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Occupational Injuries and Diseases in Alberta

Forestry and Related Industries 1997 to 2001

Lost-Time Claims and Claim Rates





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TABLE OF CONTENTS

1. Introduction	1
2. Primary Forest Activities	3
2.1 Industry Descriptions	3
3. Lost-Time Claim Rate and Duration Rate: Forestry	5
3.1 Lost-Time Claim Rate by Industry Code	5
3.2 Lost-Time Claim Rate by Size of Employer: 2001	7
4. Analysis of the Lost-Time Claims: Forestry	8
4.1 Nature of Injury	8
4.2 Duration of Disability	8
4.3 Part of Body Injured	9
4.4 Type of Event or Exposure	10
4.5 Source of Injury	11
5. Characteristics of the Injured Worker	12
5.1 Occupation of the Injured Worker	12
5.2 Length of Time Employed	13
5.3 Age of Injured Worker	13
5.4 Gender of Injured Worker	13
6. Cost of Claims and Employer Premiums	14
7. Occupational Fatalities: Forestry	15
8. Description of Workplace Fatalities Investigated by Occupational Health and Safety: 1997-2001	16
9. Forest Product Manufacturing	18
9.1 Industry Descriptions	18
10. Lost-Time Claim Rate and Duration Rate: Forest Product Manufacturing	21
10.1 Lost-Time Claim Rate by Industry Code	21
10.2 Lost-Time Claim Rate by Size of Employer: 2001	24
11. Analysis of the Lost-Time Claims: Forest Product Manufacturing	25
11.1 Nature of Injury	25
11.2 Duration of Disability	25
11.3 Part of Body Injured	26
11.4 Type of Event or Exposure	27
11.5 Source of Injury	28
12. Characteristics of the Injured Worker	29
12.1 Occupation of the Injured Worker	29
12.2 Length of Time Employed	30
12.3 Age of Injured Worker	30
12.4 Gender of Injured Worker	30

13. Cost of Claims and Employer Premiums	31
14. Occupational Fatalities: Forest Product Manufacturing.....	32
15. Description of Workplace Fatalities Investigated by Occupational Health and Safety: 1997-2001.....	33
Appendix A: Terms, Definitions, and Formulas	35
Appendix B: Forestry and Related Industries 2001 Industry Codes.....	36

1. Introduction

Alberta Human Resources and Employment (AHRE) invests in people and workplaces. AHRE develops and delivers programs and services, which contribute to workplaces that are safe, healthy, fair and stable for employees and employers. Workplace Health and Safety is part of the continuum of services provided by Alberta Human Resources and Employment. The Department promotes the development of effective work site health and safety management systems and compliance programs and supports fair and effective resolution of workplace issues. AHRE works in partnership with Alberta Workers' Compensation Board (WCB), safety associations, employers, workers and labour to promote prevention of workplace injuries and diseases.

To this end, AHRE recognizes that monitoring workplace health and safety will help to ensure that primary concerns are actively managed and that resources are directed where needed. To parallel the increase in workforce covered by Alberta legislation, the number of Occupational Health and Safety officers dedicated to enforcement was increased. The officers are responsible for: ensuring that workers and employers are knowledgeable about Occupational Health and Safety Act; investigating serious incidents, fatalities and complaints; performing workplace inspections; and ensuring compliance with regulations if employers are found to be in violation.

Role of Alberta Human Resources and Employment

AHRE helps employers and workers ensure safe, healthy and productive workplaces in Alberta by:

- ◆ Providing workplace health and safety information and assistance to all Albertans.
- ◆ Investigating serious incidents and complaints about potential work site hazards.
- ◆ Partnering with industry leaders and safety associations to develop health and safety programs.
- ◆ Enforcing the *Occupational Health and Safety Act*.

This report summarizes the lost-time injuries and disease claims accepted by the WCB, characteristics of the injured worker and the risk of injury to workers in Alberta's forest and related industry between the years 1997 and 2001. A summary of occupational fatalities accepted by the WCB and detailed description of those fatalities investigated by AHRE are also provided. Cost of lost-time injuries and revenue in terms of premiums are also provided.

The purpose of this report is to provide government, employers, workers, and health and safety officers in Alberta's forestry industry information about the industry key health and safety issues.

Business Rules

Lost-Time Claim Rate

The lost-time claim rate can only be considered reliable for employers with 40 or more person years; it is recommended that the lost-time claim rate not be calculated based upon fewer than 40 person years.

Duration Rate

Duration rate is highly unstable when based on a few lost-time claims; it is recommended that the duration rate not be calculated based upon fewer than 30 lost-time claims.

Percent

Percents may not add up to a 100 because of rounding.

Description of Forestry and Related Industries

The Forest industry in this report includes Primary Forest Activities and Forest Product Manufacturing.

2. Primary Forest Activities

For the sake of simplicity, primary forest activities will be called forestry in this report. This activity is made up of two industries: Logging and Woodlands Operations and Timber Management.

2.1 Industry Descriptions

i. Logging and Woodlands Operations, including Trucking of Logs (Industry Code 03100)

The business activity of logging in Alberta relates specifically to the physical harvesting of trees. Often referred to as "stump to dump" logging, the activities comprise all elements of harvesting including the transport of logs to a mill. Logging is performed both on crown land, through various forms of timber disposition, and on private land.

Logging contractors may perform all harvest activities from cutting to delivery; however, they will often contact out specialized functions of their harvest requirements. Such specialized contractors, when active in logging contacts, are covered under this industry. This is particularly common where trucking of logs is concerned.

Logging can be performed conventionally, using chain saws and line skidders or mechanically, using equipment such as; feller bunchers, grapple skidders, delimiters, harvesters, forwarders and loaders. Both conventional and mechanical logging methods form part of this industry.

In Alberta, it has become common for mill operators to hold logging rights (generally under Forest Management Agreements-FMA's) and contract out the harvesting. The mill operators coordinate the harvesting through "woodlands administration" division. Woodlands administration refers to forest technicians, foresters and their support staff. Woodlands administration is considered to be a normal function of a mill and when conducted by the mill operator's own workers, it does not require a separate classification. Woodlands administration, when conducted by the independent third parties under contract to the mill, will be classified according to the service provided, generally industry code 03902.

ii. Timber Management (Industry Code 03902)

This classification addresses those activities carried on as a separate business within the forest industries, outside of logging or log processing. Employers in this industry do no logging, trucking of logs, sawing or handling of logs, nor do they use any equipment or tools of any significant size.

Planting of seedlings is performed with a variety of hand tools designed to punch a hole in the ground into which a seedling is placed. Check plots are performed on recently planted areas as a visual inspection intended to determine the effectiveness of the planters' work.

Regeneration Surveys are the inspection of logged areas to determine natural stocking levels. The cut block is divided into a grid pattern of equal spacing. Each point in the grid is inspected for a one square metre area in an effort to locate natural regeneration (seedling). Unstocked blocks will require planting and seedling. The only tool used in regeneration surveys are small hand rakes for clearing tall grass and debris

Timber Cruising is a method of determining tree stand volumes, type and condition. Performed in pairs, timber cruisers follow predetermined compass bearing to arrive at numerous randomly selected plots. At the plots the timber cruisers use a variety of hand held measuring instruments to measure and record information needed to formulate harvest plans.

Block Layout is the marking of the cut block boundaries. Performed in pairs, this activity involves following predetermined compass bearing or natural stand boundaries while marking trees with seismic ribbon or spray paint.

