reason or evidence did authorities have to suspect that lawful medical marijuana grow-operations represented public safety hazards? The inclusion of no references leads me to conclude that there is no reason other than confirmation bias.

24. In response to paragraph 29: The author says, "The program was intended to reduce the incidence of house fires and associated public safety hazards caused by residential MGOs..." The starting assumption of the Len Garis work is that all marijuana

grow-operations are dangerous and all further research and activity is directed at proving that point.

25. In response to paragraph 41: The graph indicates evidence that regulation is actually working. As administrative processes catch up with industry we expect to see more inspections and engagement with marijuana growers. Repair notices on the rise is evidence that there is more engagement and inspection happening. A cornerstone of inspection is public education, the more engagement inspectors have with citizens the more education occurs and the safer we expect communities to be.

26. What is absent from this analysis is how other enterprises and categories compare in terms of amount of inspections, repair notice rates, and regulatory compliance issues. This would help determine whether the problem is in fact endemic in medical marijuana grow operations or whether this is a pattern across the board in terms of home businesses, homes of people with medical disabilities, homes renovated by owner, which are all equally legitimate categories that these inspected homes may belong to as well. This section coupled with section 146, which clearly shows far more compliance with safety standards by licensed MGOs compared to illicit grow-ops, suggests that regulation is making an improvement.

27. In response to paragraph 48(a): "Illicit grow operations pose significant electrical hazards..." The author does compare illicit grow-ops which make improper modifications and violate building and fire codes, with everyone else who makes improper modifications and violates building and fire codes. What is the increased danger of a grow-operation violating these codes versus any other codes violator? There is no attempt to explain or even understand why grow-operations would violate fire code other than to say that illicit grow-ops violate code through by-passing meters to avoid detection.

28. In response to paragraph 48(b): Mr. Garis lumps illicit and licensed operations together. Illicit grow-ops are irrelevant.

29. In response to paragraph 48(c): How does this level of mould compare to any other house where people take showers and moisture is present? In my experience mould is very common in regular households, especially in washrooms. Mould is also easy to control inexpensively using a fan or dehumidifier and dehumidistat.

30. In response to paragraph 48(d): In my experience almost all households and small businesses have Workplace Hazardous Materials Information System (WHMIS) violations. Labeling issues with chemicals is common place and is not a problem unique to cannabis growers in my experience.

31. In response to paragraph 48(e): This appears to contradict paragraph 146 which shows illicit grow operations to be far bigger culprits of safety violations.

32. In response to paragraph 48(f): Looking at the BC Annual Statistical Fire Reports from the Fire Commissioners office for the past decade I only find 2 reports of injuries related to a grow-op fire in 2004, none are reported in other years. I attach as **Exhibit "B"** to this my affidavit true copies of BC Annual Statistical Fire Reports from the Fire Commissioner's Office for 2001 to 2012. Where did the author get an injury rate of 16.8 from? It is also important to note that while grow-operations are associated with about 1% of fires, kitchens caused about 34% of residential fires in the same period. If fire safety is our primary goal and prohibition is our only solution then we ought to ban kitchens, and we are not about to do that.

33. In response to paragraph 55: Here Mr. Garis shows the number of fires caused by direct act or omission of a grow operation to be staying the same or going down while we know that PUPL's rose exponentially during the same time period and fire deaths also fell during that period. This suggests that there is no causal relationship or even correlation between grow operations and fires. Other important questions not addressed are: Do grow-ops ignore code at a rate that is greater than other categories? Why or why not? Can medical disability also contribute to fire safety issues? How does the disability of the grower relate to compliance with code? What is the difference in the rate of compliance between non-disabled growers and disabled growers?

34. The question that is forefront to my mind as a fire officer when we are talking about medically disabled people growing their own medicine is how can we help people with medical disabilities grow their medicine more safely?

35. In response to paragraph 58: The legalization of medical marijuana use has now created an environment where fire prevention officers can interact and educate medical marijuana growers about safety. The fact that repair notices are on the rise is evidence of this occurring.

36. There is no comparison of licensed marijuana growers that follow all fire code, building code and health regulation versus those that do not follow those codes. Studying the gap between growers that are compliant or even exemplary with code and those who are not compliant would produce very useful information in terms of regulatory actions that might remove obstacles and incentivize code compliance. I don't see any evidence that this gap has been studied or addressed.

37. In response to paragraph 61: Again the evidence presented in paragraph 146 suggests that the problem of bypassing electrical meters is greatly reduced by a factor of nearly 10 by licensing growers.

38. In response to paragraph 136: There is a failure here to acknowledge that the number of illegal grow-operation fires has been on the decline both in terms of gross number and as a percentage of fires per capita since 2007 when there were 30 fires in one year until 2012 where there were 15 fires (and these statistics include meth labs in with grow-operations so the number is actually lower).

39. In response to paragraph 138: The source of the injury rates is not clear. The Fire Commissioners reports only report 2 injuries in 2004 related to illegal grow-operation fires. Assuming the statistics are correct it begs the question as to why there is a higher rate of injuries in MGO fires: is this because growers are disabled, poor, live in old houses, or disregard of fire codes or some other reason?

40. In response to paragraph 146: This shows that in 3 of 4 measured areas licensed grow-operations are far safer than illicit grow-operations.

41. In response to paragraph 151: This fails to compare unsafe electrical practices due to renovations for grow-operations with rates of unsafe electrical practices due to renovations for general home improvement. My experience is that many homeowners who renovate do not get permits, nor have professional electricians do their work, nor have electrical inspectors vet and approve their work.

42. In response to paragraph 154: Mr. Garis's conclusion could just as easily be that disregard for electrical code is higher in illicit grow operations than licensed grow-operations, and that since a pathway to licensing has been established and fire inspections with repair notices have increased, fire rates have fallen. Followed by recommendations that make getting licenses easier and make engagement with fire safety officials stronger.

43. In response to paragraph 167: Why is there blatant disregard for fire codes? There is no work to understand this question. Mr. Garis provides nothing that controls for things like income level of the home. Is it possible that non-compliance for building codes and municipal bylaws has more to do with the fact that the house is old? What is the difference between safe marihuana growers and unsafe marihuana growers? Are marijuana growers more likely than any other type of grower to disregard safety regulations? Are there similar issues facing other grow operations such as tomato and cucumber growers?

(h) Any literature or other materials specifically relied on in support of the opinions:

1. BC Annual Statistical Fire Reports from the Fire Commissioner's Office for 2001 to 2012.

(i) A summary of the methodology used, including any examinations, tests or other investigations on which the expert has relied, including details of the qualifications of the person who carried them out, and whether a representative of any other party was present;

(j) Any caveats or qualifications necessary to render the report complete and accurate, including those relating to any insufficiency of data or research and an indication of any matters that fall outside the expert's field of expertise;


2. Not applicable.

(k) Particulars of any aspect of the expert's relationship with a party to the proceeding or the subject matter of his or her proposed evidence that might affect his or her duty to the Court.

3. I have no relationship with any party to this proceeding or any other relationship that would affect my evidence or my duty to this Court in any way. Now produced and marked as Exhibit "C" to this my Affidavit is my Certificate Concerning Code of Conduct for Expert Witnesses.

4. I swear this Affidavit as an expert rebuttal witness on behalf of the Plaintiffs in this action.

SWORN BEFORE ME at the City)
of Calgary, in the Province of)
Albera, this 19th day of)
December, 2014)



A Commissioner for Taking Affidavits in)
and for the Province of Alberta)



Tim Moen

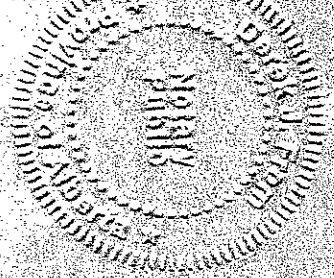
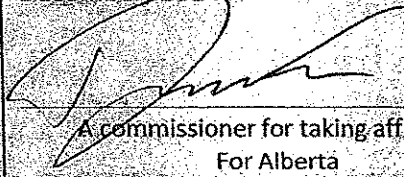
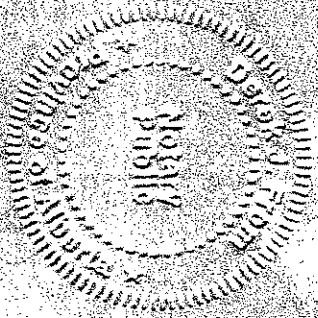


EXHIBIT "A"

This is Exhibit "A" referred to in the
Affidavit of Tim Moen sworn before me at
Calgary, this 19 day of
December, 2014.



A commissioner for taking affidavits
For Alberta



Tim Moen

905 Auburn Bay Square SE
Calgary, AB T3M 0Y7
Home Phone (780) 598-2558

Resume

TRAINING AND PROFESSIONAL DEVELOPMENT

FORMAL EDUCATION

Master of Arts - Leadership *Royal Roads University*
2010 - 2012

Emergency Medical Technologist – Paramedic *NAIT*
1994 – 1996

Emergency Medical Technician – Ambulance *SAIT*
1992 - 1993

PERTINENT TRAINING

Safety Codes Officer Training, NFPA 1001 Level 2 Structural Firefighting, NFPA 1021 Level 2 – Fire Officer, NFPA 1041 Level 2 – Fire Service Instructor, NFPA 1051 – Wildland Firefighting, NFPA 1003 – Aircraft Rescue and Firefighting, NFPA 1081 – Industrial Firefighting, NFPA 472 – Hazmat Tech, ICS 100-300, Bluecard Command Training, RMWB Media Training, Chemical Biological Radiological and Nuclear Responder Level 2, Hazmat Advanced Life Support Training, ACLS Instructor, ITLS Instructor, AMLS Instructor, PHTLS Instructor

Work Experience

**Regional Municipality of Wood Buffalo (RMWB) – Regional
Emergency Services
Fort McMurray, AB**

2010 - Present

Captain/Acting Battalion Chief

Duties include; responsible for managing day to day operations of fire hall, scheduling and managing operational personnel, performing incident command role at emergency scenes, providing Hazmat response and leadership. Providing Advanced Life Support EMS when required.

2009 - Present

Fire Lieutenant

Duties include; leading emergency response teams in performing fire and rescue operations at the tactical level. Providing Advanced Life Support EMS when required.

2008

Medical Training Coordinator (6 month temp)

Duties include; Identifying medical training needs of Fire Departments approximately 120 members and implementing a comprehensive training plan that ensures professional competencies and customer service requirements are met.

2004 - 2008

EMS Lieutenant (Full-Time)

Duties include; supervising operations of regional ambulance delivery, monitoring quality assurance measures, writing Standard Operating Guidelines, orientating staff, identifying/implementing training needs, writing administrative proposals, purchasing equipment within a budget, coaching and counseling subordinates, chairing working groups and special projects groups, ensuring Alberta Health EHS requirements are met, provide incident command during mass casualty incidents, representing region at provincial meetings with the AAOA.

2001-2004

Fire Fighter/Paramedic (Full-Time)

Duties include; emergency response to fire and EMS calls within the RMWB, acting as team leader on EMS calls

**Keyano College
Fort McMurray, AB**

2001 - 2007

Contract Instructor (Part-Time)

Teaching Emergency Technologist - Paramedic program. Subjects taught include: 'Pathophysiology', 'Air Ambulance', and 'The Professional Paramedic: Law and Ethics'.

**Epic Productions
Fort McMurray, AB**

2006 - 2014

Business Owner

Grew value of business to 20X original purchase price. Experience securing start-up capital, bookkeeping, managing payroll, preparing tax returns, sales and marketing, business planning, employee recruitment and retention, preparing estimates, web page design and creation, and working with partners. Experienced between 70-120% growth since buying business.
www.epicfortmcmurray.com

**Industrial Paramedic Services
Fort McMurray, AB**

2003-2004

1 Year as Regional Manager (Full-Time equivalent)

Duties included; contract negotiation, hiring/terminating employees, wage negotiation, sales and marketing, operational supervision, invoicing, managing an office budget, purchasing equipment, working within a corporate mission and vision.

**Grande Prairie Regional Emergency Medical Services
(GPREMS)
Grande Prairie, AB**

1998-2000

2 Years as EMS Supervisor (Full-Time)

Duties included; similar to EMS Lieutenant position. While in this position I had the opportunity to initiate and implement a highly successful Community First Response program. This involved securing funds, recruiting, training, and equipping community members to respond to emergencies in outlying areas.

1996-1998

2 Years as Paramedic (Full-Time)

Duties Included: Responding to EMS calls, transporting critically ill/injured patients via air and ground ambulance

LEADERSHIP EXPERIENCE

Training

Throughout my career I have participated in various leadership courses and workshops including; Courses offered in the Fire Officer Training Program at Lakeland College, Business Courses at Keyano College, GPREMS Supervisor training, RMWB Customer Service etc. These courses have provided skill sets such as; establishing and leading working groups, setting benchmarks/performance indicators, effective business communication, time management, stress management, coaching and counseling, selection and motivation etc.

Graduate Thesis

My MA Leadership thesis studied high performance fire fighting teams and applied the lens of complex adaptive systems and self-organization theory to understand leadership within these teams. Comparing and contrasting leadership practices and the mental models different teams and leaders had of command and control, I was able to develop best practice recommendations for organizational leaders within the RMWB Regional Emergency Services department in a collaborative process that utilized the frame work of appreciative inquiry.

Leading Group of Volunteer First Responders

While working as a Supervisor for GPREMS, I had the opportunity to initiate and implement a highly successful Community First Response program. This involved securing funds, recruiting, training, and equipping community members to respond to emergencies in outlying areas. On-going skills maintenance, regular meetings and establishing an organizational structure to ensure the groups continued success were all elements of this project.

Multi-million Dollar Oil Sands Medical Contract Bid

While with Industrial Paramedics Services I led a group including company salesmen, administration assistance, medical director (physician) and other managers through a bid and contract negotiation process with a large oilsands company involving a detailed RFP review, subsequent proposal(s), and lengthy corporate negotiations on comprehensive medical services contract including elements such as; on-site physician, diagnostic imaging, legislative requirements, minimizing health region impact, emergency medical response, medical clinic, air ambulance operations, profit margin budgeting, local resource coordination plans. Negotiations lasted several months and resulted in a conditional contract offering.

Over 20 Years of Mitigating Emergencies

The nature of my work involves call by call providing leadership to mitigate specific emergencies. Leadership of team members, other emergency response agencies and the general public are all required to some degree on every single call. This has allowed a constant framework with which to integrate newly gained leadership knowledge.

Over 12 Years in Supervisory/Management Roles

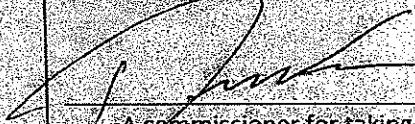
I have accumulated 12 years of management experience in the emergency services industry that is described in greater detail under 'employment history'. I've also accumulated another 7 years of leadership experience in owning businesses.

Leader of a Federal Political Party

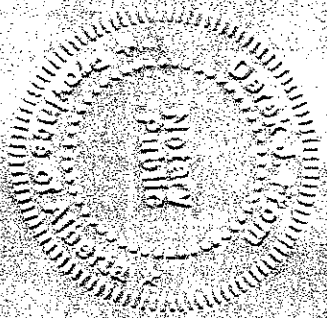
As elected leader of the Libertarian Party of Canada since May 2014, I have developed, through the process of recruitment, organizing, mentorship and coaching, a team of leaders that has been responsible for nearly doubling party membership and funding in the first 4 months of my leadership. Our success is attributable directly to the utilization of modern progressive leadership practices.

EXHIBIT "B"

This is Exhibit "B" referred to in the
Affidavit of Tim Moen sworn before me at
Calgary, this 19 day of
December, 2014

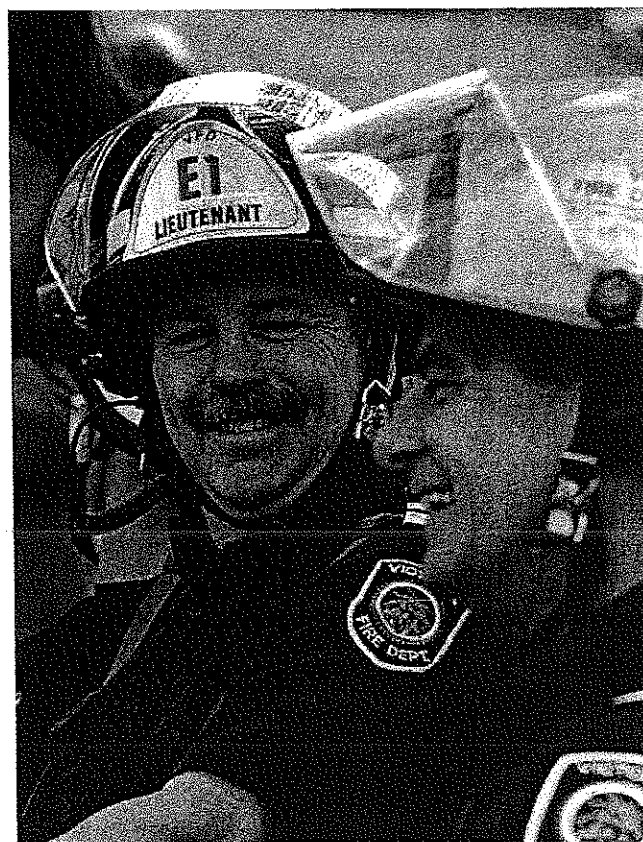


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ANNUAL STATISTICAL FIRE REPORT 2001-2003

Office of the Fire Commissioner
Annual Statistical Report



Ministry of
Public Safety
and Solicitor General

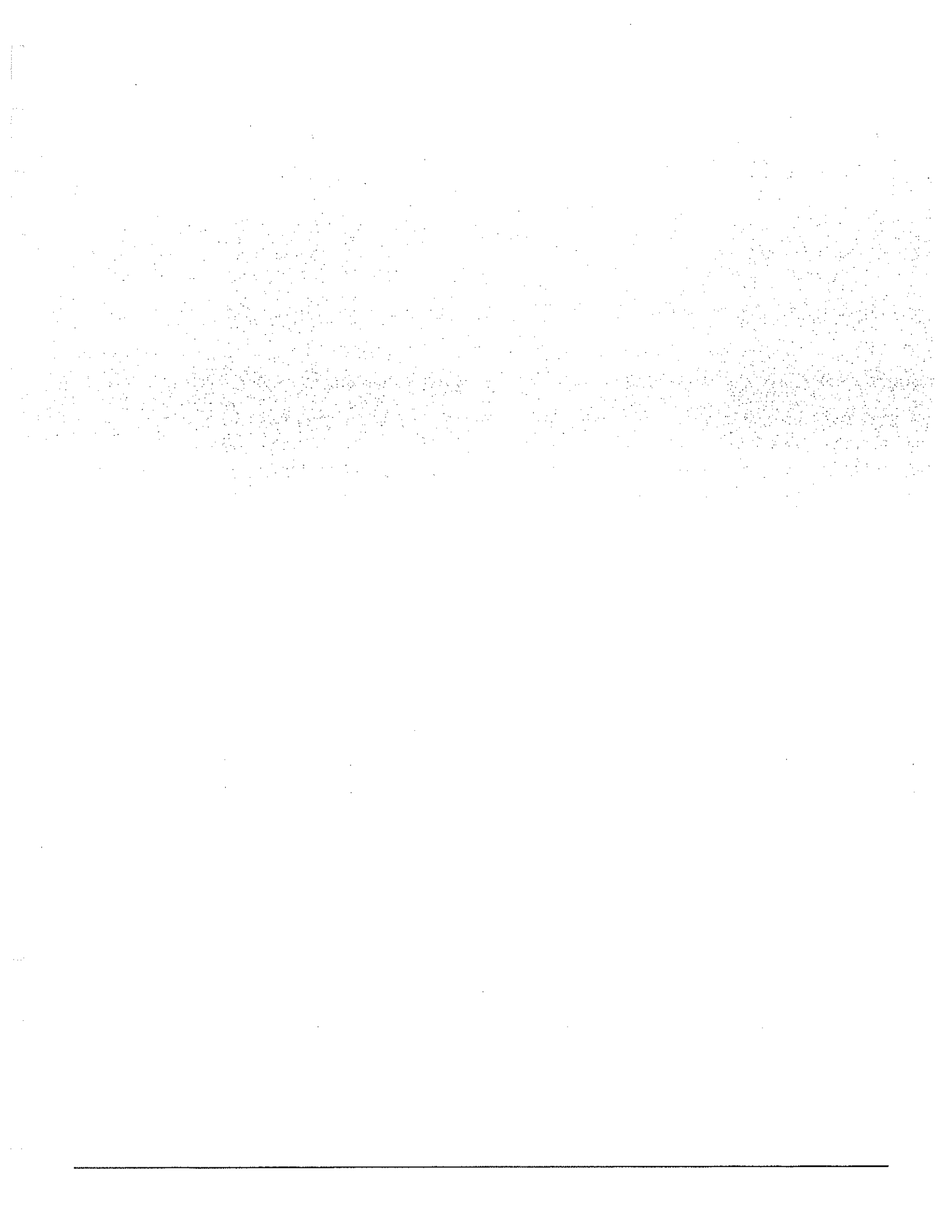


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MESSAGES

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 British Columbia 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*.

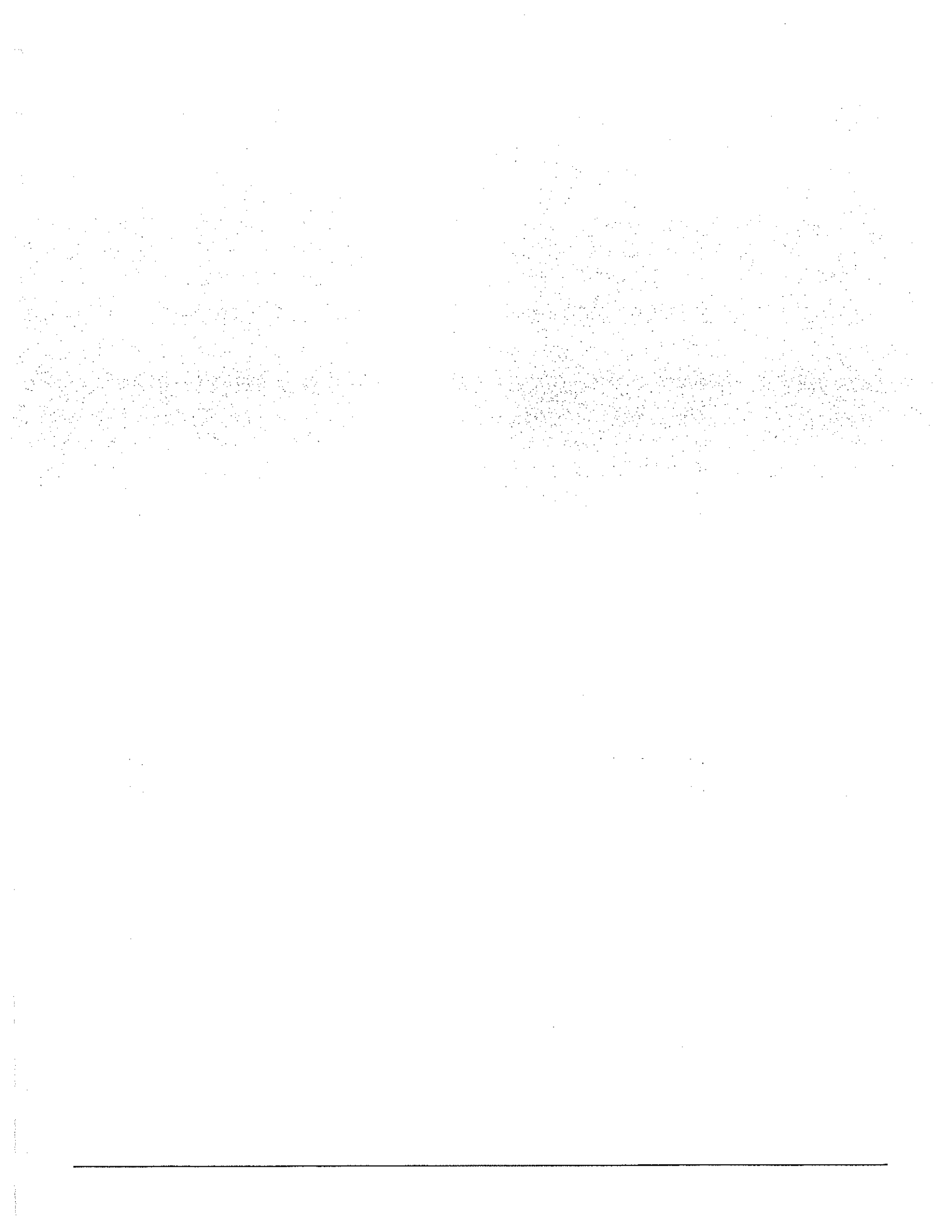
An overview of fire activity in British Columbia from 2001-2003 is as follows: we've had 19,002 fires resulting in 770 injuries and 108 fire related deaths and more than \$900 million in property losses.

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
10 Year Average of Injuries/Deaths		379.7	36.2	0.96

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



Circumstances Contributing to Fire Casualties

CODE & DESCRIPTION	FIRES	INJURIES	DEATHS	\$ LOSS
NATURE OF CASUALTY				
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
SUBTOTAL	267	288	44	71,575,161
CONDITION OF CASUALTY				
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
SUBTOTAL	265	288	44	46,834,661
ACTION OF CASUALTY				
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
SUBTOTAL	275	288	44	72,604,661

Major Causes of Fire Injuries

CODE & DESCRIPTION	FIRES	INJURIES	DEATHS	\$ LOSS
INITIAL CAUSE OF INJURY OF DEATH				
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
SUBTOTAL	256	288	44	45,617,661

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
TOTAL	6,035	202,889,229	288	44

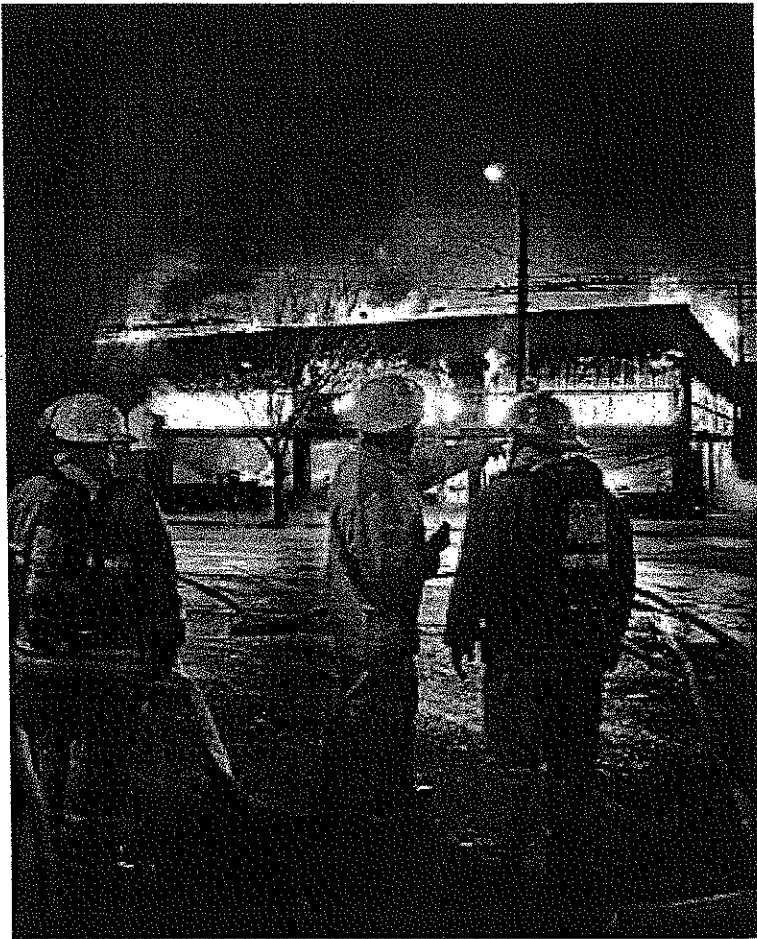
Fire Related Injuries and Deaths by Major Property Classification

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
Total	288	100.0	44	100.0

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.





FIRE FACTS

- 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.

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
Total	6,035	288	44	202,889,229	100.00

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
Total	6,035	288	44	202,889,229	100.00

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
Total	6,035	288	44	202,889,229	100.00

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
Total	6,035	288	44	202,889,229	100.00

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
Total	6,035	288	44	202,889,229	100.00

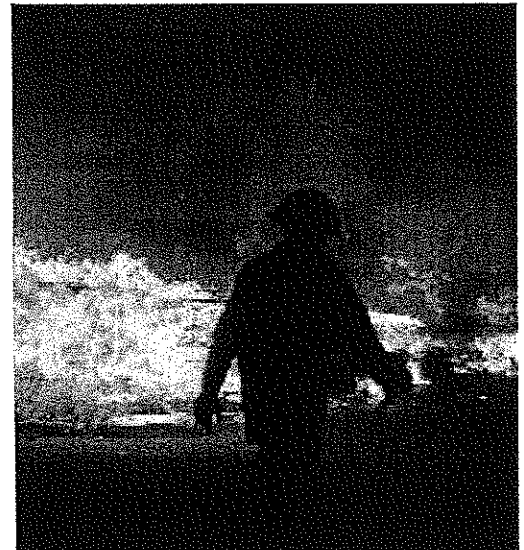
Initial Detection of Fires (ID)

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
Total	6,035	100.00



Arson Fires

Property Class Codes	Property Group	# of Fires	\$ Loss	# of Injuries	# of Deaths
ASSEMBLY					
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
INSTITUTIONAL					
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
RESIDENTIAL					
311-319	One & two-family dwelling	214	11,992,698	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
MISCELLANEOUS					
811-829, 894	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
TOTAL		1,735	39,850,804	37	6



Comparison of 1-2 Family Dwellings to Apartments

	1-2 Family Dwelling	Apartment
TOTAL NUMBER OF FIRES IN PROPERTY GROUP	1,457	462
COOKING FIRES	328	129
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
HEATING EQUIPMENT FIRES	230	14
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
SMOKING MATERIAL FIRES	76	77
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
ARSON FIRES	214	93
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
OTHER	609	149
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

FIRE FACTS

- 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.

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
Total		6,035	288	44	202,889,229

FIRE FACTS

- 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 BC has 4.8 arson fires each day.

2002 ANNUAL STATISTICAL REPORT

British Columbia Fire Injury and Fatality Rates

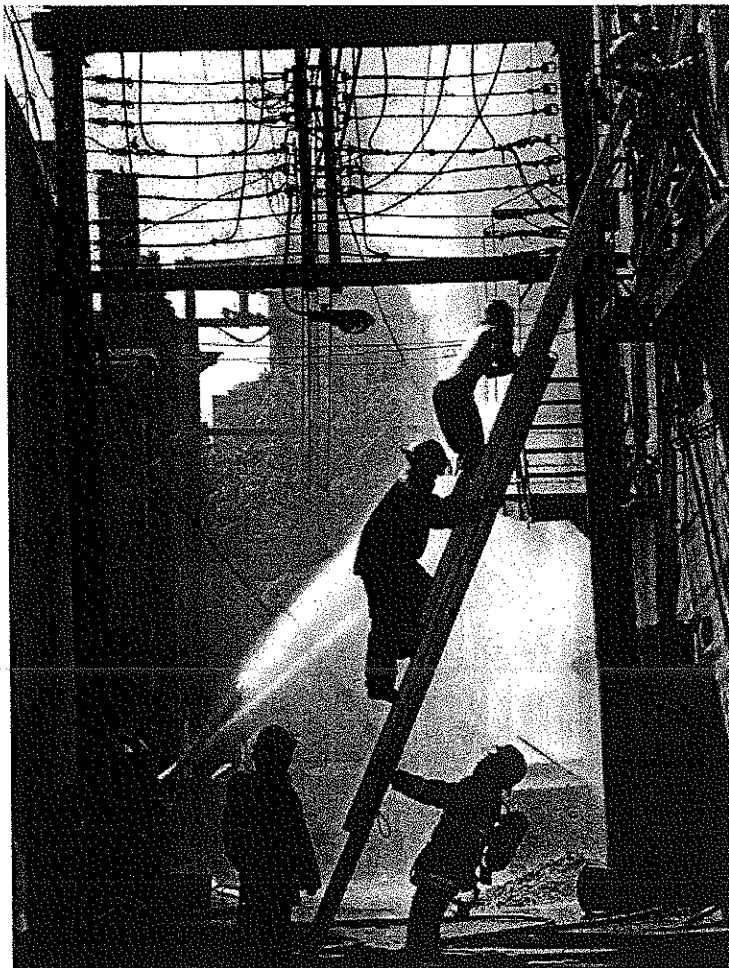
Year	Population	BC Fire Injuries	BC Fire Deaths*	BC Fire Death Rate**
1993	3,601,360	409	33	1.1
1994	3,711,072	428	30	0.9
1995	3,805,056	414	36	1.0
1996	3,899,213	432	27	0.7
1997	3,964,637	373	41	0.8
1998	3,990,414	333	30	0.8
1999	4,021,567	298	32	0.9
2000	4,069,264	343	42	0.7
2001	4,090,659	288	44	1.0
2002	4,126,688	270	41	1.0
10 Year Average of Injuries/Deaths		358.8	35.6	0.89

*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
Vancouver	7
North Vancouver	2
Port Coquitlam	2
Richmond	2
Sahlam	2
Summerland	2
Beaver Creek	1
Burnaby	1
Courtenay	1
Creston	1
Denman Island	1
Hope District	1
Kelowna	1
Maple Ridge	1
Pentton	1
Prince George	1
Sechelt	1
Songhees First Nation	1
Squamish	1
Terrace	1
Udulet	1
Vernon	1
Westside	1
TOTAL	41



Circumstances Contributing to Fire Casualties

CODE & DESCRIPTION	FIRES	INJURIES	DEATHS	\$ LOSS
NATURE OF CASUALTY				
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
SUBTOTAL	259	270	41	21,639,146
CONDITION OF CASUALTY				
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
SUBTOTAL	261	270	41	20,269,146
ACTION OF CASUALTY				
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
SUBTOTAL	266	270	41	23,423,146

Casualties by Month

MONTH	FIRES	\$ LOSS	INJURED	FATALITIES
JANUARY	438	20,060,977	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
TOTAL	6,703	214,056,071	270	41

Major Causes of Fire Injuries

CODE & DESCRIPTION	FIRES	INJURIES	DEATHS	\$ LOSS
INITIAL CAUSE OF INJURY OF DEATH				
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
SUBTOTAL	247	270	41	18,772,146
CAUSE OF FAILURE TO ESCAPE				
FC050 - UNKNOWN	53	50	12	6,082,207
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
SUBTOTAL	252	270	41	19,458,146

Fire Related Injuries and Deaths by Major Property Classification

Property Classification	Fire Injuries	%	Fire Deaths	%
Structural	239	88.5	32	76.06
Vehicle	16	6.0	7	17.2
Outdoor	9	3.3	1	3.4
Other	6	2.2	1	3.4
Total	270	100.0	41	100.0



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.



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
Total	6,703	270	41	214,056,071	100.00

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
Total	6,703	270	41	214,056,071	100.00

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
Total	6,703	270	41	214,056,071	100.00

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
Total	6,703	270	41	214,056,071	100.00

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
Total	6,703	270	41	214,056,071	100.00

Initial Detection of Fires (ID)

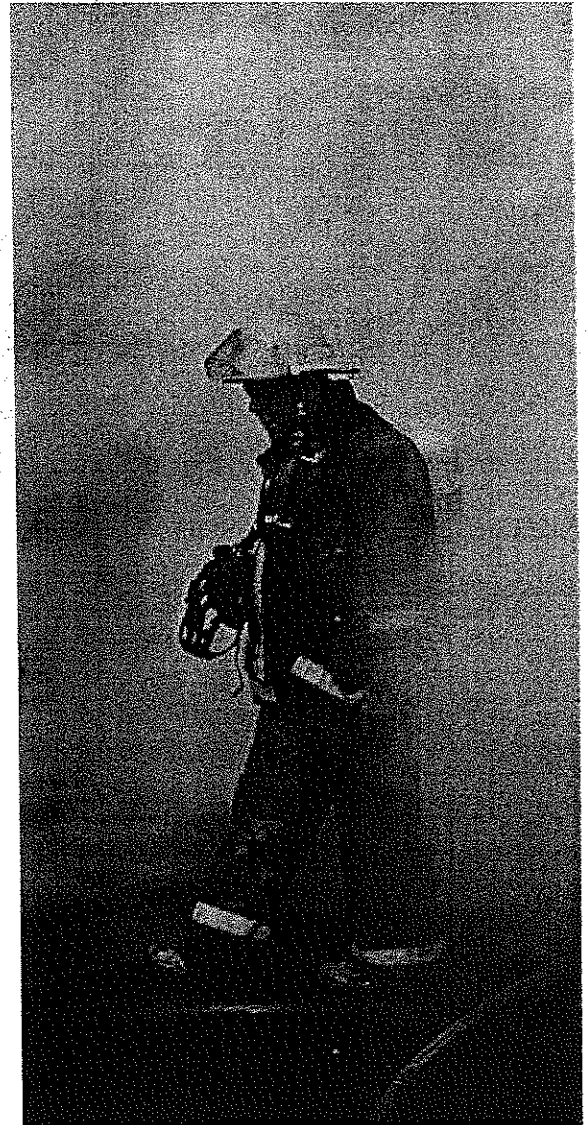
INITIAL DETECTION	FIRES	%
VISUAL SIGHTING	5,610	83.69
INITIAL DETECTION UNKNOWN	597	8.91
SMOKE ALARM DEVICE	181	2.71
SMOKE DETECTOR DEVICE	104	1.55
INITIAL DETECTION - UNCLASSIFIED	66	0.98
AUTOMATIC SPRINKLER SYSTEM	62	0.93
NONE	43	0.64
HEAT DETECTOR DEVICE	15	0.22
AUTOMATIC SYSTEM - OTHER THAN SPRINKLER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

FIRE FACTS

- 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.