Cone Picking is the natural gathering of cones to be used for seed. Often cone picking takes place in recently logged areas where cones are readily accessible in the remaining branches of the harvested trees.

Log Scaling is a method of determining volumes of harvested trees. Log scalers often work at the unloading deck of a mill but may scale logs at individual cut block landings. Using a calibrated measuring stick and a can of spray paint, the scaler considers diameter, length and wood rot to determine wood volumes.

Stand Tending is the process where competing vegetation is removed from immature stands to allow for optimum growing conditions. Small trees and vegetation are removed at predetermined spacing using brush cutters. This is a pre-commercial form of thinning. Power saws (chainsaws) are not to be included in this classification.

3. Lost-Time Claim Rate and Duration Rate: Forestry

Forestry

Year	# of Accounts	Cost	Person Years	Days Lost	Duration Rate	LTCs	LTC Rate
1997	2,821	\$2,077,085	5,379	12,866	239	241	4.5
1998	2,785	\$1,458,379	5,564	11,956	215	227	4.1
1999	2,793	\$996,034	5,560	13,074	235	256	4.6
2000	2,722	\$2,201,082	5,352	13,575	254	276	5.2
2001	2,564	\$1,838,329	4,967	13,000	262	225	4.5

3.1 Lost-Time Claim Rates by Industry Code

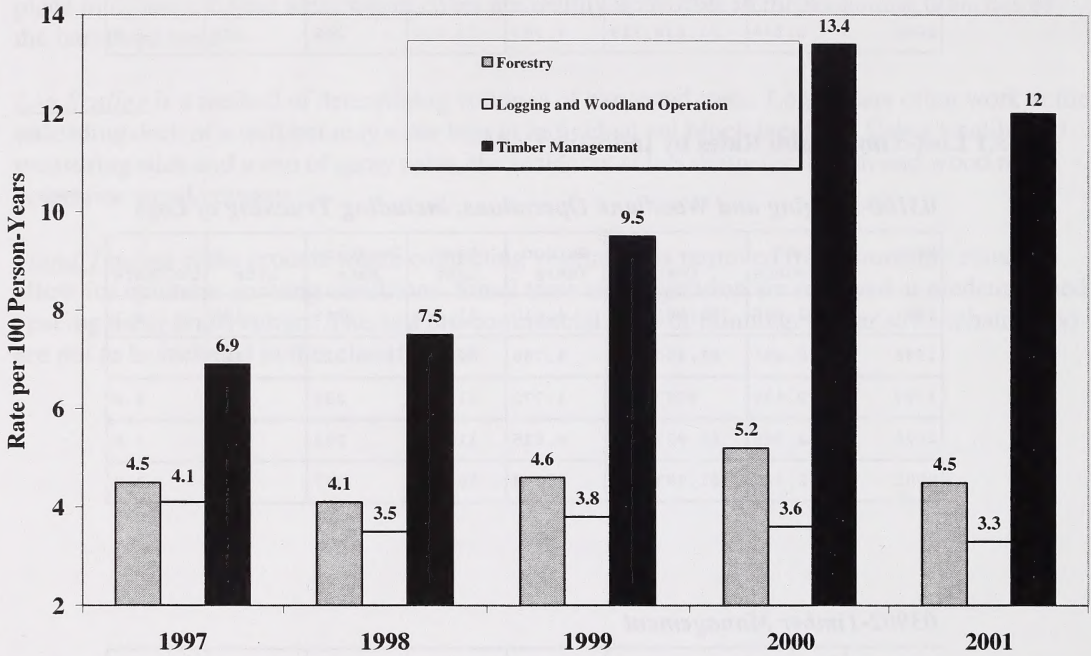
03100-Logging and Woodland Operations, including Trucking of Logs

Year	# of Accounts	Cost	Person Years	Days Lost	Duration Rate	LTCs	LTC Rate
1997	2,690	\$1,961,420	4,610	11,465	249	188	4.1
1998	2,651	\$1,350,038	4,768	10,123	212	167	3.5
1999	2,634	\$867,128	4,772	11,116	233	181	3.8
2000	2,568	\$1,977,556	4,525	11,015	243	165	3.6
2001	2,415	\$1,593,033	4,248	10,049	237	139	3.3

03902-Timber Management

Year	# of Accounts	Cost	Person Years	Days Lost	Duration Rate	LTCs	LTC Rate
1997	131	\$115,665	769	1,401	182	53	6.9
1998	134	\$108,341	796	1,833	230	60	7.5
1999	159	\$128,907	788	1,958	248	75	9.5
2000	154	\$223,526	827	2,560	310	111	13.4
2001	149	\$245,295	719	2,951	410	86	12.0

Lost-Time Claim Rate Forestry Alberta: 1997-2001

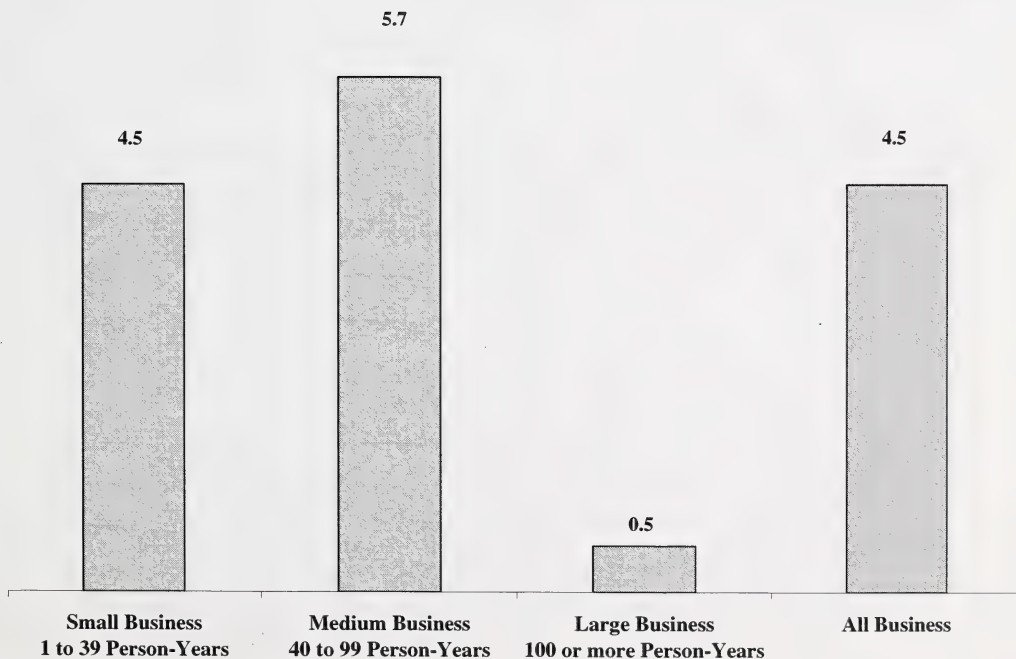


3.2 Lost-Time Claim Rate by Size of Employer: 2001

Forestry

Size of Employer	# of Accounts	LTCs	Person - Years	LTC Rate
A: Less than 1 person-years	1,838	34	642	5.3
B: 1 to 4 person-years	541	39	1,169	3.3
C: 5 to 9 person-years	91	21	633	3.3
D: 10 to 19 person-years	48	24	695	3.5
E: 20 to 39 person-years	32	64	880	7.3
F: 40 to 99 person-years	13	43	752	5.7
G: 100 or more person-years	1	N/A	195	N/A
Total	2,564	225	4,967	4.5

**Lost-Time Claim Rate by Size of Employer
Forestry
Alberta: 2001**



4. Analysis of the Lost-Time Claims: Forestry

4.1 Nature of Injury

LOST-TIME CLAIMS ALBERTA: 1997 TO 2001	OCCURRENCE YEAR					Total	
	1997	1998	1999	2000	2001	Number	Percent
SPRAIN, STRAIN, TEARS	80	82	94	74	76	406	33.1
FRACTURE/DISLOCATION	46	40	36	34	26	182	14.9
OTHER TRAUMATIC INJURY/DISEASE	24	18	32	52	48	174	14.2
SURFACE WOUNDS, BRUISES	31	29	37	52	18	167	13.6
OPEN WOUNDS	30	25	19	22	15	111	9.1
SYSTEMATIC DISEASES, DISORDERS	9	17	21	20	25	92	7.5
NATURE - UNS	12	12	14	17	13	68	5.6
BURNS	4	1	1	2	3	11	0.9
MULTIPLE DISEASE/DISORDERS	3	2	2	.	.	7	0.6
SYMPTONS, SIGN/ILLNESS	2	.	.	2	1	5	0.4
OTHER DISEASE/DISORDERS	.	1	.	.	.	1	0.1
INFECTIOUS/PARASITIC DISEASE	.	.	.	1	.	1	0.1
Total	241	227	256	276	225	1,225	100.0

4.2 Duration of Disability

LOST-TIME CLAIMS ALBERTA: 1997 TO 2001	OCCURRENCE YEAR					Total	
	1997	1998	1999	2000	2001	Number	Percent
01 - 05 DAYS LOST	52	41	48	77	49	267	21.8
06 - 10 DAYS LOST	29	27	35	31	25	147	12.0
11 - 15 DAYS LOST	19	15	17	20	13	84	6.9
16 - 20 DAYS LOST	10	16	15	17	7	65	5.3
21 - 30 DAYS LOST	19	24	23	21	19	106	8.7
31 - 40 DAYS LOST	25	11	24	14	17	91	7.4
41 - 50 DAYS LOST	8	13	12	12	7	52	4.2
51 OR MORE DAYS LOST	74	74	76	74	84	382	31.2
DAYS LOST-UNSPECIFIED	5	6	6	10	4	31	2.5
Total	241	227	256	276	225	1,225	100.0

4.3 Part of Body Injured

LOST-TIME CLAIMS ALBERTA: 1997 TO 2001	OCCURRENCE YEAR					Total	
	1997	1998	1999	2000	2001	Number	Percent
BACK	52	39	55	53	46	245	20.0
OTHER TRUNK	35	38	38	33	31	175	14.3
LEG(S)	40	27	31	40	29	167	13.6
ANKLE(S) & FOOT(FEET) -NOT TOES	28	29	29	35	20	141	11.5
HAND(S)	12	23	26	27	26	114	9.3
MULTIPLE BODY PARTS	9	12	18	15	18	72	5.9
OTHER UPPER EXTREMITIES	12	12	15	12	17	68	5.6
FINGER(S)	16	19	9	14	7	65	5.3
OTHER HEAD	18	7	9	16	10	60	4.9
EYE(S) -OPTIC NERVE, VISION	2	9	12	21	7	51	4.2
NECK	9	9	12	6	11	47	3.8
OTHER LOWER EXTREMITIES	5	2	2	3	2	14	1.1
BODY SYSTEMS	3	.	.	1	1	5	0.4
OTHER BODY PARTS	.	1	.	.	.	1	0.1
Total	241	227	256	276	225	1,225	100.0

4.4 Type of Event or Exposure

LOST-TIME CLAIMS ALBERTA: 1997 TO 2001	OCCURRENCE YEAR					Total	
	1997	1998	1999	2000	2001	Number	Percent
UNKNOWN	33	29	30	25	26	143	11.7
STRUCK BY OBJECTS	54	36	34	46	34	204	16.7
TRANSPORTATION ACCIDENTS	33	25	39	44	45	186	15.2
BODILY REACTION	22	23	28	33	29	135	11.0
OVEREXERTION	23	23	25	29	22	122	10.0
FALL ON SAME LEVEL	18	21	34	25	13	111	9.1
FALL TO LOWER LEVEL	17	19	13	13	11	73	6.0
STRUCK AGAINST OBJECTS	11	9	12	15	7	54	4.4
CAUGHT IN OBJECTS	11	12	8	14	7	52	4.2
REPETITIVE MOTIONS	3	6	12	17	14	52	4.2
OTHER FALLS	8	10	8	1	1	28	2.3
EXPOSURE TO HARMFUL SUBSTANCES	8	7	3	7	2	27	2.2
RUBBED OR ABRADED	.	3	6	5	6	20	1.6
OTHER BODILY REACTION/EXERTION	.	1	2	1	6	10	0.8
OTHER CONTACT WITH/ OBJECT/EQUIP	.	1	2	.	.	3	0.2
ASSAULT/VIOLENT ACT BY PERSON	.	1	.	.	1	2	0.2
FIRES AND EXPLOSIONS	.	.	.	1	1	2	0.2
OTHER ASSAULTS/VIOLENT	.	1	.	.	.	1	0.1
UNKNOWN	33	29	30	25	26	143	11.7
Total	241	227	256	276	225	1,225	100.0