Arson Fires

Property Class Codes	Property Group	# of Fires	\$ Loss	# of Injuries	# of Deaths
ASSEMBLY					
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
INSTITUTIONAL					
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
RESIDENTIAL					
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
MISCELLANEOUS					
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
TOTAL		1,928	41,662,093	31	9



FIRE FACTS

- 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.

Comparison of 1-2 Family Dwellings to Apartments

	1-2 Family Dwelling	Apartment Building
TOTAL NUMBER OF FIRES IN PROPERTY GROUP	1,518	518
COOKING FIRES	331	130
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
HEATING EQUIPMENT FIRES	235	13
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
SMOKING MATERIAL FIRES	77	76
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
ARSON FIRES	219	89
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
OTHER FIRES	656	210
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

FIRE FACTS

- 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.

Smoke Alarm Operation

Code	Description	FIRES	INJ	DEA	\$ 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
Total		6,703	270	41	\$214,056,071



2003 ANNUAL STATISTICAL REPORT

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: <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 what 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
10 Year Average of Injuries/Deaths		381.9	34.6	0.88

*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	
Westside District	
Cariboo P.D.	
Chilliwack	
Vancouver	
Abbotsford	
Edmonton	
Cootanham	
Kelowna	
Climatech/Climate 300	
Langley	
Coquitlam	
Mill Bay	
North Cowichan	
North Vancouver	
Kanaskis	
TOTAL	23



Circumstances Contributing to Fire Casualties

CODE & DESCRIPTION	FIRES	INJURIES	DEATHS	\$ LOSS
NATURE OF CASUALTY				
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
SUBTOTAL	205	212	23	29,056,085
CONDITION OF CASUALTY				
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
SUBTOTAL	200	212	23	31,089,587
ACTION OF CASUALTY				
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
SUBTOTAL	206	212	23	31,945,968

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	36,569,593	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	60,586,421	18	2
TOTAL	6,264	483,970,947	212	23

Major Causes of Fire Injuries

CODE & DESCRIPTION	FIRES	INJURIES	DEATHS	\$ LOSS
INITIAL CAUSE OF INJURY OR DEATH				
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
SUBTOTAL	191	212	23	26,658,493
CAUSE OF FAILURE TO ESCAPE				
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
SUBTOTAL	198	212	23	26,899,162

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
Total	212	100.0	23	100.0



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.



FIRE FACTS

- 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.



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 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
Total	6,264	212	23	483,970,947	100.00

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
Total	6,264	212	23	483,970,947	100.00

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
Total	6,264	212	23	483,970,947	100.00

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
Total	6,264	212	23	483,970,947	100.00

Fire Losses by Major Materials First Ignited (MI)

Major Materials First Ignited	FIRES	INJ	DEA	\$ LOSS	% of \$ LOSS
NOT DETERMINED	2,370	54	7	189,683,629	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
Total	6,264	212	23	483,970,947	100.00

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
Total	6,264	100.00

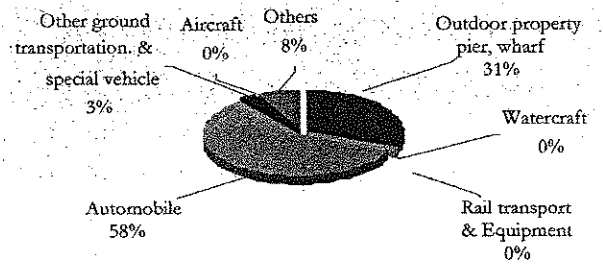
FIRE FACTS

- 22% of fires were ignited by smoker's materials and open flames.
- Only 3% of fires were detected by an alarm, 83% were detected by visual sighting/human senses.

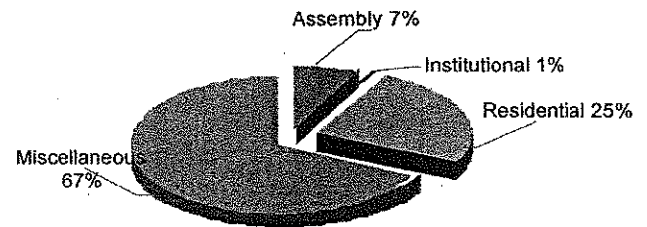
Arson Fires

Property Class Codes	Property Group	# of Fires	\$ Loss	# of Injuries	# of Deaths
ASSEMBLY					
161-169	Educational	77	4,327,535	0	0
172-173	Nightclub, tavern	2	2,050,000	0	0
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
INSTITUTIONAL					
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
RESIDENTIAL					
311-319	One & two-family dwelling	216	11,992,486	10	0
321-329	Apartment	69	4,289,750	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	60,660	0	0
372, 377-399	Other	7	139,520	0	1
411-499	Business and personal service	13	5,878,787	0	0
511-599	Mercantile	50	4,657,609	0	0
611-699	Industrial manufacturing	22	2,208,925	0	0
711-799	Industrial storage	31	4,179,972	0	0
MISCELLANEOUS					
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	578	10,599,897	0	0
862-869, 881-889	Other ground trans. & special vehicle	35	498,223	0	0
871-879	Aircraft	1	10,000	0	0
831-839, 899 or 911-999	Others	88	1,399,594	1	0
TOTAL		1,734	60,328,065	16	4

Property Class Percentage Affected by Arson:



Miscellaneous Property Class Percentages:



FIRE FACTS

- 39% of arson fires involve vehicles, 25% involve residential structures.
- Over \$60 million in losses were due to arson fires.
- Statistically, BC had 4.75 arson fires every day in 2003.

Comparison of 1-2 Family Dwellings to Apartments

	1-2 Family Dwelling	Apartment Building
TOTAL NUMBER OF FIRES IN PROPERTY GROUP	1,533	420
COOKING FIRES	316	126
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
HEATING EQUIPMENT FIRES	223	12
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
SMOKING MATERIAL FIRES	93	67
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
ARSON FIRES	216	69
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
OTHER FIRES	685	272
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	INF	DEA	\$ 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	1,157,253
SD009	ALARM NOT ACTIVATED - MECHANICAL FAILURE	16	2	0	2,749,416
SD010	ALARM NOT ACTIVATED - UNKNOWN	222	13	0	21,649,047
SD011	NOT APPLICABLE (E.G. OUTSIDE AREA)	3,410	24	5	70,754,655
SD099	SMOKE ALARM OPERATION UNKNOWN	562	43	7	189,450,553
Total		6,264	212	23	483,970,947

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.



GLOSSARY

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 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:

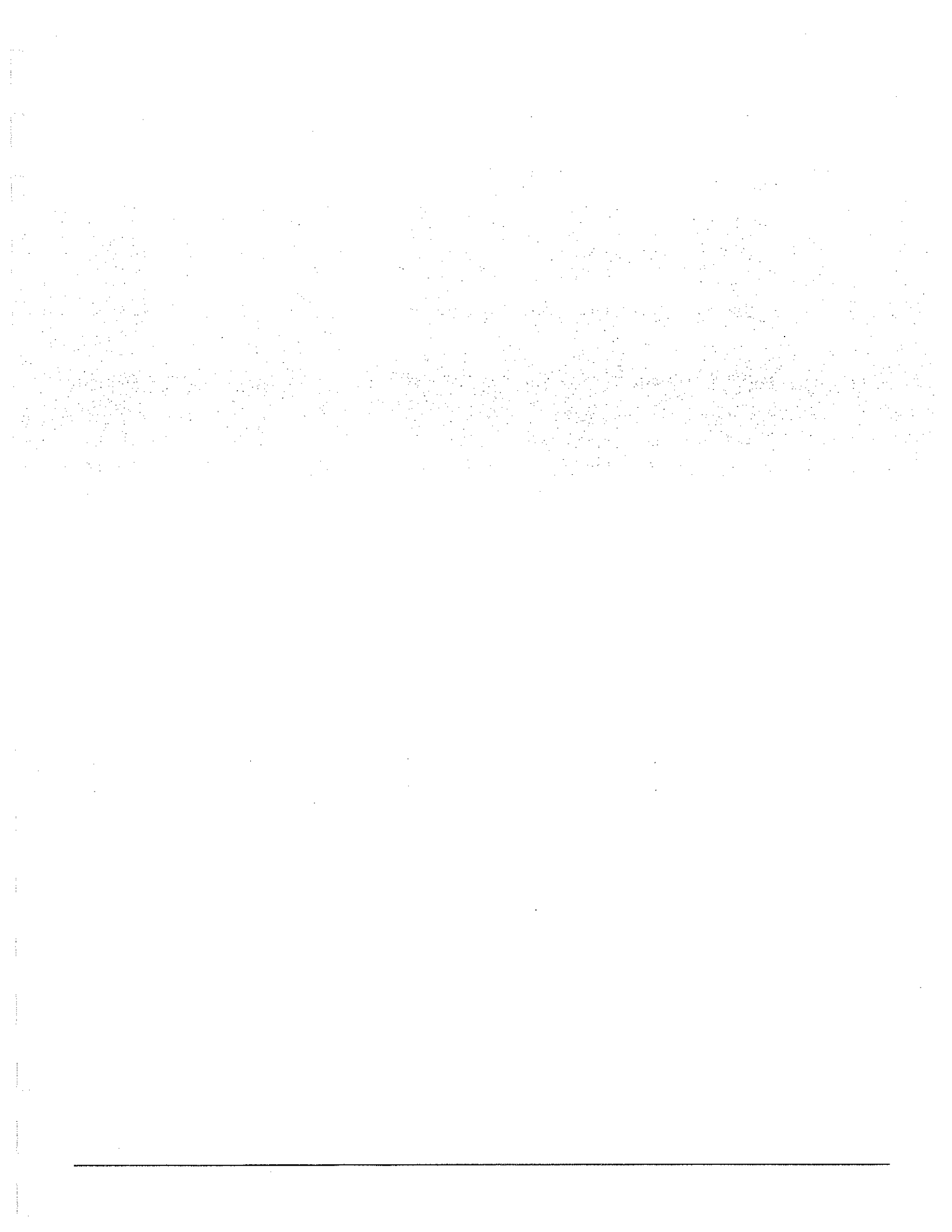
Includes cigarettes, pipes, cigars and/or matches, lighters when used in conjunction with smoking. Includes matches and lighters not associated with smoker's material, candles, cutting torches, welding equipment and hot ashes.

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

CONTACT INFORMATION TO THE OFFICE OF THE FIRE COMMISSIONER

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Victoria BC V8W 9N7

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ACKNOWLEDGEMENTS

We would like to thank the following fire departments for submitting photos that enhance this report:

Cover: Victoria Fire Department (photo taken by Aaron McMillan)

2001 Report:

Page 8: Squamish Fire Department

Page 10: Langford Fire Department

Page 11: Vancouver Fire Department

Page 13: Bowen Island Fire Department

Page 14: Top: Richmond Fire Department,
Bottom: Victoria Fire Department

2002 Report:

Page 18: Vancouver Fire Department

Page 20: Westside Fire Rescue

Page 21: Vancouver Fire Department

Page 24: Vancouver Fire Department

Page 25: Westside Fire Rescue

2003 Report:

Page 28: Ministry of Forests and Range

Page 30: Burnaby Fire Department

Page 32: Westside Fire Rescue

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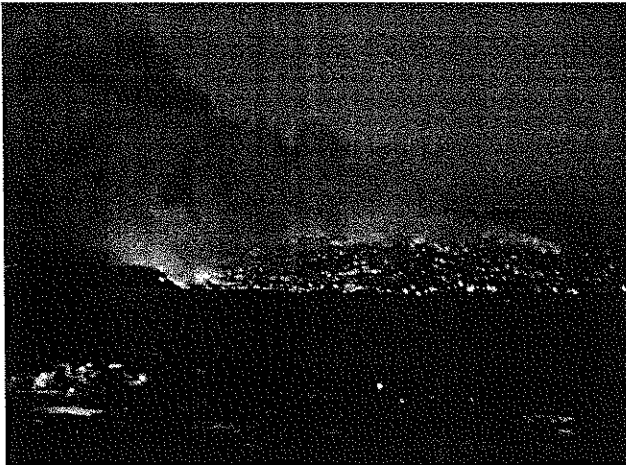
Bottom: Vancouver Fire Department, (Kelowna 2003
Firestorm)

Glossary:

Page 39: Vancouver Fire Department, (Kelowna 2003 Firestorm)

Back Cover: Vancouver Fire Department, (Kelowna 2003 Firestorm)

Report prepared by the Office of the Fire Commissioner, 2007-02-28
Fire Reporting Systems Officer, Jennifer Bresciani 1-888-944-9488
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Ministry of
Public Safety
and Solicitor General

ANNUAL STATISTICAL REPORT 2004

British Columbia Office of the Fire Commissioner

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INTRODUCTION

The source of all statistical data is from the Office of the Fire Commissioner's (OFC) Fire Incident Reporting and Evaluation (FIRE) System. The FIRE System receives fire incident data from local fire departments in BC, and from insurance companies who have received claims due to fire damage. Fire incident data is received regularly throughout the year as fire events occur in BC.

Dollar Loss is an estimate of the value of the property loss due to a fire. Dollar loss (\$ Loss) data is received from either local fire department estimates, or from insurance company claims for the actual dollar loss amount that was paid to the claimant. Dollar loss does not include loss of business or income as a result of fire.

FIRE CASUALTIES

British Columbia Fire Injury and Death Rates

Year	Population ¹	BC Fire Injuries	BC Fire Deaths ²	BC Fire Death Rate ³
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
2004	4,203,807	208	30	0.7
10 Year Average	4,032,582	317	34.6	0.9

Fire Events by Month, 2004

Month	Fires ⁴	\$ Loss	Injured	Deaths
JANUARY	601	13,067,183	25	6
FEBRUARY	525	9,260,889	17	3
MARCH	680	23,821,685	22	0
APRIL	892	15,186,781	23	1
MAY	696	11,372,057	9	2
JUNE	772	14,063,131	18	4
JULY	710	11,198,343	16	1
AUGUST	572	13,371,457	15	5
SEPTEMBER	473	10,063,714	12	2
OCTOBER	663	11,723,900	14	1
NOVEMBER	526	16,634,409	12	3
DECEMBER	512	18,037,720	25	2
TOTAL	7,622	167,801,269	208	30

LOCATION OF FIRE DEATHS

Armstrong	1
Bulkley-Netchako	1
Burnaby	1
Campbell River	1
Coquitlam	2
Courtenay	1
Eagle Bay	1
Esquimalt	1
Grand Forks	1
Hope	1
Jaffray	1
Kelowna	1
Kitimat	1
Langley	2
Merritt	1
Nanaimo	3
North Oyster	1
North Vancouver	1
Penticton	2
Prince George	1
Richmond	2
Sidney	1
Surrey	1
Trail	1
TOTAL	30

¹ Source of Population Statistics: Statistics Canada, CANSIM.

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

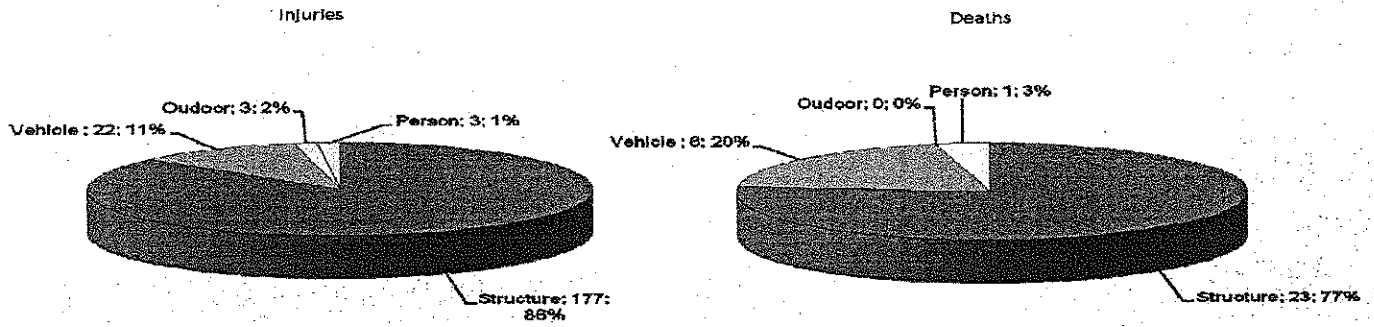
² Fire Death is a death directly due to fire or death within one year of a fire injury.

³ Fire Death Rate = number of fire deaths per 100,000 population.

⁴ Fire is any instance of destructive or uncontrolled burning of combustible solids, liquids or gases.

Fire does not include: lightning, forest fire, motor vehicle accidents, explosion - steam/ammunition.