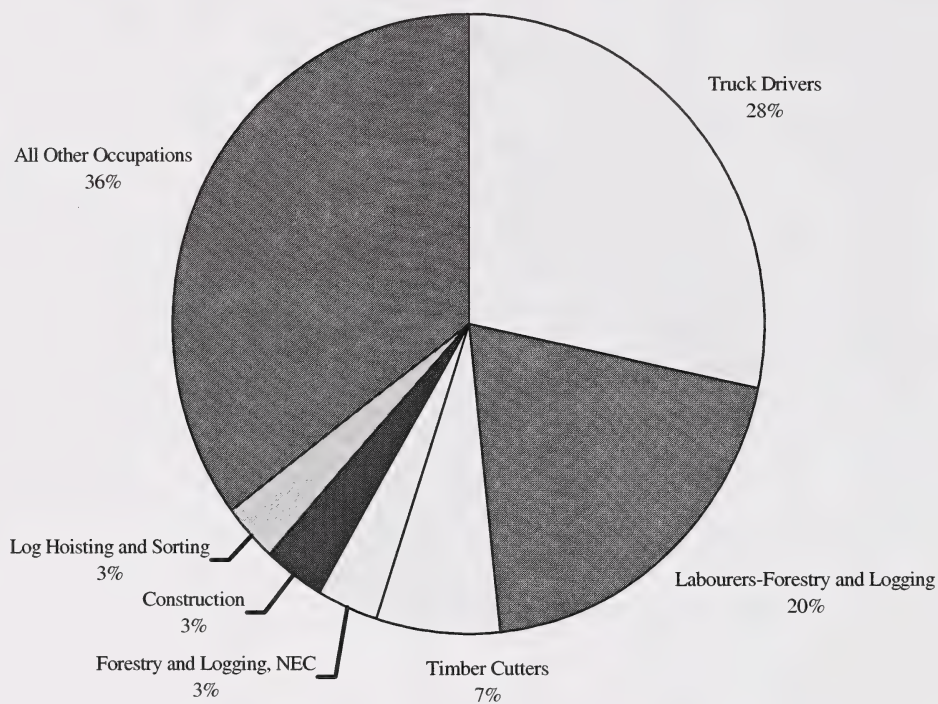
4.5 Source of Injury

LOST-TIME CLAIMS ALBERTA: 1997 TO 2001	OCCURRENCE YEAR					Total	
	1997	1998	1999	2000	2001	Number	Percent
VEHICLES	35	26	38	49	50	198	16.2
PERSONS-INJURED WORKER	25	31	42	49	48	195	15.9
OTHER PLANTS/ANIMALS/MINERALS	45	32	35	41	28	181	14.8
STRUCTURES/SURFACES	26	35	38	25	19	143	11.7
PARTS & MATERIALS	21	22	12	12	7	74	6.0
MACHINERY	7	11	12	16	7	53	4.3
OTHER SOURCES	5	6	7	15	5	38	3.1
HANDTOOLS-POWERED	12	4	6	6	7	35	2.9
HANDTOOLS-UNPOWERED	6	7	3	9	8	33	2.7
CONTAINERS	2	5	8	7	6	28	2.3
OTHER TOOLS/EQUIPMENT	1	4	1	5	.	11	0.9
PLANTS & ANIMALS	.	3	.	3	.	6	0.5
CHEMICAL/CHEMICAL PRODUCTS	2	1	1	.	1	5	0.4
MINERAL-METALS/NONMETALS	1	1	.	1	2	5	0.4
FURNITURE & FIXTURES	1	.	.	2	.	3	0.2
PERSONS-NOT THE INJURED WORKER	.	1	.	.	.	1	0.1
UNKNOWN	52	38	53	36	37	216	17.6
Total	241	227	256	276	225	1,225	100.0

5. Characteristics of the Injured Worker

5.1 Occupation¹ of the Injured Worker

**Occupation of the Injured Worker
Forestry
Alberta: 1997-2001**



¹ None of the individual occupations belonging to the 'all other occupation' category accounted for more than 3% of the total lost-time claims.

5.2 Length of Time Employed

LOST-TIME CLAIMS ALBERTA: 1997 TO 2001	OCCURRENCE YEAR					Total	
	1997	1998	1999	2000	2001	Number	Percent
A. LESS THAN 1 MONTH	54	40	39	47	39	219	17.9
B. 1 MONTH TO LESS THAN 6 MONTHS	71	68	94	99	56	388	31.7
C. 6 MONTHS TO LESS THAN 1 YEAR	12	10	17	11	4	54	4.4
D. 1 YEAR OR MORE	30	57	41	39	24	191	15.6
E. TIME-UNSPECIFIED	74	52	65	80	102	373	30.4
Total	241	227	256	276	225	1,225	100.0

5.3 Age of Injured Worker

LOST-TIME CLAIMS ALBERTA: 1997 TO 2001	OCCURRENCE YEAR					Total	
	1997	1998	1999	2000	2001	Number	Percent
15-19 YEARS	10	14	10	16	13	63	5.1
20-24 YEARS	45	44	59	75	53	276	22.5
25-34 YEARS	65	58	67	75	79	344	28.1
35-44 YEARS	71	62	63	50	44	290	23.7
45-54 YEARS	35	28	41	32	22	158	12.9
55-64 YEARS	12	15	12	22	12	73	6.0
65 YEARS AND OVER	2	5	2	4	2	15	1.2
AGE-UNSPECIFIED	1	1	2	2	.	6	0.5
Total	241	227	256	276	225	1,225	100.0

5.4 Gender of Injured Worker

LOST-TIME CLAIMS ALBERTA: 1997 TO 2001	OCCURRENCE YEAR					Total	
	1997	1998	1999	2000	2001	Number	Percent
MALE	221	201	223	228	194	1,067	87.1
FEMALE	17	20	27	40	24	128	10.4
GENDER-UNSPECIFIED	3	6	6	8	7	30	2.4
Total	241	227	256	276	225	1,225	100.0

6. Cost of Claims and Employer Premiums

Forestry

<i>Transaction Year</i>	Occurrence Year				
	1997	1998	1999	2000	2001
1997	1,677,429				
1998	1,077,440	1,165,858			
1999	1,051,096	831,214	1,136,581		
2000	700,178	412,640	778,066	1,423,779	
2001	920,485	974,360	842,453	1,340,374	1,471,769
Total Cost	5,426,628	3,384,071	2,757,100	2,764,153	1,471,769
Total Premiums	7,071,596	6,378,887	5,279,711	5,814,475	6,324,417

The above cost for claims and premiums are for the five-year period 1997 through 2001.
The data is as of May 4, 2002.

The claim costs reflect amount paid on claims that have occurred in the five-year period.
The claim costs are tracked by the year of occurrence and year that the costs were transacted.

The premiums are the total premiums paid by employers for the year.

7. Occupational Fatalities in Forestry

An occupational fatality is the death of a worker that results from a work-related event or exposure. AHRE classifies occupational fatalities into three general categories: motor vehicle collision, workplace incident and occupational disease. Each of these is described below.

Motor Vehicles Incidents

Motor vehicles incidents typically involve non-industrial vehicles operating on public roads in which the fatally injured worker was either a driver or a passenger. This category also includes fatalities involving aircraft crashes, train crashes, helicopter crashes, and water vehicle crashes.

Workplace Incidents

Fatal workplace incidents consist of cases in which the worker dies at a work site, or as a result of injuries sustained at a work site. This is the type of fatality that AHRE typically investigates.

Occupational Disease

Occupational disease fatalities consist mostly of recognized occupational disease, that is, disease known to be primarily or exclusive work-related. Occupational diseases are usually diagnosed many years after the initial or crucial exposure to the toxic substance, and in such cases it is very difficult to determine when the exposure occurred. This category should, therefore, not be interpreted to reflect present work site hazards. This category also includes heart attacks suffered on the job.

Each year the WCB accepts occupational fatality claims for compensation. Most of the occupational disease fatalities accepted in a particular year are the result of event or exposure from prior years. Fatalities accepted in a year do not mean all of them happened in that year.

Description of Forestry Workplace Fatalities Accepted by the Workers' Compensation Board Alberta: 1997-2001

YEAR	Occupational Diseases		Motor Vehicle Incidents		Workplace Incidents		Total	
	N	%	N	%	N	%	N	%
1997	0	0	1	25.0	3	75.0	4	100
1998	0	0	1	100.0	0	0	1	100
1999	0	0	0	0	1	100.0	1	100
2000	0	0	1	100.0	0	0	1	100
2001	1	20.0	3	60.0	1	20.0	5	100
Total	1	8.3	6	50.0	5	41.7	12	100

8. Description of Workplace Fatalities Investigated by Occupational Health and Safety: 1997-2001

Primary Forest Activity (Forestry)

YEAR: 1997 FILE: 0851
 OCCUPATION: Equipment Operator AGE: 36
 INDUSTRY: Logging, Woodlands Operations
 EXPERIENCE: Two years

DESCRIPTION: The slasher is a large machine used to cut trees into log lengths. The slasher consists of an operator's cab, a log grapple, a log deck and a large saw used to cut the trees. Two workers were preparing to remove a portion of a broken saw guard. The injured worker had positioned himself up on the frame of the saw, when the other worker activated the saw to move it up onto the slasher deck. When the saw was activated, the worker was crushed between the moving saw frames and the fixed saw guard.

YEAR: 1997 FILE: 0853
 OCCUPATION: Faller AGE: 28
 INDUSTRY: Logging, Woodlands Operations
 EXPERIENCE: Two years

DESCRIPTION: The faller's chainsaw became stuck in a tree and he called a skidder over to push the tree so he could dislodge the saw. The skidder operator backed his machine into the tree, and in doing so, his left front tire contacted a 7-metre high dry snag, knocking it over and onto the faller who was standing 5 metres behind and to the left of the skidder. The faller received fatal head and crushing injuries.