Fire Related Injuries and Deaths by Major Property Classification



Major Causes of Fire Injuries

	Fires	Injuries	Deaths
FC100 - SMOKE INHALATION	73	76	14
FC101 - BURNS RESULTING FROM FIRE AND FLAMES	84	90	6
FC102 - BURNS RESULTING FROM HOT SUBSTANCES	11	11	0
FC103 - STRUCK BY OBJECTS OR PERSONS	0	0	0
FC104 - INJURY CAUSED BY FALLS	5	5	0
FC105 - INJURY CAUSED BY EXPLOSIVES	3	4	0
FC107 - UNCLASSIFIED	11	12	0
FC108 - UNKNOWN	19	10	10
TOTAL	206	208	30

Status, Age and Gender of Casualties

	Injuries	Deaths
STATUS OF CASUALTY	Firefighter	2
	Civilian	28
AGE OF CASUALTY	Unknown	4
	Birth - 2 Years	0
	3 - 4 Years	0
	5 - 6 Years	0
	7 - 8 Years	0
	9 - 10 Years	0
	11 - 12 Years	0
	13 - 14 Years	1
	15 - 16 Years	0
	17 - 18 Years	0
	19 - 20 Years	0
	21 - 30 Years	0
	31 - 40 Years	6
	41 - 50 Years	6
	51 - 60 Years	4
	61 - 70 Years	6
	71 - 80 Years	2
81 - 90 Years	1	
over 90 Years	0	
GENDER OF CASUALTY	Male	24
	Female	6

Circumstances Contributing to Fire Casualties

NATURE OF CASUALTY	Fires	Injuries	Deaths
FC001 - DEATH	29	0	30
FC002 - LIGHT INJURY (HOSP. 1-2 DAYS AND/OR OFF WORK 1-15 DAYS)	46	54	0
FC003 - MINOR INJURY (LESS THAN ONE DAY HOSPITAL OR OFF WORK)	112	128	0
FC004 - SERIOUS INJURY (HOSP. 3+ DAYS AND/OR OFF WORK 15+ DAYS)	24	26	0
TOTAL	211	208	30

CONDITION OF CASUALTY	Fires	Injuries	Deaths
FC010 - CONDITION OF CASUALTY UNKNOWN	33	22	12
FC011 - ASLEEP AT TIME OF FIRE	27	27	4
FC012 - BEDRIDDEN OR OTHER PHYSICAL HANDICAP	6	3	3
FC013 - IMPAIRMENT BY ALCOHOL, DRUGS, OR MEDICATION	18	18	4
FC014 - AWAKE OR NO PHYSICAL OR MENTAL IMPAIRMENT AT TIME OF FIRE	87	102	3
FC015 - UNDER RESTRAINT OR DETENTION	2	2	0
FC016 - TOO YOUNG TO REACT TO FIRE EMERGENCY	1	1	0
FC017 - MENTAL HANDICAP - INCLUDES SENILITY	2	1	1
FC018 - CHILD LEFT UNATTENDED	0	0	0
FC019 - UNCLASSIFIED	29	32	3
TOTAL	205	208	30

ACTION OF CASUALTY	Fires	Injuries	Deaths
FC020 - ACTION OF CASUALTY UNKNOWN	35	22	17
FC021 - INJURED WHILE ATTEMPTING TO ESCAPE	27	29	3
FC022 - OVER-EXERTION, HEART ATTACK	0	0	0
FC023 - VOLUNTARILY ENTERED OR REMAINED FOR RESCUE PURPOSE	8	8	1
FC024 - VOLUNTARILY ENTERED OR REMAINED FOR FIRE FIGHTING	86	93	2
FC025 - VOLUNTARILY ENTERED OR REMAINED TO SAVE PERSONAL PROPERTY	9	8	1
FC026 - LOSS OF JUDGEMENT OR PANIC	14	14	1
FC027 - RECEIVED DELAYED WARNING	6	6	1
FC028 - DID NOT ACT	6	5	1
FC029 - UNCLASSIFIED	23	23	3
TOTAL	214	208	30

CAUSE OF FAILURE TO ESCAPE	Fires	Injuries	Deaths
FC050 - UNKNOWN	40	27	15
FC051 - TRAPPED BY RAPID SPREADING OF FIRE/SMOKE THROUGH VERTICAL OPENINGS	5	5	1
FC052 - TRAPPED BY RAPID SPREADING OF FIRE/SMOKE THROUGH HORIZONTAL OPENINGS	8	8	4
FC053 - HIGH FLAME SPREAD OF COMBUSTIBLE INTERIOR FINISH OF WALLS, CEILINGS	9	7	3
FC054 - BUILDING COLLAPSE	1	1	0
FC055 - FALLING DEBRIS	1	0	1
FC056 - EXPLOSION	8	14	2
FC057 - EXIT LOCKED, BLOCKED OR OBSTRUCTED	1	1	0
FC058 - OUTDOOR FIRE INCLUDES FOREST/BRUSH FIRES	1	0	1
FC059 - UNCLASSIFIED OR NOT APPLICABLE	133	145	3
TOTAL	207	208	30

B.C. FIRE LOSS**Fire Loss in British Columbia 1995-2004**

Year	Fires	\$ Loss
1995	7,282	147,356,211
1996	7,494	165,040,632
1997	6,415	202,644,692
1998	6,674	167,096,340
1999	6,037	167,334,641
2000	6,315	157,866,569
2001	6,035	202,889,229
2002	6,703	214,201,260
2003	6,264	484,414,632
2004	7,622	167,801,269

Per Capita Fire Loss in British Columbia 1995-2004

Year	Population ⁵	Fires	Fire Rate ⁶	\$ Loss	\$ Loss/Capita
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
2004	4,203,807	7,622	1.81	167,801,269	39.92
10 Year Average	4,032,581.60	6,684.10	1.66	207,605,660.10	51.23

⁵ **Source of Population Statistics:** Statistics Canada, CANSIM.

⁶ **Fire Rate** = Number of fires per 1,000 population.

Per Capita Fires by Location

Municipality	Population ⁷	Fires	Injuries	Deaths	\$ Loss	\$ Loss / Fire	\$ Loss / Capita	Fire Rate ⁸
100 MILE HOUSE	1,828	6	0	0	5,420	903	3.0	3.3
ABBOTSFORD	127,192	58	0	0	897,133	15,468	7.1	0.5
ALERT BAY	617	1	0	0	1,200	1,200	1.9	1.6
ANMORE	1,553	1	0	0	0	0	0.0	0.6
ARMSTRONG	4,534	15	0	1	95,933	6,396	21.2	3.3
BOWEN ISLAND	3,353	1	0	0	1,000	1,000	0.3	0.3
BURNABY	203,244	216	16	1	7,024,787	32,522	34.6	1.1
BURNS LAKE	2,016	4	0	0	76,300	19,075	37.8	2.0
CACHE CREEK	1,145	3	0	0	15,519	5,173	13.6	2.6
CAMPBELL RIVER	30,250	136	2	1	1,385,073	10,184	45.8	4.5
CASTLEGAR	7,774	16	0	0	733,976	45,874	94.4	2.1
CENTRAL SAANICH	16,495	40	3	0	214,694	5,367	13.0	2.4
CHASE	2,552	9	0	0	121,000	13,444	47.4	3.5
CHETWYND	2,729	5	7	0	292,350	58,470	107.1	1.8
CITY OF CHILLIWACK	69,193	218	21	0	3,033,898	13,917	43.8	3.2
CLINTON	672	7	0	0	180,005	25,715	267.9	10.4
COLDSTREAM	9,922	25	0	0	132,599	5,304	13.4	2.5
COLWOOD	14,821	64	2	0	177,916	2,780	12.0	4.3
COMOX	12,426	6	0	0	538,679	89,780	43.4	0.5
COQUITLAM CITY	119,159	439	4	2	3,801,461	8,659	31.9	3.7
COURTENAY	21,124	75	1	0	767,556	10,234	36.3	3.6
CRANBROOK	19,660	41	0	0	149,200	3,639	7.6	2.1
CRESTON	5,053	28	0	0	2,205,200	78,757	436.4	5.5
CUMBERLAND	2,768	15	0	0	412,000	27,467	148.8	5.4
DAWSON CREEK	11,320	52	0	0	3,269,151	62,868	288.8	4.6
DELTA	102,114	28	0	0	484,076	17,288	4.7	0.3
DISTRICT OF LAKE COUNTRY	10,091	28	1	0	382,875	13,674	37.9	2.8
DUNCAN	4,884	11	0	0	211,486	19,226	43.3	2.3
ELKFORD	2,683	4	0	0	71,000	17,750	26.5	1.5
ENDERBY	3,023	14	0	0	32,450	2,318	10.7	4.6
ESQUIMALT	17,078	27	7	1	350,626	12,986	20.5	1.6
FERNIE	5,054	16	1	0	236,900	14,806	46.9	3.2
FORT NELSON	4,706	20	0	0	628,206	31,410	133.5	4.2
FORT ST. JAMES	2,004	1	0	0	213,695	213,695	106.6	0.5
FORT ST. JOHN	17,326	37	1	0	1,846,563	49,907	106.6	2.1
FRASER LAKE	1,369	4	0	0	46,020	11,505	33.6	2.9
GIBSONS	4,216	5	0	0	26,535	5,307	6.3	1.2
GOLD RIVER	1,436	3	0	0	11,000	3,667	7.7	2.1
GOLDEN	4,385	10	0	0	429,300	42,930	97.9	2.3
GRAND FORKS	4,184	36	1	1	684,001	19,000	163.5	8.6
GREENWOOD	666	8	0	0	16,375	2,047	24.6	12.0
HIGHLANDS DISTRICT	1,967	1	0	0	0	0	0.0	0.5
HOPE DISTRICT	6,575	58	1	1	1,317,182	22,710	200.3	8.8
HOUSTON	3,849	11	0	0	971,733	88,339	252.5	2.9
HUDSON'S HOPE	1,159	2	0	0	50,267	25,134	43.4	1.7
INVERMERE	3,149	2	0	0	175,000	87,500	55.6	0.6

⁷ Source of Population Statistics: Statistics Canada, CANSIM.⁸ Fire Rate = Number of fires per 1,000 population.

B.C. Fire Loss

Municipality	Population ⁹	Fires	Injuries	Deaths	\$ Loss	\$ Loss / Fire	\$ Loss / Capita	Fire Rate ¹⁰
KAMLOOPS	81,916	123	3	0	2,370,742	19,274	28.9	1.5
KASLO	1,071	1	0	0	6,500	6,500	6.1	0.9
KELOWNA	105,902	147	4	1	9,946,284	67,662	93.9	1.4
KENT	5,525	26	0	0	599,516	23,058	108.5	4.7
KIMBERLEY	6,946	16	0	0	490,043	30,628	70.6	2.3
KITIMAT	10,725	36	0	1	545,500	15,153	50.9	3.4
LADYSMITH	7,130	38	0	0	586,683	15,439	82.3	5.3
LANGFORD DISTRICT	20,879	3	0	0	1,500	500	0.1	0.1
LANGLEY CITY	24,982	36	0	0	2,182,921	60,637	87.4	1.4
LANGLEY TOWNSHIP	94,776	287	11	2	11,104,404	38,691	117.2	3.0
LILLOOET	2,821	1	0	0	8,663	8,663	3.1	0.4
LIONS BAY	1,421	2	0	0	53,300	26,650	37.5	1.4
LOGAN LAKE	2,321	2	1	0	10,000	5,000	4.3	0.9
LUMBY	1,703	26	0	0	58,150	2,237	34.1	15.3
LYTTON	333	3	0	0	72,721	24,240	218.4	9.0
MACKENZIE	5,458	23	0	0	473,755	20,598	86.8	4.2
MAPLE RIDGE	71,037	82	0	0	1,236,376	15,078	17.4	1.2
MASSET	967	3	0	0	87,500	29,167	90.5	3.1
MERRITT	7,516	17	0	1	1,611,850	94,815	214.5	2.3
METCHOSIN	5,258	3	0	0	30,300	10,100	5.8	0.6
MISSION	34,061	39	0	0	2,652,254	68,007	77.9	1.1
NAKUSP	1,789	4	0	0	161,500	40,375	90.3	2.2
NANAIMO	78,480	419	7	3	2,085,253	4,977	26.6	5.3
NELSON	9,810	38	1	0	414,095	10,897	42.2	3.9
NEW DENVER	550	2	0	0	37,026	18,513	67.3	3.6
NEW HAZELTON	765	2	0	0	24,685	12,343	32.3	2.6
NEW WESTMINSTER	57,892	170	5	0	3,123,854	18,376	54.0	2.9
NORTH COWICHAN	28,140	31	6	0	2,097,458	67,660	74.5	1.1
NORTH SAANICH	11,132	2	0	0	44,000	22,000	4.0	0.2
NORTH VANCOUVER CITY	46,831	140	3	1	954,132	6,815	20.4	3.0
NORTH VANCOUVER DISTRICT	86,868	100	1	0	1,844,800	18,448	21.2	1.2
OAK BAY	18,406	64	0	0	550,740	8,605	29.9	3.5
OLIVER	4,378	2	0	0	9,060	4,530	2.1	0.5
OSOYOOS	4,611	9	0	0	1,105,141	122,793	239.7	2.0
PARKSVILLE	11,275	29	0	0	40,165	1,385	3.6	2.6
PEACHLAND	5,090	30	0	0	225,788	7,526	44.4	5.9
PEMBERTON	2,210	1	0	0	1,858	1,858	0.8	0.5
PENTICTON	32,955	121	0	2	471,445	3,896	14.3	3.7
PITT MEADOWS	16,143	15	0	0	979,838	65,323	60.7	0.9
PORT ALBERNI	18,610	39	0	0	737,984	18,923	39.7	2.1
PORT ALICE	1,206	7	0	0	465,244	66,463	385.8	5.8
PORT COQUITLAM	55,525	125	4	0	1,660,982	13,288	29.9	2.3
PORT EDWARD	659	1	0	0	250,000	250,000	379.4	1.5
PORT HARDY	4,798	2	0	0	3,919	1,960	0.8	0.4
PORT MCNEILL	2,908	8	0	0	280,006	35,001	96.3	2.8
PORT MOODY	26,849	8	0	0	402,335	50,292	15.0	0.3
POUCE COUPE	864	2	0	0	5,000	2,500	5.8	2.3

⁹ Source of Population Statistics: Statistics Canada, CANSIM.

¹⁰ Fire Rate = Number of fires per 1,000 population.

B.C. Fire Loss

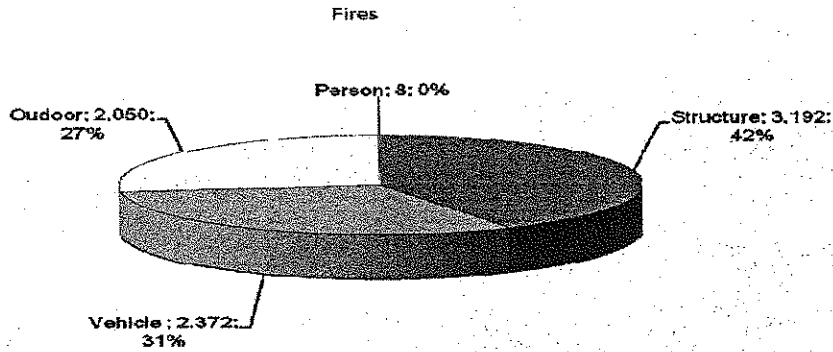
Municipality	Population ¹¹	Fires	Injuries	Deaths	\$ Loss	\$ Loss / Fire	\$ Loss / Capita	Fire Rate ¹²
POWELL RIVER	13,716	20	0	0	140,943	7,047	10.3	1.5
PRINCE GEORGE	77,827	400	1	1	5,437,306	13,593	69.9	5.1
PRINCE RUPERT	15,060	112	4	0	1,939,513	17,317	128.8	7.4
PRINCETON	2,691	2	0	0	7,638	3,819	2.8	0.7
QUALICUM BEACH	7,403	8	0	0	1,015,252	126,907	137.1	1.1
QUESNEL	10,445	57	0	0	1,300,164	22,810	124.5	5.5
RADIUM HOT SPRINGS	749	6	0	0	800	133	1.1	8.0
REVELSTOKE	7,932	22	4	0	331,554	15,071	41.8	2.8
RICHMOND	174,364	34	1	2	1,127,851	33,172	6.5	0.2
ROSSLAND	3,690	4	0	0	42,212	10,553	11.4	1.1
SAANICH	109,873	251	9	0	3,108,612	12,385	28.3	2.3
SALMON ARM	16,466	19	0	0	726,846	38,255	44.1	1.2
SECHELT	8,511	12	1	0	171,230	14,269	20.1	1.4
SIDNEY	11,525	7	0	1	257,254	36,751	22.3	0.6
SMITHERS	5,652	12	0	0	467,986	38,999	82.8	2.1
SOOKE	9,756	51	1	0	58,475	1,147	6.0	5.2
SPALLUMCHEEN	5,648	30	0	0	451,112	15,037	79.9	5.3
SPARWOOD	3,998	4	1	0	315,700	78,925	79.0	1.0
SQUAMISH	15,431	7	0	0	109,579	15,654	7.1	0.5
STEWART	717	1	0	0	13,152	13,152	18.3	1.4
SUMMERLAND	11,285	39	0	0	293,390	7,523	26.0	3.5
SURREY	387,162	788	38	1	12,089,629	15,342	31.2	2.0
TAHSIS	594	1	0	0	0	0	0.0	1.7
TAYLOR	1,291	2	0	0	75,000	37,500	58.1	1.5
TELKWA	1,421	2	0	0	47,000	23,500	33.1	1.4
TERRACE	12,599	43	0	0	448,900	10,440	35.6	3.4
TOFINO	1,716	5	0	0	110,341	22,068	64.3	2.9
TRAIL	7,891	17	1	1	361,894	21,288	45.9	2.2
TUMBLER RIDGE	2,464	2	0	0	3,048	1,524	1.2	0.8
UCLUELET	1,852	2	0	0	69,000	34,500	37.3	1.1
VALEMOUNT	1,247	2	0	0	90,377	45,189	72.5	1.6
VANCOUVER	579,717	140	1	0	4,394,287	31,388	7.6	0.2
VANDERHOOF	4,662	5	0	0	324,245	64,849	69.6	1.1
VERNON	35,643	67	1	0	938,599	14,009	26.3	1.9
VICTORIA	77,769	163	5	0	3,265,179	20,032	42.0	2.1
VIEW ROYAL	7,970	1	1	0	60,000	60,000	7.5	0.1
WARFIELD	1,763	1	0	0	0	0	0.0	0.6
WEST VANCOUVER	43,356	18	2	0	1,684,699	93,594	38.9	0.4
WHISTLER	9,828	29	3	0	760,962	26,240	77.4	3.0
WHITE ROCK	19,370	2	0	0	12,744	6,372	0.7	0.1
WILLIAMS LAKE	11,865	67	0	0	4,400,364	65,677	370.9	5.6
ZEBALLOS	232	4	0	0	500	125	2.2	17.2
OTHER ¹³	565,846	1,071	20	5	35,525,322	33,170	63.0	2.0
TOTAL	4,203,807	7,622	208	30	167,801,269	3,818,395	36.36	2.8

¹¹ Source of Population Statistics: Statistics Canada, CANSIM.

¹² Fire Rate = Number of fires per 1,000 population.

¹³ Other refers to any municipal/non-municipal districts that were not listed from our population statistic source.

Fire Loss by Major Property Classification



Fire Loss by Major Property Complex (PC)

	Fires	Injuries	Deaths	\$ Loss	% of Fires
Assembly Use	180	6	0	7,985,709	2
Institutional Use	32	0	0	1,465,939	0
Residential Use	2,163	167	24	82,592,637	28
Business Use	27	0	0	745,957	0
Commercial Use	126	1	0	6,176,542	2
Manufacturing Use	128	2	1	6,447,232	2
Storage Use	12	0	0	543,908	0
Other Special Use ¹⁴	4,954	32	5	61,843,345	65
TOTAL	7,622	208	30	167,801,269	100

¹⁴ **Other Special Use** includes: parks, public transportation terminals and agricultural property

Fire Loss by Major Property Classes (PR)

	Fires	Injuries	Deaths	\$ Loss	% of Fires
Assembly	208	5	0	8,728,581	2.73
Institutional	34	2	0	1,597,119	0.45
Residential	2,347	168	24	95,124,002	30.79
Business & Personal Services	46	0	0	2,974,758	0.60
Mercantile	127	1	0	6,204,538	1.67
Industrial Manufacturing	143	2	1	7,720,621	1.88
Storage Properties	138	1	0	7,796,330	1.81
Special Property and Transportation Equipment ¹⁵	4,299	19	4	27,345,968	56.40
Miscellaneous Properties ¹⁵	272	4	0	10,308,452	3.57
Person	8	6	1	900	0.10
TOTAL	7,622	208	30	167,801,269	100.00

Fire Loss by Major Sources of Ignition (IG)

	Fires	Injuries	Deaths	\$ Loss	% of Fires
Cooking Equipment	598	65	4	8,019,742	7.85
Heating Equipment	509	20	2	11,913,164	6.68
Appliances & Equipment	141	9	0	4,026,126	1.85
Electrical Distribution Equipment	536	8	3	15,862,101	7.03
Electrical Equipment	148	8	1	4,809,098	1.94
Smoker's Material & "Open" Flames	1,447	49	4	27,331,200	18.98
Exposure	255	1	0	4,018,006	3.35
Miscellaneous ¹⁷	3,988	48	16	91,821,832	52.32
TOTAL	7,622	208	30	167,801,269	100.00

¹⁵ **Special Property & Transportation Equipment** includes: outdoor property, connecting thoroughfares like bridges and tunnels, vacant property that is under construction or demolition, watercraft, rail transport vehicles, ground transportation vehicles, aircraft and heavy machinery.