YEAR: 1997 FILE: 0869
 OCCUPATION: Tree Faller AGE: 60
 INDUSTRY: Logging and Woodlands Operations, including Trucking of Logs
 EXPERIENCE: 33 years

DESCRIPTION: The worker was a member of a crew of workers harvesting trees in a logging operation. He was operating a chain saw falling trees. He cut a large pine tree, which was supporting a leaning dry snag. When the tree that he cut fell, the dry sang came down striking the worker on his head causing fatal injuries.

YEAR: 1998 FILE: 0889
OCCUPATION: Truck Driver AGE: 29
INDUSTRY: Logging and Woodlands Operations, including Trucking of Logs
EXPERIENCE: 5 years

DESCRIPTION: The logging truck was loaded with three rows of short logs measuring from 3.6 to 4.8 metres in length. The truck was travelling down a grade and the driver failed to negotiate a curve near the bottom of the grade. The truck left the road and rolled over, coming to rest upside down in a creek bed beside a bridge. The driver was pinned in the cab of the truck and died from his injuries.

Note: There was one fatality in 2000 and one in 2001 that are still under investigation.

9. Forest Product Manufacturing

This section provides a comprehensive picture of workplace health and safety in Alberta's Forest Products Manufacturing industry. Information on cost of injuries and total premiums are also presented.

Description of Forest Product Manufacturing Industries

Employers in this activity may be classified into the following industries:

- ◆ Sawmills and Planing Mills;
- ◆ Wood Products Manufacturing;
- ◆ Peeling and Pointing of Posts;
- ◆ Treating of Timber;
- ◆ Pulp Mills, and
- ◆ Plywood, Chipboard, Strandboard and Fibreboard Mills.

9.1 Industry Description

i. Sawmills and Planning Mills (Industry Code 25100)

This classification involves sawing logs into rough lumber of various imperial and metric dimensions.

Sawmills vary from one-man portable mills to large automated mills employing in excess of 100 personnel. Labour is performed largely by those trained on the job and would include equipment operators, sawyers, scalers and labourers. Large mills will employ mechanics, millwrights, and welders.

Logs are trucked to the mill, often weighed, off loaded and then scaled. The size of the mill dictates the complexity of the sawing process. Logs may be trimmed to length, debarked in a variety of debarking machines, and then sawn lengthwise into a cant (squared timber). The cant is further reduced into rough lumber by an edger. These processes may be manual in the case of portable mills, or highly automated using conveyers, pickers, and computer/laser guided saws in large mills.

Planing mills often accompany the large sawmill and function as a final cutting process for the lumber.

Various forms of specialized remanufacturing also forms part of this industry. This may involve cutting of grooves, bevels, edges, and may include cutting special edges on the boards such as tongue and grooves or shiplap. Re-manufacturing lumber to metric sizes for overseas markets is also prevalent in this industry.

The restoration of railway ties and the manufacture of wooden shakes are activities also included in this industry.

ii. Manufacturing of Wood Products (Industry Code 25401)

Manufacturing includes cutting wood to specification, assembling and finishing the product, big and small. Activities include, but is not limited to, planing, sawing, cutting, tonguing, grooving, nailing, screwing, gluing, clamping, filling, sanding and staining or painting of product big or small.

When installing their product, it forms part of the employer's primary manufacturing activity. This industry may include storefront operations to sell related products and include relevant personnel and delivery. A showroom or display area may exist to present sample products.

Business may utilize saws, lathes, planers glue machines, hand tools, forklifts, trucks and dust-collection equipment. A typical job mix may include carpenter-types, handymen, labourers, and sales/estimators.

iii. Peeling and Pointing of Post (Industry Code 25900)

This industry covers businesses that perform the peeling and pointing of post exclusive of other lumber milling operations.

Post of uniform length is fed into a machine that rotates them much the same as a lathe at the same time peeling the bark off. One end is then ground to a point using a post pointer. The posts are usually dip-treated following the peeling and pointing.

The posts peeled and pointed in this industry are generally smaller and used by farmers, ranchers or acreage owners, although the peeling and treating of telephone poles are also included in this industry.

iv. Treating of Timber (Industry Code 25901)

This classification involves the coating of wood with a preservative, including items such as fence posts, hydro poles, bridge timbers and railroad ties.

Some employers in this industry are involved only in dip-treating posts and poles. The product is immersed in a preservative solution in an open tank. Square cedar post for fences are usually treated on one end only.

Another, more elaborate process uses large cylinders (often seven feet in diameter and 150 feet long). The ties, timber, post or poles to be treated are strapped to small rail carts then loaded into cylinders. The timber is then subject to pressure and heat while being treated with the appropriate preservative. Following the prescribed time (which varies by product), the preservative solution is pumped out and the timber is then vacuum-dried. The timber then leaves the cylinder and moved to a temporary storage area to drip dry. Pressure treaters usually have the capacity to peel, cut and incise their product using variety of machinery and hand tools. Some pressure treaters will slightly modify the product by predrilling holes for hardware, cutting special ends and cutting out defective areas.

The two most common preservatives are Chromated Copper Arsenate (CCA) and Pentachlorophenol (Penta).

v. Pulp Mills (Industry Code 27102)

This industry covers the actual conversion of wood-to-wood pulp, generally to be used in paper manufacturing operations. This industry will include the manufacturing of newsprint, either done in conjunction with wood pulp manufacturing or as a separate business.

There are two types of pulp manufacturing:

- ◆ Bleached kraft pulp mills, and
- ◆ Chemithermomechanical pulp mills (CTMP).

Bleached kraft pulp mills rely on chemical processes to break down wood into pulp. CTMP mills rely on the mechanical grinding process to break down wood into pulp. The pulp is compressed into 3 cubic ft. cubes/bundles and shipped to paper mills, which convert the pulp to paper.

All activities from receiving the logs to processing into pulp, processing into paper, shipping the finished product and marketing is included in this industry.

vi. Plywood, Chipboard, Strandboard and Fibreboard Mills (Industry Code 27103)

This industry generally incorporates lumber processing other than sawmills and pulpmills. Included is plywood, chipboard, strandboard and fiberboard mill.

Chipboard, Strandboard and Fibreboard:

Spruce and aspen logs are cut to 2' and 3' length, then moved by conveyor to a machine that slices them into small chips or wafers. The chips are conveyed to a rotating dryer where moisture is removed, then to a chamber, where a mixture of glues and waxes is sprayed onto the chips. The chips are dropped into trays 16' long by 4' wide, which move to a heated press. Once in place, the trays (and chips) are pressed and heated to bond the chips into a board. 8' by 4' sheet are then cut and passed to a dryer where they are rotated until cool, then stacked and prepared for shipment.

With fibreboards, it is the fibres being pressed into board rather than chips or wafers. Otherwise the processes are similar.

Plywood:

Trees (mostly white spruce) are debarked and cut into peelers (8' 6" long) sorted and conditioned or steamed for 10 to 35 hours. The logs are then placed on a lathe and strips of veneer are peeled off from 1/10 to 1/8 inch thick. A clipper cuts out any defects, the veneer is trimmed and sent to the plywood mill. At the mills the sheets are sorted into grades, then lined up in presses. The interior cross banding (narrow strips) are glued on both sides and placed by hand between the layers. The sheets are glued and built up to required thickness. The ends are trimmed and the units are placed in a loading basket and put in the hot press automatically.