¹⁶ **(PR) Miscellaneous Properties** include: laboratories, farm facilities, outbuildings, utilities, mining, communications and nucleonic.

¹⁷ **(IG) Miscellaneous** includes: fireworks, heat treatment equipment, and commercial and industrial machinery.

Fire Loss by Major Acts or Omissions (AO)

	Fires	Injuries	Deaths	\$ Loss	% of Fires
Cannot Be Determined	1,997	30	13	61,700,452	26.2
Incendiary & Suspicious Fires	1,739	21	2	25,908,762	22.8
Misuse of Source of Ignition	584	17	2	16,096,414	7.7
Misuse of Material Ignited	229	19	3	5,032,394	3.0
Mechanical/Electrical Failure/Malfunction	1,246	11	3	18,967,411	16.3
Construction, Design, or Installation Deficiency	116	6	0	4,798,761	1.5
Misuse of Equipment	319	4	0	6,869,735	4.2
Human Failing	1,142	90	7	18,886,757	15.0
Vehicle Accident	72	4	0	1,231,355	0.9
Miscellaneous ¹⁸	178	6	0	8,311,228	2.3
TOTAL	7,622	208	30	167,801,269	100.0

Fire Loss by Major Materials First Ignited (MI)

	Fires	Injuries	Deaths	\$ Loss	% of Fires
Cannot Be Determined	3,021	53	14	77,629,781	39.6
Structural Components, Finish Materials	245	12	1	17,353,038	3.2
Furniture, Furnishings	317	25	2	9,539,685	4.2
Clothing, Textiles	275	13	1	6,312,268	3.6
Wood, Paper Products	835	17	3	19,926,379	11.0
Flammable Liquids, Combustible Liquids	622	44	4	12,221,536	8.2
Flammable Gases	83	11	3	1,448,182	1.1
Chemicals, Plastics, Metals	209	5	0	2,254,837	2.7
Agricultural, Forestry Products	828	7	0	8,337,129	10.9
Miscellaneous ¹⁹	1,187	21	2	12,778,434	15.6
TOTAL	7,622	208	30	167,801,269	100.0

¹⁸ (AO) Miscellaneous includes: illegal operations/activities, exposure from Wildland fire, and tampering with safety devices.

¹⁹ (MI) Miscellaneous includes: barbecue briquettes and sticks, fire logs, coal, peat, hog fuel, creosote, electrical insulation, garbage, oily rags, artificial Christmas trees, gunpowder and wood treatment oil.

B.C. FIRE FACTS***Initial Detection of Fires (ID)***

	Fires	Injuries	Deaths	\$ Loss
CANNOT BE DETERMINED	425	7	3	22,515,727
NOT APPLICABLE (FOR VEHICLE, OUTDOOR, PERSON REPORTS ONLY)	4,423	31	5	25,449,849
INITIAL DETECTION - UNCLASSIFIED (DESCRIBE)	17	1	0	633,610
SMOKE ALARM DEVICE	240	20	0	8,035,269
SMOKE DETECTOR DEVICE	103	6	1	2,308,972
HEAT ALARM DEVICE	9	0	0	475,100
HEAT DETECTOR DEVICE	23	1	1	1,018,093
AUTOMATIC SPRINKLER SYSTEM	63	3	0	1,102,304
AUTOMATIC SYSTEM OTHER THAN SPRINKLER	5	0	0	7,020
VISUAL SIGHTING OR OTHER MEANS OF PERSONAL DETECTION (E.G. SMELL)	2,293	139	20	105,739,500
NO INITIAL DETECTION (EXTINGUISHED BEFORE DETECTION)	17	0	0	333,325
SPECIALTY DETECTOR (INCLUDES FLAME, BEAM, LINE)	4	0	0	182,500
TOTAL	7,622	208	30	167,801,269

Smoke Alarm Operation (SD)

	Fires	Injuries	Deaths	\$ Loss
ALARM OPERATION CANNOT BE DETERMINED	1,114	37	9	51,403,698
NOT APPLICABLE (FOR VEHICLE, OUTDOOR, PERSON REPORTS ONLY)	4,430	31	5	25,487,099
ALARM ACTIVATED - ASSISTED OCCUPANT(S) IN EVACUATING	375	38	0	17,850,028
ALARM ACTIVATED - INAUDIBLE	9	1	0	36,100
ALARM ACTIVATED - OCCUPANT(S) UNABLE TO RESPOND	42	8	2	667,898
ALARM ACTIVATED - UNNECESSARY TO EVACUATE OR UNOCCUPIED	189	9	0	5,779,004
ALARM ACTIVATED - OCCUPANT ACTION UNKNOWN	67	6	1	4,229,007
ALARM NOT ACTIVATED - UNSUITABLE LOCATION	125	2	0	1,938,701
ALARM NOT ACTIVATED - NO BATTERY OR BATTERY DEAD	86	12	0	3,695,155
ALARM NOT ACTIVATED - AC POWER NOT CONNECTED, DISABLE OR OFF	35	2	1	1,553,530
ALARM NOT ACTIVATED - MECHANICAL FAILURE	12	2	0	386,450
ALARM NOT ACTIVATED - UNKNOWN	356	29	2	11,710,587
NO SMOKE ALARM INSTALLED	782	31	10	43,064,012
TOTAL	7,622	208	30	167,801,269

Incendiary²⁰ Fires by Property Group

	# of Fires	\$ Loss	# of Injuries	# of Deaths
ASSEMBLY				
Educational	1	500,000	0	0
Other	3	6,065	0	0
INSTITUTIONAL				
None Reported	0	0	0	0
RESIDENTIAL				
One & two-family dwelling	84	975,230	0	0
Apartment, condominium	1	250	0	0
Business and personal service	2	372,319	0	0
Industrial storage	2	0	0	0
MISCELLANEOUS				
None Reported	0	0	0	0
TOTAL	93	1,853,864	0	0

Juvenile Fire Setters²¹

Age of Children	# of Children	\$ Loss
1-4 years	5	1,100
5-8 years	18	12,150
10-12 years	58	27,355
13-18 years	73	483,400
Unknown Age	9	20,060
TOTAL	163	544,065

Gender of Children	Amount
Female	15
Male	142
Unknown	6
TOTAL	163

FIRE FACTS

FIRES ON SCHOOL PROPERTY:

- 83 fires were reported to have occurred on school property, resulting in \$5.8 million in damages.

GROW OPS/CYRSTAL METH LABS:

- 27 fires were reported to have been caused as a direct result of grow operations, causing \$2 million in damages and 2 injuries
- 2 fires were reported to have been the result of individuals cooking marijuana, causing \$92 thousand damage and 4 injuries
- Only 1 fire was reported to have been the result of a Crystal Methamphetamine laboratory

²⁰ **Incendiary** or set fires include arson, suspected incendiarism, riot, mischief or vandalism.

²¹ **Juvenile Fire Setters** are children and/or adolescents (under 18 years of age) that engage in fire setting.

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:

- Over fuelling, 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.

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.

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)

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 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 reaction.

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.

Fire

Fire is any instance of destructive or uncontrolled burning of combustible solids, liquids or gases

Fire does not include:

- lightning
- forest fire
- motor vehicle accidents
- explosion - steam/ammunition

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.

Juvenile Fire Setter

Children and/or adolescents (under 18 years of age) that engage in fire setting.

CONTACT INFORMATION

OFFICE OF THE FIRE COMMISSIONER

PO BOX 9491 STN PROV GOVT
VICTORIA B.C. V8W 9N7

TOLL FREE: 1-888-988-9488

Phone: 250-356-9000

Fax: 250-356-9019

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

Report prepared by the Office of the Fire Commissioner.

If you have any questions or concerns regarding this report, or require more detailed statistical information, we encourage you to contact us.

Toll Free: 1-888-988-9488

E-mail: ofc@gov.bc.ca

REPORT POSTED MARCH 2010



Ministry of
Public Safety
and Solicitor General

ANNUAL STATISTICAL REPORT 2005

British Columbia Office of the Fire Commissioner

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INTRODUCTION

The source of all statistical data is from the Office of the Fire Commissioner's (OFC) Fire Incident Reporting and Evaluation (FIRE) System. The FIRE System receives fire incident data from local fire departments in BC, and from insurance companies who have received claims due to fire damage. Fire incident data is received regularly throughout the year as fire events occur in BC.

Dollar Loss is an estimate of the value of the property loss due to a fire. Dollar loss (\$ Loss) data is received from either local fire department estimates, or from insurance company claims for the actual dollar loss amount that was paid to the claimant. Dollar loss does not include loss of business or income as a result of fire.

FIRE CASUALTIES

British Columbia Fire Injury and Death Rates

Year	Population ¹	BC Fire Injuries	BC Fire Deaths ²	BC Fire Death Rate ³
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
2004	4,203,807	208	30	0.7
2005	4,260,246	195	35	0.8
10 Year Average	4,078,101	295.2	34.5	0.85

Casualties by Month

MONTH	FIRES ⁴	\$ LOSS	INJURED	DEATHS
JANUARY	647	19,469,241	22	2
FEBRUARY	570	16,922,590	20	1
MARCH	630	17,659,748	19	10
APRIL	702	12,192,764	13	1
MAY	750	15,413,024	10	0
JUNE	548	15,024,580	19	0
JULY	654	41,856,195	14	4
AUGUST	710	22,612,746	11	1
SEPTEMBER	567	12,490,138	21	6
OCTOBER	527	9,537,070	11	3
NOVEMBER	477	14,654,126	14	5
DECEMBER	467	15,152,933	21	2
TOTAL	7,249	212,985,155	195	35

Location of Fire Deaths

Coquitlam	1
Dawson Creek	1
Duncan	1
Fort St John	1
Kamloops	1
Kelowna	1
Nanaimo	4
Prince Rupert	1
Revelstoke	1
Richmond	2
Surrey	5
Vancouver	1
Victoria	1
Williams Lake	3
Langley	1
Powell River	1
Anahim Lake	3
Comox	1
Fort Nelson	1
Grand Forks	1
Moberly Lake	1
Kootenay Region	1
100 Mile House	1
Total	35

¹ Source of Population Statistics: Statistics Canada, CANSIM.

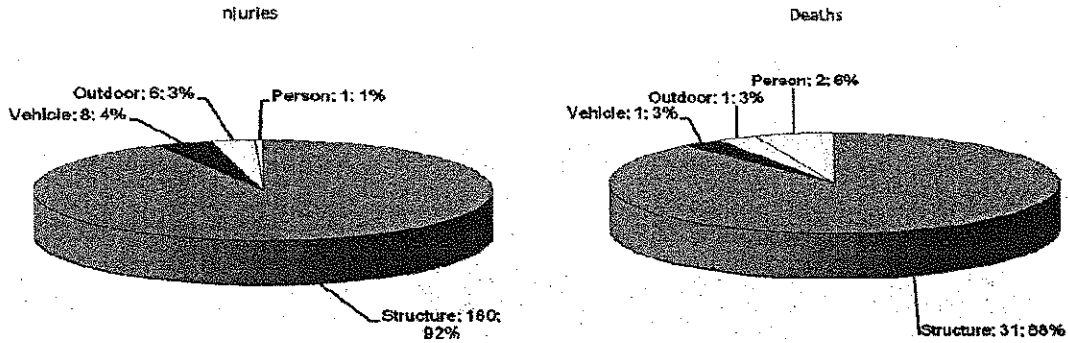
Prepared by: Population Section, BC Stats, Ministry of Labour and Citizens' Services, Government of British Columbia.

² Fire Death is a death directly due to fire; or death within one year of a fire injury.

³ Fire Death Rate = number of fire deaths per 100,000 population.

⁴ Fire is any instance of destructive or uncontrolled burning of combustible solids, liquids or gases. Fire does not include: lightning, forest fire, motor vehicle accidents, explosion - steam/ammunition.

Fire Related Injuries and Deaths by Major Property Classification



Major Causes of Fire Injuries

	Fires	Injuries	Deaths	\$ Loss
FC100 - SMOKE INHALATION	70	78	14	14,591,057
FC101 - BURNS RESULTING FROM FIRE AND FLAMES	57	63	4	1,987,770
FC102 - BURNS RESULTING FROM HOT SUBSTANCES	16	16	0	5,862,100
FC103 - STRUCK BY OBJECTS OR PERSONS	3	3	0	2,199,070
FC104 - INJURY CAUSED BY FALLS	4	3	1	440,000
FC105 - INJURY CAUSED BY EXPLOSIVES	2	3	0	25,000
FC107 - UNCLASSIFIED	15	15	1	12,246,070
FC108 - UNKNOWN	24	14	15	491,020
TOTAL	191	195	35	37,842,087

Status, Age and Gender of Casualties

	Injured	Deaths
STATUS OF CASUALTY		
Firefighter	20	1
Civilian	175	34
AGE OF CASUALTY		
Unknown	18	14
Birth - 2 Years	7	1
3 - 4 Years	1	0
5 - 6 Years	3	0
7 - 8 Years	1	0
9 - 10 Years	0	0
11 - 12 Years	0	0
13 - 14 Years	1	0
15 - 16 Years	5	0
17 - 18 Years	2	0
19 - 20 Years	6	0
21 - 30 Years	28	2
31 - 40 Years	33	0
41 - 50 Years	34	3
51 - 60 Years	22	8
61 - 70 Years	13	4
71 - 80 Years	6	2
81 - 90 Years	2	0
over 90 Years	13	1
GENDER OF CASUALTY		
Male	128	23
Female	67	12

Circumstances Contributing to Fire Casualties

NATURE OF CASUALTY	Fires	Injuries	Deaths	\$ Loss
FC001 - DEATH	28	0	35	6,856,200
FC002 - LIGHT INJURY (HOSP. 1-2 DAYS AND/OR OFF WORK 1-15 DAYS)	49	56	0	6,946,381
FC003 - MINOR INJURY (LESS THAN ONE DAY HOSPITAL OR OFF WORK)	95	118	0	9,022,316
FC004 - SERIOUS INJURY (HOSP. 3+ DAYS AND/OR OFF WORK 15+ DAYS)	19	21	0	2,869,070
TOTAL	191	195	35	25,693,967

CONDITION OF CASUALTY	Fires	Injuries	Deaths	\$ Loss
FC010 - CONDITION OF CASUALTY UNKNOWN	35	25	22	5,224,650
FC011 - ASLEEP AT TIME OF FIRE	26	24	5	1,381,910
FC012 - BEDRIDDEN OR OTHER PHYSICAL HANDICAP	2	1	1	1,500
FC013 - IMPAIRMENT BY ALCOHOL, DRUGS, OR MEDICATION	17	15	3	590,420
FC014 - AWAKE OR NO PHYSICAL OR MENTAL IMPAIRMENT AT TIME OF FIRE	74	87	2	16,422,247
FC015 - UNDER RESTRAINT OR DETENTION	1	1	0	1,500
FC016 - TOO YOUNG TO REACT TO FIRE EMERGENCY	0	0	0	0
FC017 - MENTAL HANDICAP - INCLUDES SENILITY	1	1	0	3,500
FC018 - CHILD LEFT UNATTENDED	0	0	0	0
FC019 - UNCLASSIFIED	32	41	2	2,596,040
TOTAL	188	195	35	26,221,767

ACTION OF CASUALTY	Fires	Injuries	Deaths	\$ Loss
FC020 - ACTION OF CASUALTY UNKNOWN	38	25	22	5,145,750
FC021 - INJURED WHILE ATTEMPTING TO ESCAPE	29	28	7	4,003,450
FC022 - OVER-EXERTION, HEART ATTACK	5	3	2	5,716,400
FC023 - VOLUNTARILY ENTERED OR REMAINED FOR RESCUE PURPOSE	13	15	0	558,950
FC024 - VOLUNTARILY ENTERED OR REMAINED FOR FIRE FIGHTING	71	74	2	9,639,401
FC025 - VOLUNTARILY ENTERED OR REMAINED TO SAVE PERSONAL PROPERTY	12	12	1	6,739,316
FC026 - LOSS OF JUDGEMENT OR PANIC	11	11	0	158,150
FC027 - RECEIVED DELAYED WARNING	0	0	0	0
FC028 - DID NOT ACT	12	13	1	233,470
FC029 - UNCLASSIFIED	14	14	0	6,522,350
TOTAL	205	195	35	38,717,237

CAUSE OF FAILURE TO ESCAPE	Fires	Injuries	Deaths	\$ Loss
FC050 - UNKNOWN	37	34	17	5,406,350
FC051 - TRAPPED BY RAPID SPREADING OF FIRE/SMOKE THROUGH VERTICAL OPENINGS	6	3	5	843,250
FC052 - TRAPPED BY RAPID SPREADING OF FIRE/SMOKE THROUGH HORIZONTAL OPENINGS	7	5	6	2,575,800
FC053 - HIGH FLAME SPREAD OF COMBUSTIBLE INTERIOR FINISH OF WALLS, CEILINGS	5	5	0	422,500
FC054 - BUILDING COLLAPSE	0	0	0	0
FC055 - FALLING DEBRIS	2	2	0	7,299,070
FC056 - EXPLOSION	5	8	0	76,000
FC057 - EXIT LOCKED, BLOCKED OR OBSTRUCTED	0	0	0	0
FC058 - OUTDOOR FIRE INCLUDES FOREST/BRUSH FIRES	3	3	0	15,000
FC059 - UNCLASSIFIED OR NOT APPLICABLE	123	135	7	15,336,047
TOTAL	188	195	35	31,974,017

B.C. FIRE LOSS**Fire Loss in British Columbia 1996-2005**

Year	Fires	Injuries	Deaths	\$ Loss
1996	7,494	432	27	165,040,632
1997	6,415	373	41	202,644,692
1998	6,674	333	30	167,096,340
1999	6,037	298	32	167,334,641
2000	6,315	343	42	157,866,569
2001	6,035	288	44	202,889,229
2002	6,703	270	41	214,056,071
2003	6,264	212	23	483,970,947 ⁵
2004	7,614	208	30	167,285,613
2005	7,249	195	35	212,985,155

Per Capita Loss in British Columbia 1996-2005

Year	Population ⁶	Fires	Fire Rate ⁷	\$ Loss	\$ Loss/Capita
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
2004	4,203,807	7,614	1.81	167,285,613	39.79
2005	4,260,246	7,249	1.70	212,985,155	49.99
10 Year Average	4,078,101	6,680	1.64	214,116,989	52.35

⁵ 2003 was an exceptional year with very high losses due to major forest fires that swept throughout the interior of British Columbia. This is referred to as Firestorm 2003

⁶ **Source of Population Statistics:** Statistics Canada, CANSIM.