Employers who paint or stain board products are also included in this industry. Staining is a simple process of passing a board through a mechanical stainer (often called an Olympic Stainer). The stainer will apply stain (or paint) to both sides and the edges of the board. Boards are then stacked to dry. One person can handle this entire process.

This industry encompasses all related activities including the wholesaling and warehousing of board products.

10. Lost-Time Claims Rate and Duration Rate

Forest Product Manufacturing

Year	# of Accounts	Cost	Person Years	Days Lost	Duration Rate	LTCs	LTC Rate
1997	954	\$3,809,259	22,030	27,477	125	1,293	5.9
1998	961	\$4,287,490	23,653	29,573	125	1,357	5.7
1999	998	\$2,928,190	23,072	29,597	128	1,348	5.8
2000	1,017	\$5,715,652	26,334	32,404	123	1,460	5.5
2001	1,037	\$4,773,524	26,201	32,777	125	1,436	5.5

10.1 Lost-Time Claim Rate by Industry Code

25100-Sawmills and Planing Mills

Year	# of Accounts	Cost	Person Years	Days Lost	Duration Rate	LTCs	LTC Rate
1997	308	\$1,358,591	6,474	9,424	146	359	5.5
1998	290	\$1,311,238	6,056	8,178	135	361	6.0
1999	301	\$1,158,139	6,572	9,875	150	373	5.7
2000	283	\$1,832,452	7,157	7,430	104	333	4.7
2001	267	\$999,571	6,688	6,834	102	243	3.6

25401- Wood Products Manufacturing

Year	# of Accounts	Cost	Person Years	Days Lost	Duration Rate	LTCs	LTC Rate
1997	589	\$1,896,641	10,479	15,792	151	823	7.9
1998	613	\$2,366,555	11,163	19,181	172	882	7.9
1999	642	\$1,544,590	11,413	17,996	158	870	7.6
2000	693	\$3,314,483	13,069	22,197	170	1,022	7.8
2001	728	\$3,224,604	13,162	23,408	178	1,099	8.3

25900-Peeling and Pointing of Posts

Year	# of Accounts	Cost	Person Years	Days Lost	Duration Rate	LTCs	LTC Rate
1997	19	\$47,360	63	443	N/A	9	14.3
1998	19	\$52,383	56	308	N/A	6	10.8
1999	13	\$8,957	35	177	N/A	6	N/A
2000	11	\$30,776	24	159	N/A	4	N/A
2001	10	\$373	22	6	N/A	1	N/A

25901-Treating of Timber

Year	# of Accounts	Cost	Person Years	Days Lost	Duration Rate	LTCs	LTC Rate
1997	4	\$44,151	93	248	N/A	13	14.0
1998	4	\$5,876	89	66	N/A	8	8.9
1999	5	\$16,508	112	235	N/A	12	10.8
2000	6	\$73,527	149	672	N/A	22	14.7
2001	6	\$50,890	142	447	N/A	14	9.8

27102-Pulp Mills

Year	# of Accounts	Cost	Person Years	Days Lost	Duration Rate	LTCs	LTC Rate
1997	15	\$95,549	2,799	444	16	38	1.4
1998	15	\$201,089	4,103	663	16	38	0.9
1999	15	\$73,843	2,492	472	19	35	1.4
2000	10	\$156,951	3,960	582	N/A	25	0.6
2001	11	\$160,760	3,889	823	N/A	29	0.7

27103-Plywood, Chipboard, Strandboard and Fibrebroad Mills

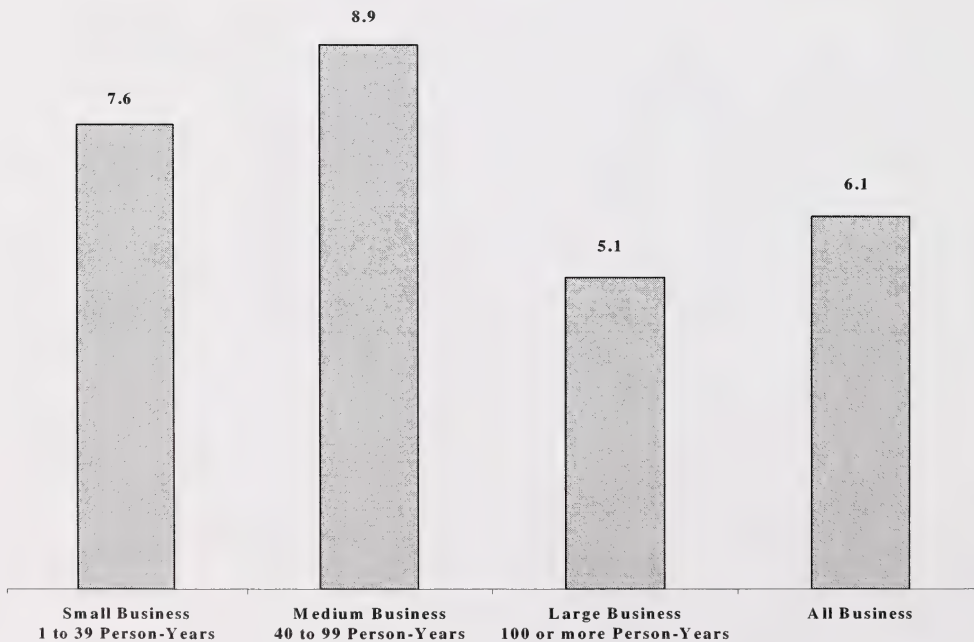
Year	# of Accounts	Cost	Person Years	Days Lost	Duration Rate	LTCs	LTC Rate
1997	19	\$366,968	2,122	1,126	53	51	2.4
1998	20	\$350,350	2,186	1,177	54	62	2.8
1999	22	\$126,152	2,450	842	34	52	2.1
2000	14	\$307,463	1,974	1,364	69	54	2.7
2001	15	\$337,326	2,297	1,259	55	50	2.2

10.2 Lost-Time Claim Rate by Size of Employer: 2001

Forest Product Manufacturing

Size of Employer	# of Accounts	LTCs	Person - Years	LTC Rate
A: Less than 1 person-years	273	10	119	8.4
B: 1 to 4 person-years	208	32	494	6.5
C: 5 to 9 person-years	93	50	679	7.4
D: 10 to 19 person-years	61	64	870	7.4
E: 20 to 39 person-years	52	117	1,412	8.3
F: 40 to 99 person-years	43	235	2,634	8.9
G: 100 or more person-years	40	685	13,305	5.1
Total	770	1,193	19,513	6.1

**Lost-Time Claim Rate by Size of Employer
Forest Product Manufacturing
Alberta: 2001**



11. Analysis of the Lost-Time Claims: Forest Product Manufacturing

11.1 Nature of Injury

LOST-TIME CLAIMS ALBERTA: 1997 TO 2001	OCCURRENCE YEAR					Total	
	1997	1998	1999	2000	2001	Number	Percent
SPRAIN, STRAIN, TEARS	483	499	493	543	548	2,566	37.2
OPEN WOUNDS	269	274	237	227	259	1,266	18.4
SURFACE WOUNDS, BRUISES	173	204	208	210	205	1,000	14.5
OTHER TRAUMATIC INJURY/DISEASE	100	102	175	182	141	700	10.2
FRACTURE/DISLOCATION	149	144	113	148	115	669	9.7
SYSTEMATIC DISEASES, DISORDERS	72	80	68	90	81	391	5.7
NATURE - UNS	31	39	31	43	64	208	3.0
BURNS	11	11	15	11	19	67	1.0
MULTIPLE DISEASE/DISORDERS	4	2	3	2	1	12	0.2
SYMPTONS, SIGN/ILLNESS	1	2	3	2	2	10	0.1
OTHER DISEASE/DISORDERS	.	.	1	2	1	4	0.1
INFECTIOUS/PARASITIC DISEASE	.	.	1	.	.	1	0.0
Total	1,293	1,357	1,348	1,460	1,436	6,894	100.0

11.2 Duration of Disability

LOST-TIME CLAIMS ALBERTA: 1997 TO 2001	OCCURRENCE YEAR					Total	
	1997	1998	1999	2000	2001	Number	Percent
01 - 05 DAYS LOST	573	582	619	651	641	3,066	44.5
06 - 10 DAYS LOST	208	194	171	175	218	966	14.0
11 - 15 DAYS LOST	90	105	105	120	103	523	7.6
16 - 20 DAYS LOST	64	59	55	63	64	305	4.4
21 - 30 DAYS LOST	78	94	95	97	80	444	6.4
31 - 40 DAYS LOST	56	66	56	52	48	278	4.0
41 - 50 DAYS LOST	36	31	43	50	37	197	2.9
51 OR MORE DAYS LOST	156	170	153	186	186	851	12.3
DAYS LOST-UNSPECIFIED	32	56	51	66	59	264	3.8
Total	1,293	1,357	1,348	1,460	1,436	6,894	100.0

11.3 Part of Body Injured

LOST-TIME CLAIMS ALBERTA: 1997 TO 2001	OCCURRENCE YEAR					Total	
	1997	1998	1999	2000	2001	Number	Percent
BACK	299	302	297	344	321	1,563	22.7
FINGER(S)	251	265	234	214	231	1,195	17.3
HAND(S)	148	159	157	183	189	836	12.1
OTHER TRUNK	144	140	149	195	173	801	11.6
LEG(S)	104	103	117	127	122	573	8.3
ANKLE(S) & FOOT(FEET) -NOT TOES	111	114	121	101	108	555	8.1
OTHER UPPER EXTREMITIES	74	95	80	100	119	468	6.8
EYE(S) -OPTIC NERVE, VISION	48	52	58	55	47	260	3.8
OTHER HEAD	37	38	38	48	35	196	2.8
MULTIPLE BODY PARTS	12	33	35	36	47	163	2.4
NECK	32	34	29	33	25	153	2.2
OTHER LOWER EXTREMITIES	22	18	23	17	10	90	1.3
BODY SYSTEMS	9	1	8	4	4	26	0.4
OTHER BODY PARTS	.	.	1	1	.	2	0.0
UNKNOWN	2	3	1	2	5	13	0.2
Total	1,293	1,357	1,348	1,460	1,436	6,894	100.0

11.4 Type of Event or Exposure

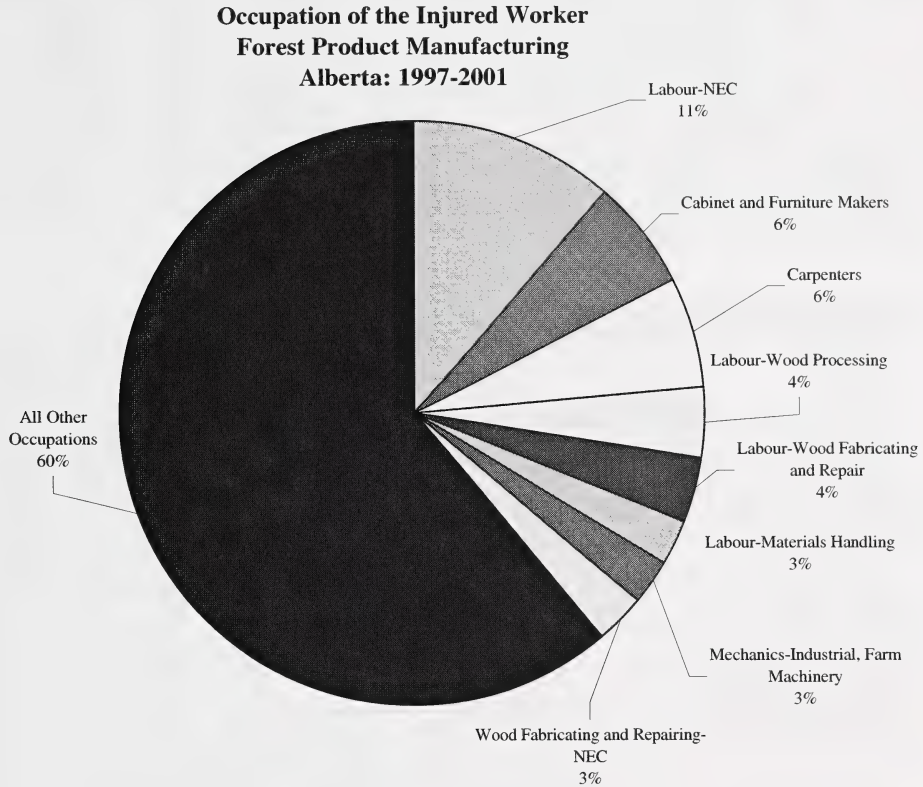
LOST-TIME CLAIMS ALBERTA: 1997 TO 2001	OCCURRENCE YEAR					Total	
	1997	1998	1999	2000	2001	Number	Percent
OVEREXERTION	277	294	312	343	330	1,556	22.6
STRUCK BY OBJECTS	285	285	269	274	280	1,393	20.2
CAUGHT IN OBJECTS	139	145	146	141	141	712	10.3
STRUCK AGAINST OBJECTS	121	138	129	126	134	648	9.4
BODILY REACTION	121	115	112	118	114	580	8.4
FALL ON SAME LEVEL	58	75	70	94	65	362	5.3
FALL TO LOWER LEVEL	49	50	47	49	50	245	3.6
REPETITIVE MOTIONS	29	35	31	59	59	213	3.1
EXPOSURE TO HARMFUL SUBSTANCES	32	19	43	35	31	160	2.3
RUBBED OR ABRADED	33	30	31	37	26	157	2.3
OTHER FALLS	26	18	14	24	26	108	1.6
TRANSPORTATION ACCIDENTS	13	22	14	20	12	81	1.2
OTHER BODILY REACTION/EXERTION	12	13	13	20	17	75	1.1
OTHER CONTACT WITH/ OBJECT/EQUIP	7	6	7	9	5	34	0.5
ASSAULT/VIOLENT ACT BY PERSON	1	1	.	1	3	6	0.1
FIRES AND EXPLOSIONS	1	1	.	.	.	2	0.0
UNKNOWN	89	110	110	110	143	562	8.2
Total	1,293	1,357	1,348	1,460	1,436	6,894	100.0

11.5 Source of Injury

LOST-TIME CLAIMS ALBERTA: 1997 TO 2001	OCCURRENCE YEAR					Total	
	1997	1998	1999	2000	2001	Number	Percent
PARTS & MATERIALS	324	326	348	359	327	1,684	24.4
PERSONS-INJURED WORKER	156	161	149	189	183	838	12.2
STRUCTURES/SURFACES	136	148	138	192	163	777	11.3
MACHINERY	159	158	132	141	128	718	10.4
CONTAINERS	65	62	74	77	69	347	5.0
OTHER SOURCES	49	58	51	66	61	285	4.1
FURNITURE & FIXTURES	35	43	49	49	50	226	3.3
HANDTOOLS-UNPOWERED	29	45	49	47	54	224	3.2
VEHICLES	46	41	33	43	37	200	2.9
HANDTOOLS-POWERED	35	23	27	30	40	155	2.2
OTHER PLANTS/ANIMALS/MINERALS	29	34	25	17	14	119	1.7
OTHER TOOLS/EQUIPMENT	24	23	22	25	21	115	1.7
CHEMICAL/CHEMICAL PRODUCTS	16	8	15	10	8	57	0.8
MINERAL-METALS/NONMETALS	3	1	4	.	4	12	0.2
PERSONS-NOT THE INJURED WORKER	1	1	1	3	4	10	0.1
PLANTS & ANIMALS	1	.	2	3	.	6	0.1
UNKNOWN	185	225	229	209	273	1,121	16.3
Total	1,293	1,357	1,348	1,460	1,436	6,894	100.0

12. Characteristics of the Injured Worker

12.1 Occupation² of the Injured Worker



² None of the individual occupations belonging to the 'all other occupation' category accounted for more than 3% of the total lost-time claims.