⁷ **Fire Rate** = Number of fires per 1,000 population

Per Capita Fires by Location

Municipality	Population ⁸	Fires	Injuries	Deaths	\$ Loss	\$ Loss / Fire	\$ Loss / Capita	Fire Rate ⁹
100 MILE HOUSE	1,826	1	0	1	0	0	0.0	0.5
ABBOTSFORD	128,088	64	0	0	1,780,089	27,814	13.9	0.5
ALERT BAY	611	2	0	0	43,144	21,572	70.6	3.3
ARMSTRONG	4,554	17	0	0	260,484	15,323	57.2	3.7
ASHCROFT	1,836	1	0	0	1,200	1,200	0.7	0.5
BOWEN ISLAND	3,424	2	0	0	7,700	3,850	2.2	0.6
BURNABY	204,551	128	13	0	3,862,822	30,178	18.9	0.6
BURNS LAKE	2,173	3	0	0	167,297	55,766	77.0	1.4
CACHE CREEK	1,134	3	0	0	3,613	1,204	3.2	2.6
CAMPBELL RIVER	30,806	85	2	0	1,058,440	12,452	34.4	2.8
CASTLEGAR	7,820	29	1	0	182,184	6,282	23.3	3.7
CENTRAL SAANICH	16,819	35	2	0	458,835	13,110	27.3	2.1
CHASE	2,568	5	0	0	1,370,500	274,100	533.7	1.9
CHETWYND	2,770	1	0	0	373,441	373,441	134.8	0.4
CITY OF CHILLIWACK	70,513	206	11	0	6,330,050	30,728	89.8	2.9
CLINTON	654	2	0	0	0	0	0.0	3.1
COLDSTREAM	10,101	25	0	0	613,000	24,520	60.7	2.5
COLWOOD	15,122	55	0	0	76,419	1,389	5.1	3.6
COMOX	12,833	4	0	0	58,671	14,668	4.6	0.3
COQUITLAM CITY	119,451	221	5	1	2,127,949	9,629	17.8	1.9
COURTENAY	21,798	67	0	0	1,101,376	16,438	50.5	3.1
CRANBROOK	19,771	62	0	0	1,534,348	24,748	77.6	3.1
CRESTON	5,097	25	0	0	1,699,359	67,974	333.4	4.9
CUMBERLAND	2,817	2	0	0	45,500	22,750	16.2	0.7
DAWSON CREEK	11,393	37	0	1	11,060	299	1.0	3.2
DELTA	102,642	104	5	0	1,769,949	17,019	17.2	1.0
DISTRICT OF LAKE COUNTRY	10,366	22	0	0	813,742	36,988	78.5	2.1
DUNCAN	4,898	13	0	1	298,396	22,954	60.9	2.7
ELKFORD	2,670	10	0	0	255,000	25,500	95.5	3.7
ENDERBY	3,072	9	0	0	102,900	11,433	33.5	2.9
ESQUIMALT	17,188	13	0	0	442,036	34,003	25.7	0.8
FERNIE	5,126	19	4	0	19,270	1,014	3.8	3.7
FORT NELSON	4,822	18	0	0	348,034	19,335	72.2	3.7
FORT ST. JAMES	2,003	1	0	0	101,854	101,854	50.9	0.5
FORT ST. JOHN	17,779	41	1	1	620,359	15,131	34.9	2.3
FRASER LAKE	1,366	1	0	0	2,100	2,100	1.5	0.7
GIBSONS	4,349	1	0	0	44,086	44,086	10.1	0.2
GOLD RIVER	1,356	2	0	0	300	150	0.2	1.5
GOLDEN	4,398	8	0	0	171,192	21,399	38.9	1.8
GRAND FORKS	4,200	27	1	0	496,750	18,398	118.3	6.4
GREENWOOD	668	5	0	0	267,962	53,592	401.1	7.5
HARRISON HOT SPRINGS	1,595	4	0	0	209,051	52,263	131.1	2.5
HAZELTON	341	1	0	0	9,020	9,020	26.5	2.9
HIGHLANDS DISTRICT	2,114	1	0	0	0	0	0.0	0.5
HOPE DISTRICT	6,590	54	3	0	628,709	11,643	95.4	8.2
HOUSTON	3,732	6	0	0	1,225,842	204,307	328.5	1.6
HUDSON'S HOPE	1,157	4	0	0	230,000	57,500	198.8	3.5
INVERMERE	3,256	1	0	0	12,420	12,420	3.8	0.3

⁸ Source of Population Statistics: Statistics Canada, CANSIM.⁹ Fire Rate = Number of fires per 1,000 population

B.C. Fire Loss

Municipality	Population ¹⁰	Fires	Injuries	Deaths	\$ Loss	\$ Loss / Fire	\$ Loss / Capita	Fire Rate ¹¹
KAMLOOPS	82,703	154	4	1	1,627,731	10,570	19.7	1.9
KASLO	1,105	1	0	0	2,556	2,556	2.3	0.9
KELOWNA	109,477	209	4	1	4,120,700	19,716	37.6	1.9
KENT	5,679	25	0	0	50,301	2,012	8.9	4.4
KEREMEOS	1,315	4	0	0	115,585	28,896	87.9	3.0
KIMBERLEY	7,048	3	0	0	10,940	3,647	1.6	0.4
KITIMAT	10,586	28	1	0	1,751,927	62,569	165.5	2.6
LADYSMITH	7,291	28	0	0	16,138	576	2.2	3.8
LAKE COWICHAN	3,029	1	0	0	7,072	7,072	2.3	0.3
LANGLEY CITY	25,712	40	2	0	2,603,990	65,100	101.3	1.6
LANGLEY TOWNSHIP	97,113	316	8	1	13,480,784	42,661	138.8	3.3
LANTZVILLE	3,819	3	0	0	31,345	10,448	8.2	0.8
LILLOOET	2,755	2	0	0	51,392	25,696	18.7	0.7
LOGAN LAKE	2,313	10	0	0	7,400	740	3.2	4.3
LUMBY	1,738	17	0	0	355,520	20,913	204.6	9.8
MACKENZIE	5,453	30	0	0	247,746	8,258	45.4	5.5
MAPLE RIDGE	73,748	36	3	0	1,124,526	31,237	15.2	0.5
MASSET	967	1	0	0	97,000	97,000	100.3	1.0
MCBRIDE	752	1	0	0	4,000	4,000	5.3	1.3
MERRITT	7,561	9	0	0	4,932	548	0.7	1.2
METCHOSIN	500	2	0	0	24,152	12,076	48.3	4.0
MISSION	34,738	30	0	0	2,863,838	95,461	82.4	0.9
MONTROSE	1,086	1	0	0	12,000	12,000	11.0	0.9
NAKUSP	1,779	11	0	0	14,540	1,322	8.2	6.2
NANAIMO	79,616	410	4	4	2,534,908	6,183	31.8	5.1
NELSON	9,796	42	1	0	237,937	5,665	24.3	4.3
NEW DENVER	549	1	0	0	1,938	1,938	3.5	1.8
NEW HAZELTON	758	1	0	0	80,000	80,000	105.5	1.3
NEW WESTMINSTER	57,572	156	6	0	993,136	6,366	17.3	2.7
NORTH COWICHAN	28,516	20	1	0	718,771	35,939	25.2	0.7
NORTH SAANICH	11,273	1	0	0	146,000	146,000	13.0	0.1
NORTH VANCOUVER CITY DISTRICT	48,037	116	1	0	4,766,108	41,087	99.2	2.4
OAK BAY	87,072	79	0	0	4,757,639	60,223	54.6	0.9
OLIVER	18,311	74	1	0	142,775	1,929	7.8	4.0
OSOYOOS	4,379	3	0	0	73,019	24,340	16.7	0.7
PARKSVILLE	4,800	9	0	0	639,664	71,074	133.3	1.9
PEACHLAND	11,707	4	0	0	187,450	46,863	16.0	0.3
PENTICTON	5,230	14	0	0	918,140	65,581	175.6	2.7
PITT MEADOWS	33,057	185	0	0	2,529,069	13,671	76.5	5.6
PORT ALBERNI	16,780	5	0	0	417,154	83,431	24.9	0.3
PORT ALICE	18,686	36	2	0	1,002,649	27,851	53.7	1.9
PORT CLEMENTS	1,128	6	0	0	138,650	23,108	122.9	5.3
PORT COQUITLAM	533	2	0	0	6,000	3,000	11.3	3.8
PORT HARDY	57,666	98	7	0	918,038	9,368	15.9	1.7
PORT MCNEILL	4,596	3	0	0	15,727	5,242	3.4	0.7
PORT MOODY	2,927	4	0	0	10,777	2,694	3.7	1.4
POUCE COUPE	28,639	8	0	0	806,694	100,837	28.2	0.3
	887	6	2	0	99,035	16,506	111.7	6.8

¹⁰ Source of Population Statistics: Statistics Canada, CANSIM.

¹¹ Fire Rate = Number of fires per 1,000 population

B.C. Fire Loss

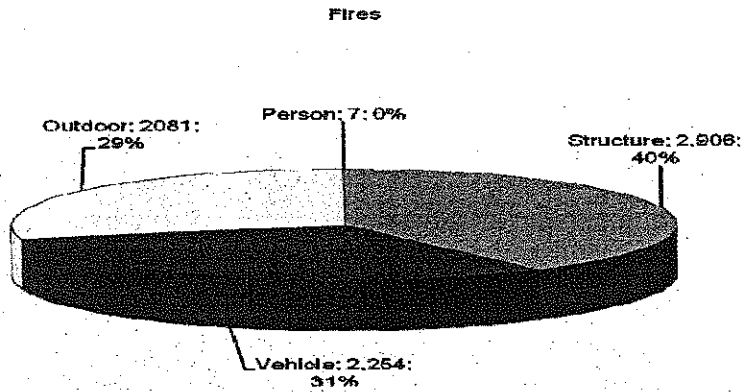
Municipality	Population ¹²	Fires	Injuries	Deaths	\$ Loss	\$ Loss / Fire	\$ Loss/ Capita	Fire Rate ¹³
POWELL RIVER	13,830	29	0	1	1,926,775	66,441	139.3	2.1
PRINCE GEORGE	77,151	610	3	0	6,922,627	11,349	89.7	7.9
PRINCE RUPERT	14,972	126	9	1	1,317,552	10,457	88.0	8.4
PRINCETON	2,687	3	0	0	110,970	36,990	41.3	1.1
QUALICUM BEACH	8,806	2	0	0	4,750	2,375	0.5	0.2
QUESNEL	10,485	37	0	0	719,009	19,433	68.6	3.5
RADIUM HOT SPRINGS	813	11	0	0	221,000	20,091	271.8	13.5
REVELSTOKE	7,963	24	0	1	194,357	8,098	24.4	3.0
RICHMOND	175,791	39	0	2	24,975,097	640,387	142.1	0.2
ROSSLAND	3,724	2	0	0	55,000	27,500	14.8	0.5
SAANICH	110,382	185	15	0	4,756,091	25,709	43.1	1.7
SALMON ARM	16,800	30	3	0	168,704	5,623	10.0	1.8
SAYWARD	407	1	0	0	1,888	1,888	4.6	2.5
SECHLT	8,899	4	0	0	156,899	39,225	17.6	0.4
SIDNEY	11,861	8	0	0	348,956	43,620	29.4	0.7
SMITHERS	5,508	9	0	0	287,500	31,944	52.2	1.6
SOOKE	10,116	15	1	0	3,210,595	214,040	317.4	1.5
SPALLUMCHEEN	5,706	17	0	0	405,834	23,873	71.1	3.0
SPARWOOD	3,972	2	0	0	1,280	640	0.3	0.5
SQUAMISH	15,724	6	0	0	158,737	26,456	10.1	0.4
STEWART	695	6	0	0	630,000	105,000	906.5	8.6
SUMMERLAND	11,404	36	2	0	347,369	9,649	30.5	3.2
SURREY	395,664	808	45	5	29,970,501	37,092	75.7	2.0
TERRACE	12,554	37	0	0	2,319,326	62,684	184.7	2.9
TOFINO	1,846	1	0	0	12,000	12,000	6.5	0.5
TRAIL	7,939	24	2	0	173,309	7,221	21.8	3.0
VALEMOUNT	1,250	2	0	0	102,000	51,000	81.6	1.6
VANCOUVER	583,191	128	0	1	4,481,898	35,015	7.7	0.2
VANDERHOOF	4,727	2	0	0	844,395	422,198	178.6	0.4
VERNON	36,228	48	2	0	1,078,020	22,459	29.8	1.3
VICTORIA	78,296	147	4	1	1,872,150	12,736	23.9	1.9
WEST VANCOUVER	44,143	21	1	0	484,500	23,071	11.0	0.5
WHISTLER	9,360	19	0	0	616,729	32,459	65.9	2.0
WHITE ROCK	19,699	3	0	0	6,135	2,045	0.3	0.2
WILLIAMS LAKE	11,871	76	0	3	5,030,347	66,189	423.8	6.4
OTHER ¹⁴	610,782	1,039	13	8	37,069,009	35,678	60.7	1.7
TOTAL	4,260,246	7,249	195	35	212,985,155	29,381	50.0	1.7

¹² Source of Population Statistics: Statistics Canada, CANSIM.

¹³ Fire Rate = Number of fires per 1,000 population

¹⁴ Other refers to any municipal/non-municipal districts that were not listed from our population statistic source

Fire Loss by Major Property Classification



Fire Loss by Major Property Complex (PC)

	Fires	Injuries	Deaths	\$ Loss	% of Fires
Assembly Use	176	1	0	7,062,043	2.43
Institutional Use	31	2	0	342,740	0.43
Residential Use	1,926	167	28	87,302,537	26.57
Business Use	26	0	0	5,606,008	0.36
Commercial/Mercantile Use	99	2	0	6,298,389	1.37
Manufacturing Use	142	1	1	28,054,920	1.96
Storage Use	10	0	0	106,100	0.14
Other Special Use ¹⁵	4,839	22	6	78,212,418	66.75
TOTAL	7,249	195	35	212,985,155	100.00

¹⁵ (PC) **Other Special Use** includes: parks, public transportation terminals and agricultural property.

Fire Loss by Major Property Classes (PR)

	Fires	Injuries	Deaths	\$ Loss	% of Fires
Assemblies	213	1	0	9,488,225	2.94
Institutional	36	1	0	363,404	0.50
Residential	2,131	169	29	102,332,926	29.40
Business & Personal Service	48	1	0	8,063,026	0.66
Mercantile	103	1	0	5,952,548	1.42
Industrial Manufacturing Property	139	1	1	29,170,962	1.92
Storage Property	158	2	0	24,719,393	2.18
Special Property & Transportation Equipment ¹⁶	4,131	10	2	19,183,367	56.99
Miscellaneous Property ¹⁷	290	9	3	13,711,304	4.00
TOTAL	7,249	195	35	212,985,155	100.00

Fire Loss by Major Sources of Ignition (IG)

	Fires	Injuries	Deaths	\$ Loss	% of Fires
Cooking Equipment	573	71	2	11,073,160	7.90
Heating Equipment	432	10	2	12,250,129	5.96
Appliances & Equipment	162	8	0	3,384,266	2.23
Electrical Distribution Equipment	405	7	1	10,669,993	5.59
Electrical Equipment	145	6	2	6,480,481	2.00
Smoker's Material & "Open" Flame	1,239	45	5	26,186,167	17.09
Exposure	177	0	0	2,492,176	2.44
Miscellaneous ¹⁸	4,116	48	23	140,448,783	56.78
TOTAL	7,249	195	35	212,985,155	100.00

¹⁶ (PR) **Special Property & Transportation Equipment** includes: outdoor property, connecting thoroughfares like bridges and tunnels, vacant property that is under construction or demolition, watercraft, rail transport vehicles, ground transport vehicles, aircraft and heavy machinery.

¹⁷ (PR) **Miscellaneous Properties** include: laboratories, farm facilities, outbuildings, utilities, mining, communications and nucleonic.

¹⁸ (IG) **Miscellaneous** includes: fireworks, heat treatment equipment and commercial and industrial machinery.

Fire Loss by Major Acts or Omissions (AO)

	Fires	Injuries	Deaths	\$ Loss	% of Fires
Incendiary	1,829	7	0	22,330,726	22.5
Misuse of Source of Ignition	550	12	1	14,557,139	7.6
Misuse of Material Ignited	207	34	1	5,837,125	2.9
Mechanical/Electrical Failure/Malfunction	1,103	11	0	17,977,195	15.2
Construction, Design or Installation Deficiency	104	2	0	5,586,024	1.4
Misuse of Equipment	259	4	2	4,457,147	3.6
Human Failing	995	81	8	21,679,541	13.7
Vehicle Accident	62	4	0	689,046	0.9
Miscellaneous ¹⁹	2,340	40	23	119,871,212	32.3
TOTAL	7,249	195	35	212,985,155	100.0

Fire Loss by Major Materials First Ignited (MI)

	Fires	Injuries	Deaths	\$ Loss	% of Fires
Structural Components, Finish Materials	209	6	1	13,888,836	2.9
Furniture, Furnishings	217	14	2	6,526,309	3.0
Clothing, Textiles	260	16	4	9,098,928	3.6
Wood, Paper Products	833	9	2	11,922,004	11.5
Flammable Liquids, Combustible Liquids	550	55	0	13,902,146	7.6
Flammable Gases	60	12	0	859,942	0.8
Chemicals, Plastics, Metals	203	7	0	2,801,656	2.8
Agricultural, Forestry Products	688	12	0	11,310,970	9.5
Miscellaneous ²⁰	4,229	64	26	142,674,364	58.3
TOTAL	7,249	195	35	212,985,155	100.0

¹⁹ (AO) Miscellaneous includes: illegal operations/activities, exposure fire from wildland fire and tampering with safety devices.

²⁰ (MI) Miscellaneous includes: barbecue briquettes and sticks, fire logs, coal, peat, hog fuel, creosote, electrical insulation, garbage, oily rags, artificial Christmas trees, gunpowder and wood treatment oil.

B.C. FIRE FACTS

Initial Detection of Fires (ID)

	Fires	Injuries	Deaths	\$ Loss
INITIAL DETECTION UNKNOWN	1	0	0	6,500
CANNOT BE DETERMINED	434	10	11	28,511,573
NOT APPLICABLE (FOR VEHICLE, OUTDOOR, PERSON REPORTS ONLY)	4,335	15	4	20,115,659
INITIAL DETECTION - UNCLASSIFIED (DESCRIBE)	23	0	1	708,250
SMOKE ALARM DEVICE	234	31	2	10,442,307
SMOKE DETECTOR DEVICE	90	5	0	6,527,363
HEAT ALARM DEVICE	5	0	0	215,153
HEAT DETECTOR DEVICE	16	1	0	21,730,010
AUTOMATIC SPRINKLER SYSTEM	36	2	0	1,150,700
AUTOMATIC SYSTEM OTHER THAN SPRINKLER	6	0	3	4,215,500
VISUAL SIGHTING OR OTHER MEANS OF PERSONAL DETECTION (E.G. SMELL)	2,044	131	12	119,076,700
NO INITIAL DETECTION (EXTINGUISHED BEFORE DETECTION)	16	0	1	136,440
SPECIALTY DETECTOR (INCLUDES FLAME, BEAM, LINE)	9	0	1	149,000
TOTAL	7,249	195	35	212,985,155

Smoke Alarm Operation (SD)

	Fires	Injuries	Deaths	\$ Loss
NO SMOKE ALARM INSTALLED	1	0	0	6,500
ALARM OPERATION CANNOT BE DETERMINED	1,070	39	22	63,901,671
NOT APPLICABLE (FOR VEHICLE, OUTDOOR, PERSON REPORTS ONLY)	4,342	15	4	20,172,159
ALARM ACTIVATED - ASSISTED OCCUPANT(S) IN EVACUATING	371	47	2	33,971,906
ALARM ACTIVATED - INAUDIBLE	13	1	0	582,250
ALARM ACTIVATED - OCCUPANT(S) UNABLE TO RESPOND	9	1	0	74,600
ALARM ACTIVATED - UNNECESSARY TO EVACUATE OR UNOCCUPIED	150	5	0	25,271,386
ALARM ACTIVATED - OCCUPANT ACTION UNKNOWN	52	11	0	1,339,254
ALARM NOT ACTIVATED - UNSUITABLE LOCATION	90	0	0	1,755,239
ALARM NOT ACTIVATED - NO BATTERY OR BATTERY DEAD	72	6	0	2,532,741
ALARM NOT ACTIVATED - AC POWER NOT CONNECTED, DISABLE OR OFF	31	11	0	719,236
ALARM NOT ACTIVATED - MECHANICAL FAILURE	8	2	0	163,800
ALARM NOT ACTIVATED - UNKNOWN	306	14	5	24,367,913
NO SMOKE ALARM INSTALLED	734	43	2	38,126,500
TOTAL	7,249	195	35	212,985,155

Incendiary²¹ Fires by Property Group

	# of Fires	\$ Loss	# of Injuries	# of Deaths
ASSEMBLY				
Educational	2	75,000	0	0
INSTITUTIONAL				
Other	1	25,000	0	0
RESIDENTIAL				
One & two-family dwelling	41	326,833	0	0
Apartment	1	500	0	0
Hotel, motel, rooming house	1	10,000	0	0
MISCELLANEOUS				
Automobile	1	6,500	0	0
TOTAL	47	443,833	0	0

Juvenile²² Fire Setters

Age of Children	# of Children	\$ Loss
1-4 years	0	0
5-8 years	15	660
9-12 years	40	62,644
13-18 years	55	19,308
Unknown age	2	2
TOTAL	112	\$82,614

Gender of Children	Amount
Female	20
Male	96
Unknown	2
TOTAL	118

Fires Related to Illegal Activity

	# of Fires	Total \$ Loss	Injuries	Deaths
Marijuana Grow Operation	24	1,979,000	1	0
Meth Lab	1	180,000	0	0
Cooking Marijuana	3	6,100	2	0
Fireworks	1	300	0	0
Bylaw Infraction (Miscoded)	26	60,000	0	0
Not Specified	1	1,000	0	0
Other	5	21400	3	0
TOTAL	61	2,247,800	6	0

Fires Related to School Property

# of Fires	Property Loss	Contents Loss	Total Loss	Injuries	Deaths
79	872,452	210,310	1,082,762	1	0

²¹ **Incendiary** or set fires include arson, suspected incendiarism, riot, mischief or vandalism.

²² **Juvenile Fire Setters** are children and/or adolescents (under 18 years of age) that engage in fire setting

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:

- Over fuelling, 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.

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.

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 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 reaction.

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.

Fire

Fire is any instance of destructive or uncontrolled burning of combustible solids, liquids or gases.

Fire does not include:

- lightning
- forest fire
- motor vehicle accidents
- explosion - steam/ammunition

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.

Juvenile Fire Setter

Children and/or adolescents (under 18 years of age) that engage in fire setting

CONTACT INFORMATION

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Report prepared by the Office of the Fire Commissioner

If you have any questions or concerns regarding this report, or require more detailed statistical information, we encourage you to contact us.

Toll Free: 1-888-988-9488

E-mail: ofc@gov.bc.ca

REPORT POSTED MARCH 2010



Ministry of
Public Safety
and Solicitor General

ANNUAL STATISTICAL REPORT 2006

British Columbia Office of the Fire Commissioner

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INTRODUCTION

The source of all statistical data is from the Office of the Fire Commissioner's (OFC) Fire Incident Reporting and Evaluation (FIRE) System. The FIRE System receives fire incident data from local fire departments in BC, and from insurance companies who have received claims due to fire damage. Fire incident data is received regularly throughout the year as fire events occur in BC.

Dollar Loss is an estimate of the value of the property loss due to a fire. Dollar loss (\$ Loss) data is received from either local fire department estimates, or from insurance company claims for the actual dollar loss amount that was paid to the claimant. Dollar loss does not include loss of business or income as a result of fire.

FIRE CASUALTIES

British Columbia Fire Injury and Death Rates

Year	Population ¹	BC Fire Injuries	BC Fire Deaths ²	BC Fire Death Rate ³
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
2004	4,203,807	208	30	0.7
2005	4,260,246	195	35	0.8
2006	4,320,255	201	23	0.5
10 Year Average	4,120,205	272.1	34.1	0.83

Casualties by Month

MONTH	FIRES ⁴	\$ LOSS	INJURED	DEATHS
JANUARY	489	13,796,132	18	0
FEBRUARY	563	18,721,805	25	1
MARCH	534	10,000,709	16	1
APRIL	719	19,771,274	18	1
MAY	725	19,937,313	9	1
JUNE	746	21,915,859	16	3
JULY	926	27,356,547	19	2
AUGUST	851	20,405,103	6	1
SEPTEMBER	793	25,960,958	13	2
OCTOBER	713	17,431,389	25	5
NOVEMBER	487	13,392,624	7	2
DECEMBER	526	27,382,969	29	4
TOTAL	8,072	236,072,682	201	23

Location of Fire Deaths

Abbotsford	1
Bella Coola	3
Burnaby	1
Central	
Kootenay RD	1
Cowichan	2
Dawson Creek	1
Delta	3
Langley	1
Midway	1
Nelson	1
North	
Vancouver	1
Prince Rupert	1
Surrey	3
Tumbler Ridge	1
Vancouver	2
Total	23

¹ **Source of Population Statistics:** Statistics Canada, CANSIM.

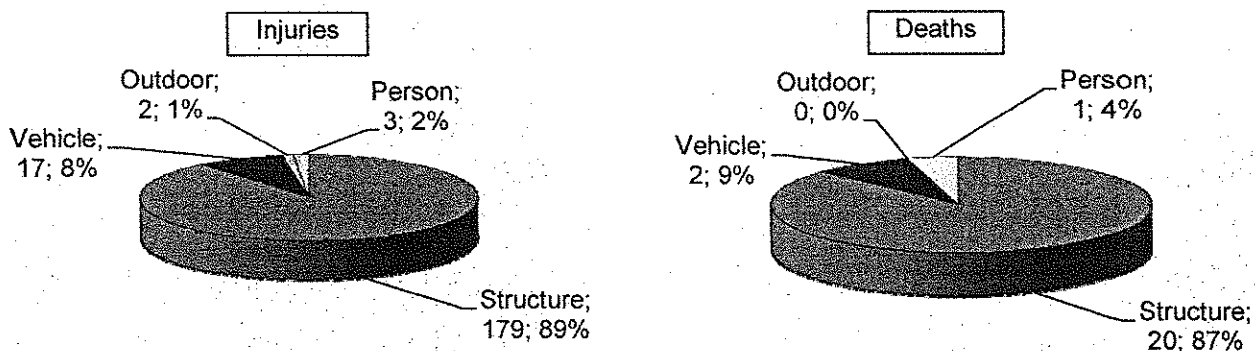
Prepared by: Population Section, BC Stats, Ministry of Labour and Citizens' Services, Government of British Columbia

² **Fire Death** is a death directly due to fire; or death within one year of a fire injury

³ **Fire Death Rate** = number of fire deaths per 100,000 population

⁴ **Fire** is any instance of destructive or uncontrolled burning of combustible solids, liquids or gases. Fire does not include: lightning, forest fire, motor vehicle accidents, explosion – steam/ammunition

Fire Related Injuries and Deaths by Major Property Classification



Major Causes of Fire Injuries

	Fires	Injuries	Deaths
FC100 - SMOKE INHALATION	74	90	8
FC101 - BURNS RESULTING FROM FIRE AND FLAMES	59	58	5
FC102 - BURNS RESULTING FROM HOT SUBSTANCES	23	23	0
FC103 - STRUCK BY OBJECTS OR PERSONS	5	5	0
FC104 - INJURY CAUSED BY FALLS	10	12	0
FC105 - INJURY CAUSED BY EXPLOSIVES	2	4	0
FC107 - UNCLASSIFIED	8	7	1
FC108 - UNKNOWN	9	2	9
TOTAL	190	201	23

Status, Age and Gender of Casualties

	Injured	Deaths
STATUS OF CASUALTY		
Firefighter	21	0
Civilian	180	23
AGE OF CASUALTY		
Unknown	27	8
Birth - 2 Years	5	0
3 - 4 Years	1	0
5 - 6 Years	1	1
7 - 8 Years	1	0
9 - 10 Years	1	1
11 - 12 Years	1	1
13 - 14 Years	3	0
15 - 16 Years	6	0
17 - 18 Years	4	0
19 - 20 Years	6	2
21 - 30 Years	35	1
31 - 40 Years	19	0
41 - 50 Years	40	2
51 - 60 Years	30	3
61 - 70 Years	8	0
71 - 80 Years	7	1
81 - 90 Years	4	3
over 90 Years	2	0
GENDER OF CASUALTY		
Male	143	14
Female	58	9

Circumstances Contributing to Fire Casualties

NATURE OF CASUALTY	Fires	Injuries	Deaths
FC001 - DEATH	18	0	23
FC002 - LIGHT INJURY (HOSP. 1-2 DAYS AND/OR OFF WORK 1-15 DAYS)	59	68	0
FC003 - MINOR INJURY (LESS THAN ONE DAY HOSPITAL OR OFF WORK)	88	105	0
FC004 - SERIOUS INJURY (HOSP. 3+ DAYS AND/OR OFF WORK 15+ DAYS)	23	28	0
TOTAL	188	201	23

CONDITION OF CASUALTY	Fires	Injuries	Deaths
FC010 - CONDITION OF CASUALTY UNKNOWN	39	29	15
FC011 - ASLEEP AT TIME OF FIRE	34	42	5
FC012 - BEDRIDDEN OR OTHER PHYSICAL HANDICAP	2	1	1
FC013 - IMPAIRMENT BY ALCOHOL, DRUGS, OR MEDICATION	7	7	1
FC014 - AWAKE OR NO PHYSICAL OR MENTAL IMPAIRMENT AT TIME OF FIRE	82	93	0
FC015 - UNDER RESTRAINT OR DETENTION	0	0	0
FC016 - TOO YOUNG TO REACT TO FIRE EMERGENCY	1	0	1
FC017 - MENTAL HANDICAP - INCLUDES SENILITY	0	0	0
FC018 - CHILD LEFT UNATTENDED	0	0	0
FC019 - UNCLASSIFIED	22	29	0
TOTAL	187	201	23

ACTION OF CASUALTY	Fires	Injuries	Deaths
FC020 - ACTION OF CASUALTY UNKNOWN	40	32	13
FC021 - INJURED WHILE ATTEMPTING TO ESCAPE	22	23	2
FC022 - OVER-EXERTION, HEART ATTACK	1	1	0
FC023 - VOLUNTARILY ENTERED OR REMAINED FOR RESCUE PURPOSE	10	12	0
FC024 - VOLUNTARILY ENTERED OR REMAINED FOR FIRE FIGHTING	75	86	0
FC025 - VOLUNTARILY ENTERED OR REMAINED TO SAVE PERSONAL PROPERTY	8	9	0
FC026 - LOSS OF JUDGEMENT OR PANIC	12	9	5
FC027 - RECEIVED DELAYED WARNING	3	3	0
FC028 - DID NOT ACT	11	11	2
FC029 - UNCLASSIFIED	13	15	1
TOTAL	195	201	23

CAUSE OF FAILURE TO ESCAPE	Fires	Injuries	Deaths
FC050 - UNKNOWN	34	26	11
FC051 - TRAPPED BY RAPID SPREADING OF FIRE/SMOKE THROUGH VERTICAL OPENINGS	3	6	0
FC052 - TRAPPED BY RAPID SPREADING OF FIRE/SMOKE THROUGH HORIZONTAL OPENINGS	10	5	7
FC053 - HIGH FLAME SPREAD OF COMBUSTIBLE INTERIOR FINISH OF WALLS, CEILINGS	5	4	3
FC054 - BUILDING COLLAPSE	1	1	0
FC055 - FALLING DEBRIS	0	0	0
FC056 - EXPLOSION	6	6	1
FC057 - EXIT LOCKED, BLOCKED OR OBSTRUCTED	5	5	0
FC058 - OUTDOOR FIRE INCLUDES FOREST/BRUSH FIRES	1	1	0
FC059 - UNCLASSIFIED OR NOT APPLICABLE	119	147	1
TOTAL	184	201	23

B.C. FIRE LOSS**Fire Loss in British Columbia 1997-2006**

Year	Fires	\$ Loss
1997	6,415	202,644,692
1998	6,674	167,096,340
1999	6,037	167,334,641
2000	6,315	157,866,569
2001	6,035	202,889,229
2002	6,703	214,056,071
2003	6,264	483,970,947 ⁵
2004	7,614	167,285,613
2005	7,249	212,985,155
2006	8,071	236,072,682

Per Capita Loss in British Columbia 1997-2006

Year	Population ⁶	Fires	Fire Rate ⁷	\$ Loss	\$ Loss/Capita
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 ⁸	4,154,591	6,264	1.51	483,970,947	116.49
2004	4,203,807	7,614	1.81	167,285,613	39.79
2005	4,260,246	7,249	1.70	212,985,155	49.99
2006	4,320,255	8,071	1.87	236,072,682	54.64
10 Year Average	4,120,205	6,738	1.63	221,220,194	53.58

⁵ 2003 was an exceptional year with very high losses due to major forest fires that swept throughout the interior of British Columbia. This is referred to as Firestorm 2003

⁶ **Source of Population Statistics:** Statistics Canada, CANSIM.

⁷ **Fire Rate** = Number of fires per 1,000 population

⁸ 2003 was an exceptional year with very high loss due to major forest fires that swept throughout the interior of British Columbia. This is referred to as Firestorm 2003.

Per Capita Fires by Location

Municipality	Population ⁹	Fires	Injuries	Deaths	\$ Loss	\$ Loss / Fire	\$ Loss / Capita	Fire Rate ¹⁰
100 MILE HOUSE	1,829	3	0	0	269,649	89,883	147.4	1.6
ABBOTSFORD	128,940	591	0	1	8,454,849	14,306	65.6	4.6
ARMSTRONG	4,531	2	0	0	3,896	1,948	0.9	0.4
ASHCROFT	1,825	1	0	0	13,900	13,900	7.6	0.5
BURNABY	205,477	112	13	1	8,931,841	79,749	43.5	0.5
BURNS LAKE	2,209	6	0	0	122,000	20,333	55.2	2.7
CACHE CREEK	1,115	1	0	0	8,527	8,527	7.6	0.9
CAMPBELL RIVER	31,444	76	0	0	668,821	8,800	21.3	2.4
CASTLEGAR	7,863	8	0	0	61,976	7,747	7.9	1.0
CENTRAL SAANICH	16,768	15	1	0	694,900	46,327	41.4	0.9
CHASE	2,600	9	0	0	601,261	66,807	231.3	3.5
CHETWYND	2,866	4	0	0	99,077	24,769	34.6	1.4
CITY OF CHILLIWACK	72,621	215	15	0	5,510,976	25,632	75.9	3.0
COLDSTREAM	10,320	13	0	0	785,547	60,427	76.1	1.3
COLWOOD	15,470	26	0	0	109,191	4,200	7.1	1.7
COMOX	13,008	3	0	0	170,000	56,667	13.1	0.2
COQUITLAM CITY	119,319	178	3	0	12,800,829	71,915	107.3	1.5
COURTENAY	22,533	69	0	0	543,810	7,881	24.1	3.1
CRANBROOK	20,102	39	0	0	1,714,655	43,966	85.3	1.9
CRESTON	5,201	37	2	0	726,754	19,642	139.7	7.1
CUMBERLAND	2,881	4	0	0	133,205	33,301	46.2	1.4
DAWSON CREEK	11,615	70	3	1	4,218,168	60,260	363.2	6.0
DELTA	102,939	49	0	3	1,056,931	21,570	10.3	0.5
DISTRICT OF LAKE COUNTRY	10,668	30	0	0	913,721	30,457	85.7	2.8
DUNCAN	5,032	11	0	0	368,537	33,503	73.2	2.2
ELKFORD	2,683	14	0	0	1,000	71	0.4	5.2
ENDERBY	3,134	11	0	0	1,372,482	124,771	437.9	3.5
ESQUIMALT	17,407	26	0	0	134,944	5,190	7.8	1.5
FERNIE	5,168	8	0	0	394,000	49,250	76.2	1.5
FORT NELSON	4,871	43	1	0	2,302,626	53,549	472.7	8.8
FORT ST. JOHN	18,270	50	0	0	1,370,066	27,401	75.0	2.7
FRASER LAKE	1,354	1	0	0	25,000	25,000	18.5	0.7
FRUITVALE	2,039	6	0	0	681,739	113,623	334.3	2.9
GIBSONS	4,458	4	0	0	72,284	18,071	16.2	0.9
GOLDEN	4,498	10	0	0	663,178	66,318	147.4	2.2
GRAND FORKS	4,159	2	0	0	5,574	2,787	1.3	0.5
GRANISLE	352	2	0	0	1,000	500	2.8	5.7
HARRISON HOT SPRINGS	1,609	3	0	0	21,634	7,211	13.4	1.9
HAZELTON	362	1	0	0	650,000	650,000	1795.6	2.8
HOPE DISTRICT	6,667	49	0	0	1,108,292	22,618	166.2	7.3
HOUSTON	3,796	13	0	0	702,343	54,026	185.0	3.4
INVERMERE	3,470	2	0	0	228,099	114,050	65.7	0.6
KAMLOOPS	84,064	212	6	0	2,079,309	9,808	24.7	2.5
KASLO	1,087	1	0	0	1,047	1,047	1.0	0.9
KELOWNA	112,775	251	2	0	8,401,492	33,472	74.5	2.2
KENT	5,756	27	1	0	445,354	16,495	77.4	4.7

⁹ Source of Population Statistics: Statistics Canada, CANSIM.¹⁰ **Fire Rate** = Number of fires per 1,000 population

B.C. Fire Loss

Municipality	Population ¹¹	Fires	Injuries	Deaths	\$ Loss	\$ Loss / Fire	\$ Loss / Capita	Fire Rate ¹²
KEREMEOS	1,369	2	0	0	27,397	13,699	20.0	1.5
KIMBERLEY	7,147	16	0	0	825,542	51,596	115.5	2.2
KITIMAT	10,510	27	6	0	1,081,223	40,045	102.9	2.6
LADYSMITH	7,460	41	0	0	427,368	10,424	57.3	5.5
LAKE COWICHAN	3,118	2	0	0	12,879	6,440	4.1	0.6
LANGFORD DISTRICT	22,229	1	0	0	12,840	12,840	0.6	0.0
LANGLEY CITY	25,789	28	0	0	764,965	27,320	29.7	1.1
LANGLEY TOWNSHIP	99,537	350	3	1	7,116,287	20,332	71.5	3.5
LILLOOET	2,779	2	0	0	38,000	19,000	13.7	0.7
LIONS BAY	1,418	1	1	0	25,000	25,000	17.6	0.7
LUMBY	1,766	13	0	0	441,932	33,995	250.2	7.4
LYTTON	330	1	0	0	3,000	3,000	9.1	3.0
MACKENZIE	5,452	6	0	0	724,788	120,798	132.9	1.1
MAPLE RIDGE	75,783	58	2	0	771,236	13,297	10.2	0.8
MCBRIDE	745	1	0	0	35,000	35,000	47.0	1.3
MERRITT	7,595	6	1	0	1,131	189	0.1	0.8
METCHOSIN	5,312	1	0	0	180,000	180,000	33.9	0.2
MIDWAY	629	4	0	1	60,000	15,000	95.4	6.4
MISSION	35,262	35	0	0	3,660,794	104,594	103.8	1.0
NAKUSP	1,800	11	0	0	311,000	28,273	172.8	6.1
NANAIMO	80,949	454	10	0	8,861,559	19,519	109.5	5.6
NELSON	9,923	44	2	1	208,841	4,746	21.0	4.4
NEW HAZELTON	729	1	0	0	15,000	15,000	20.6	1.4
NEW WESTMINSTER	57,645	72	1	0	2,361,316	32,796	41.0	1.2
NORTH COWICHAN	29,118	23	2	0	1,722,419	74,888	59.2	0.8
NORTH SAANICH	11,258	1	0	0	5,333	5,333	0.5	0.1
NORTH VANCOUVER CITY	49,248	136	2	1	1,858,703	13,667	37.7	2.8
NORTH VANCOUVER DISTRICT	87,518	81	0	0	2,459,869	30,369	28.1	0.9
OAK BAY	18,059	67	0	0	156,720	2,339	8.7	3.7
OLIVER	4,369	25	0	0	1,264,037	50,561	289.3	5.7
OSOYOOS	4,963	15	0	0	215,506	14,367	43.4	3.0
PARKSVILLE	12,081	3	0	0	94,727	31,576	7.8	0.2
PEACHLAND	5,369	29	0	0	5,112,049	176,278	952.1	5.4
PEMBERTON	2,563	1	0	0	1,529	1,529	0.6	0.4
PENTICTON	34,669	175	0	0	1,779,641	10,169	51.3	5.0
PITT MEADOWS	17,532	15	0	0	231,524	15,435	13.2	0.9
PORT ALBERNI	18,790	21	1	0	257,472	12,261	13.7	1.1
PORT ALICE	1,131	5	0	0	160,000	32,000	141.5	4.4
PORT CLEMENTS	517	1	0	0	38,000	38,000	73.5	1.9
PORT COQUITLAM	55,712	116	6	0	1,306,841	11,266	23.5	2.1
PORT HARDY	4,585	1	0	0	1,243	1,243	0.3	0.2
PORT MCNEILL	2,929	2	0	0	9,923	4,962	3.4	0.7
PORT MOODY	30,120	11	0	0	610,242	55,477	20.3	0.4
POUCE COUPE	910	3	0	0	0	0	0.0	3.3
POWELL RIVER	14,035	20	0	0	303,725	15,186	21.6	1.4
PRINCE GEORGE	77,343	536	6	0	5,317,111	9,920	68.7	6.9

¹¹ Source of Population Statistics: Statistics Canada, CANSIM.

¹² **Fire Rate** = Number of fires per 1,000 population

B.C. Fire Loss

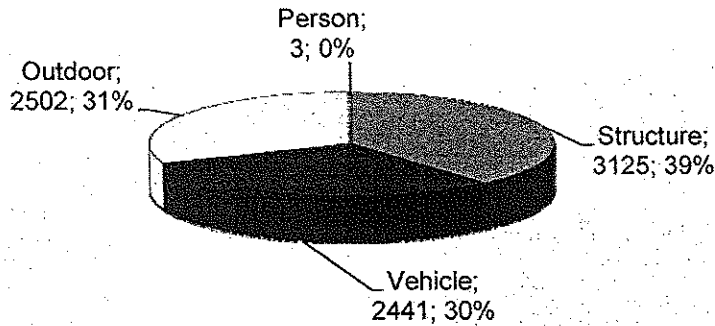
Municipality	Population ¹³	Fires	Injuries	Deaths	\$ Loss	\$ Loss / Fire	\$ Loss / Capita	Fire Rate ¹⁴
PRINCE RUPERT	15,281	78	3	1	499,703	6,406	32.7	5.1
PRINCETON	2,687	3	0	0	1,876,890	625,630	698.5	1.1
QUALICUM BEACH	8,899	13	0	0	1,441,289	110,868	162.0	1.5
QUESNEL	10,561	36	2	0	1,867,828	51,884	176.9	3.4
RADIUM HOT SPRINGS	921	10	0	0	25,612	2,561	27.8	10.9
REVELSTOKE	8,029	18	0	0	263,431	14,635	32.8	2.2
RICHMOND	176,599	228	0	0	5,640,353	24,738	31.9	1.3
ROSSLAND	3,653	6	0	0	41,000	6,833	11.2	1.6
SAANICH	110,737	246	4	0	6,744,842	27,418	60.9	2.2
SALMON ARM	17,150	60	0	0	743,662	12,394	43.4	3.5
SALMON ARM	16,815	4	0	0	33,514	8,379	2.0	0.2
SAYWARD	410	1	0	0	1,305	1,305	3.2	2.4
SECHELT	9,224	2	0	0	10,512	5,256	1.1	0.2
SICAMOUS	3,192	1	0	0	6,714	6,714	2.1	0.3
SIDNEY	11,849	7	0	0	249,945	35,706	21.1	0.6
SMITHERS	5,575	7	0	0	420,600	60,086	75.4	1.3
SOOKE	10,436	17	0	0	725,750	42,691	69.5	1.6
SPALLUMCHEEN	5,729	12	0	0	1,043,566	86,964	182.2	2.1
SPARWOOD	4,013	3	2	0	19,300	6,433	4.8	0.7
SQUAMISH	16,199	5	0	0	29,104	5,821	1.8	0.3
STEWART	670	1	0	0	215,000	215,000	320.9	1.5
SUMMERLAND	11,443	41	0	0	808,950	19,730	70.7	3.6
SURREY	402,150	791	58	3	31,477,872	39,795	78.3	2.0
TELKWA	1,443	1	0	0	22,289	22,289	15.4	0.7
TERRACE	12,660	105	2	0	800,708	7,626	63.2	8.3
TOFINO	1,906	1	0	0	2,268	2,268	1.2	0.5
TRAIL	7,744	12	1	0	831,255	69,271	107.3	1.5
TUMBLER RIDGE	2,698	2	0	1	97,750	48,875	36.2	0.7
UCLUELET	1,978	3	0	0	148,129	49,376	74.9	1.5
VALEMOUNT	1,388	1	0	0	10,000	10,000	7.2	0.7
VANCOUVER	587,891	152	0	2	2,481,974	16,329	4.2	0.3
VANDERHOOF	4,799	2	0	0	19,374	9,687	4.0	0.4
VERNON	36,785	30	0	0	2,560,676	85,356	69.6	0.8
VICTORIA	78,659	103	11	0	3,046,559	29,578	38.7	1.3
VIEW ROYAL	8,375	10	2	0	37,100	3,710	4.4	1.2
WEST VANCOUVER	44,272	24	2	0	2,118,753	88,281	47.9	0.5
WHISTLER	9,595	21	0	0	855,273	40,727	89.1	2.2
WHITE ROCK	19,545	2	0	0	12,807	6,404	0.7	0.1
WILLIAMS LAKE	11,961	101	0	0	2,887,697	28,591	241.4	8.4
OTHER ¹⁵	581,084	1,139	24	6	45,435,132	39,890	78.0	2.0
TOTAL	4,320,255	8,071	201	23	236,072,682	29,249	55.0	1.9

¹³ Source of Population Statistics: Statistics Canada, CANSIM.

¹⁴ Fire Rate = Number of fires per 1,000 population

¹⁵ Other refers to any municipal/non-municipal districts that were not listed from our population statistic source.

Fire Loss by Major Property Classification



Fire Loss by Major Property Complex (PC)

	Fires	Injuries	Deaths	\$ Loss	% of Fires
Other Special Use ¹⁶	5,420	26	3	54,218,675	67.15
Residential Use	2,125	170	20	132,964,330	26.33
Assembly Use	201	1	0	15,327,803	2.49
Manufacturing Use	152	2	0	15,824,853	1.88
Commercial/Mercantile Use	107	1	0	15,517,581	1.33
Business Use	30	0	0	1,238,710	0.37
Institutional Use	28	1	0	427,220	0.35
Storage Use	8	0	0	553,510	0.10
TOTAL	8,071	201	23	236,072,682	100.00

Fire Loss by Major Property Classes (PR)

	Fires	Injuries	Deaths	\$ Loss	% of Fires
Special Property & Transportation Equipment ¹⁷	4,664	15	2	25,134,860	57.79
Residential	2,303	171	20	140,919,454	28.53
Storage Property	194	2	0	8,856,578	2.40
Miscellaneous Property ¹⁸	323	8	1	5100102	4.00
Assemblies	235	0	0	19,315,953	2.91
Industrial Manufacturing Property	150	2	0	16,030,204	1.86
Mercantile	123	2	0	17,449,508	1.52
Business & Personal Service	47	0	0	2,470,631	0.58
Institutional	32	1	0	795,392	0.40
TOTAL	8,071	201	23	236,072,682	100.00

¹⁶ (PC) Other Special Use includes: parks public transportation terminals and agricultural property

¹⁷ (PR) Special Property & Transportation Equipment includes: outdoor property, connecting thoroughfares like bridges and tunnels, vacant property that is under construction or demolition, watercraft, rail transport vehicles, ground transport vehicles, aircraft and heavy machinery.

¹⁸ (IG) Miscellaneous Properties includes: laboratories, farm facilities, outbuildings, utilities, mining, communications and nucleonic.

Fire Loss by Major Sources of Ignition (IG)

	Fires	Injuries	Deaths	\$ Loss	% of Fires
Miscellaneous ¹⁹	4,577	58	13	130,339,664	56.71
Smoker's Material & "Open" Flame	1,468	47	3	31,561,693	18.19
Cooking Equipment	539	54	3	12274531	6.68
Heating Equipment	519	24	4	15551297	6.43
Electrical Equipment	421	8	0	26302675	5.22
Exposure	247	0	0	5095699	3.06
Electrical Distribution Equipment	225	7	0	10912720	2.79
Appliances & Equipment	75	3	0	4034403	0.93
TOTAL	8,071	201	23	236,072,682	100.00

Fire Loss by Major Acts or Omissions (AO)

	Fires	Injuries	Deaths	\$ Loss	% of Fires
Miscellaneous ²⁰	2,710	41	14	108,428,081	33.58
Incendiary	2,000	15	0	38,056,339	24.78
Mechanical/Electrical Failure/Malfunction	1,111	18	1	26,890,825	13.77
Human Failing	1027	64	5	26007342	12.72
Misuse of Source of Ignition	581	22	1	12540500	7.20
Misuse of Equipment	254	3	0	13516894	3.15
Misuse of Material Ignited	194	27	0	5367684	2.40
Construction, Design or Installation Deficiency	101	10	2	3835860	1.25
Vehicle Accident	93	1	0	1429157	1.15
TOTAL	8,071	201	23	236,072,682	100.00

Fire Loss by Major Materials First Ignited (MI)

	Fires	Injuries	Deaths	\$ Loss	% of Fires
Miscellaneous ²¹	4,526	62	16	142,505,337	56.08
Wood, Paper Products	952	11	1	21775704	11.80
Agricultural, Forestry Products	825	8	2	6728004	10.22
Flammable Liquids, Combustible Liquids	676	62	0	19080497	8.38
Clothing, Textiles	287	7	0	8805423	3.56
Furniture, Furnishings	275	30	3	12212880	3.41
Chemicals, Plastics, Metals	251	6	0	3679620	3.11
Structural Components, Finish Materials	213	3	0	19333247	2.64
Flammable Gases	66	12	1	1951970	0.82
TOTAL	8,071	201	23	236,072,682	100.00

¹⁹ **(IG) Miscellaneous** includes: fireworks, heat treatment equipment and commercial and industrial machinery.

²⁰ **(AO) Miscellaneous** includes: illegal operations/activities, exposure from Wildland fire, and tampering with safety devices.

²¹ **(MI) Miscellaneous** includes: barbecue briquettes and sticks, fire logs, coal, peat, hog fuel, creosote, electrical insulation, garbage, oily rags, artificial Christmas trees, gunpowder and wood treatment oil.

B.C. FIRE FACTS**Initial Detection of Fires (ID)**

	Fires	Injuries	Deaths	\$ Loss
CANNOT BE DETERMINED	384	7	6	25,439,814
NOT APPLICABLE (FOR VEHICLE, OUTDOOR, PERSON REPORTS ONLY)	4,914	22	3	25,832,465
INITIAL DETECTION - UNCLASSIFIED (DESCRIBE)	27	1	0	2,055,763
SMOKE ALARM DEVICE	263	18	2	7,890,895
SMOKE DETECTOR DEVICE	100	5	0	12,979,323
HEAT ALARM DEVICE	6	1	0	520,600
HEAT DETECTOR DEVICE	23	2	0	1,107,220
AUTOMATIC SPRINKLER SYSTEM	32	2	0	2,778,100
AUTOMATIC SYSTEM OTHER THAN SPRINKLER	5	0	0	10,601
VISUAL SIGHTING OR OTHER MEANS OF PERSONAL DETECTION (E.G. SMELL)	2,299	143	12	156,698,281
NO INITIAL DETECTION (EXTINGUISHED BEFORE DETECTION)	15	0	0	158,920
SPECIALTY DETECTOR (INCLUDES FLAME, BEAM, LINE)	3	0	0	600,700
TOTAL	8,071	201	23	236,072,682

Smoke Alarm Operation (SD)

	Fires	Injuries	Deaths	\$ Loss
ALARM OPERATION CANNOT BE DETERMINED	1,011	28	10	81,540,095
NOT APPLICABLE (FOR VEHICLE, OUTDOOR, PERSON REPORTS ONLY)	4,946	22	3	26,153,550
ALARM ACTIVATED - ASSISTED OCCUPANT(S) IN EVACUATING	408	38	0	24,151,724
ALARM ACTIVATED - INAUDIBLE	13	2	0	754,300
ALARM ACTIVATED - OCCUPANT(S) UNABLE TO RESPOND	22	3	1	453,385
ALARM ACTIVATED - UNNECESSARY TO EVACUATE OR UNOCCUPIED	184	6	0	10,336,145
ALARM ACTIVATED - OCCUPANT ACTION UNKNOWN	79	4	1	4,088,599
ALARM NOT ACTIVATED - UNSUITABLE LOCATION	136	5	0	4,162,041
ALARM NOT ACTIVATED - NO BATTERY OR BATTERY DEAD	76	11	1	3,419,396
ALARM NOT ACTIVATED - AC POWER NOT CONNECTED, DISABLE OR OFF	42	9	1	782,625
ALARM NOT ACTIVATED - MECHANICAL FAILURE	12	1	1	431,340
ALARM NOT ACTIVATED - UNKNOWN	354	29	0	27,368,006
NO SMOKE ALARM INSTALLED	788	43	5	52,431,476
TOTAL	8,071	201	23	236,072,682

Incendiary²² Fires by Property Group

	# of Fires	\$ Loss	# of Injuries	# of Deaths
ASSEMBLY				
Educational	2	2,000	0	0
INSTITUTIONAL				
None Reported	0	0	0	0
RESIDENTIAL				
One & two-family dwelling	48	1,262,524	0	0
Apartment	3	68,750	0	0
Business and personal service	1	2,700	0	0
Industrial manufacturing	1	58,028	0	0
Industrial storage	1	5,000	0	0
MISCELLANEOUS				
None Reported	0	0	0	0
TOTAL	56	1,399,002	0	0

Juvenile Fire Setters²³

Age of Children	# of Children	\$ Loss
1-4 years	0	0
5-8 years	9	1,500
9-12 years	28	405,560
13-18 years	43	818,295
Unknown age	9	470
TOTAL	89	1,225,825

Gender of Children	Amount
Female	11
Male	76
Unknown	2
TOTAL	89

Fires Related to Illegal Activity

	# of Fires	Total \$ Loss	Injuries	Deaths
Marijuana Grow Operation	18	1,938,500	1	0
Meth Lab	0	0	0	0
Cooking Marijuana	2	20,000	4	0
Theft/Arson (Miscoded)	1	50	0	0
Bylaw Infraction (Miscoded)	34	50	0	0
Not Specified	11	1,288,510	3	1
Other	2	0	0	0
TOTAL	68	3,247,110	8	1

Fires Related to School Property

# of Fires	Property Loss	Contents Loss	Total Loss	Injuries	Deaths	# Wildland/Interface Fires
69	475,685	18,652	494,337	0	0	0

²² **Incendiary** or set fires include arson, suspected incendiarism, riot, mischief or vandalism.

²³ **Juvenile Fire Setters** are children and/or adolescents (under 18 years of age) that engage in fire setting

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:

- Over fuelling, 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.

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.

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 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 reaction.

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.