12.2 Length of Time Employed

LOST-TIME CLAIMS ALBERTA: 1997 TO 2001	OCCURRENCE YEAR					Total	
	1997	1998	1999	2000	2001	Number	Percent
A. LESS THAN 1 MONTH	165	130	154	168	161	778	11.3
B. 1 MONTH TO LESS THAN 6 MONTHS	269	309	270	305	253	1,406	20.4
C. 6 MONTHS TO LESS THAN 1 YEAR	154	130	133	149	131	697	10.1
D. 1 YEAR OR MORE	407	502	514	496	368	2,287	33.2
E. TIME-UNSPECIFIED	298	286	277	342	523	1,726	25.0
Total	1,293	1,357	1,348	1,460	1,436	6,894	100.0

12.3 Age of Injured Worker

LOST-TIME CLAIMS ALBERTA: 1997 TO 2001	OCCURRENCE YEAR					Total	
	1997	1998	1999	2000	2001	Number	Percent
15-19 YEARS	128	101	132	129	160	650	9.4
20-24 YEARS	246	247	249	261	258	1,261	18.3
25-34 YEARS	411	441	403	412	383	2,050	29.7
35-44 YEARS	334	365	377	393	382	1,851	26.8
45-54 YEARS	125	144	150	190	172	781	11.3
55-64 YEARS	44	54	31	69	70	268	3.9
65 YEARS AND OVER	3	3	3	4	8	21	0.3
AGE-UNSPECIFIED	2	2	3	2	3	12	0.2
Total	1,293	1,357	1,348	1,460	1,436	6,894	100.0

12.4 Gender of Injured Worker

LOST-TIME CLAIMS ALBERTA: 1997 TO 2001	OCCURRENCE YEAR					Total	
	1997	1998	1999	2000	2001	Number	Percent
MALE	1,120	1,225	1,175	1,260	1,218	5,998	87.0
FEMALE	123	107	143	179	187	739	10.7
GENDER-UNSPECIFIED	50	25	30	21	31	157	2.3
Total	1,293	1,357	1,348	1,460	1,436	6,894	100.0

13. Cost of Claims and Employer Premiums

Forest Product Manufacturing

<i>Transaction Year</i>	Occurrence Year				
	1997	1998	1999	2000	2001
1997	\$3,200,934				
1998	\$1,784,093	\$3,535,883			
1999	\$1,472,750	\$2,588,336	\$3,436,796		
2000	\$688,214	\$2,035,780	\$2,972,980	\$4,840,903	
2001	\$2,170,950	\$2,396,013	\$1,834,884	\$3,732,650	\$3,882,095
Total Cost	\$9,316,942	\$10,556,013	\$8,244,660	\$8,573,554	\$3,882,095
Total Premiums	\$19,828,840	\$14,794,899	\$12,858,956	\$13,633,218	\$15,581,821

The above cost of lost-time claims and premiums are for the five-year period 1997 through 2001. The data is as of May 4, 2002.

The claim costs reflect amount paid on claims that have occurred in the five-year period. The claim costs are tracked by the year of occurrence and year that the costs were transacted.

The premiums are the total of all employers' premiums paid in each year and are calculated by the rate year.

14. Occupational Fatalities: Forest Product Manufacturing

An occupational fatality is the death of a worker that results from a work-related events or exposure. AHRE classifies occupational fatalities into three general categories: motor vehicle collision, workplace incident and occupational disease. Each of these is described below.

Motor Vehicles Incidents

Motor vehicles incidents typically involve a non-industrial vehicle operating on public roads in which the fatally injured worker was either a driver or a passenger. This category also includes fatalities involving aircraft crashes, train crashes, helicopter crashes, and water vehicle crashes.

Workplace Incidents

Fatal workplace incidents consist of cases in which the worker dies at a work site, or as a result of injuries sustained at a work site. This is the type of fatality that AHRE typically investigates.

Occupational Disease

Occupational disease fatalities consist mostly recognize occupational disease, that is, disease known to be primarily or exclusive work-related. Examples are asbestos and black lung disease. Occupational diseases are usually diagnosed many years after the initial or crucial exposure to the toxic substance, and in such cases it is very difficult to determine when the exposure occurred. This category should, therefore, not be interpreted to reflect present work site hazards. This category also includes heart attacks suffered on the job.

Each year the WCB accepts occupational fatality claims for compensation. Most of the occupational disease fatalities accepted in a particular year are the result of events or exposure from prior years.

Description of Forest Product Manufacturing Workplace Fatalities Accepted by the Workers' Compensation Board Alberta: 1997-2001

YEAR	Occupational Diseases		Motor Vehicle Incidents		Workplace Incidents		Total	
	N	%	N	%	N	%	N	%
1997	0	0	2	33.3	4	66.7	6	100
1998	0	0	2	66.7	1	33.3	3	100
1999	0	0	0	0	2	100.0	2	100
2000	0	0	1	20.0	4	80.0	5	100
2001	2	33.3	3	50.0	1	16.7	6	100
Total	2	9.1	8	36.4	12	54.5	22	100

15. Description of Workplace Fatalities Investigated by Occupational Health and Safety: 1997-2001

Forest Product Manufacturers

YEAR:	1997	FILE:	878
OCCUPATION:	Electrician	AGE:	42
INDUSTRY:	Plywood, Chipboard, Strandboard and Fibreboard Mills		
EXPERIENCE:	19 years in electrical trade (Journeyman Electrician)		

DESCRIPTION: Two electricians were making adjustments to the moulding panel stacker outfeed rollcase. The stacker was operating in the automatic mode and the unit was not stopped or locked out by either electrician. One of them crawled underneath the stacker while the other placed himself on the opposite side to assist. When the adjustments were complete, the worker who was underneath the stacker started to crawl back out. The elevator of the stacker descended and pinned him against a lower cross member resulting in fatal injuries.

YEAR:	1998	FILE:	897
OCCUPATION:	Owner and Operator of Cabinet Making Shop	AGE:	51
INDUSTRY:	Wood Products Manufacturing		
EXPERIENCE:	14 years		

DESCRIPTION: The owner was operating a large computerized table saw known as a "beam cutter". This machine had been installed two weeks prior to the incident and only the owner knew how to operate it. The owner moved from the front of the saw to the back and leaned around the control panel to check or adjust some gauges. As the computer was about to complete the cutting sequence the owner became pinned between the control panel and the edge of the carriage tray where he received fatal crush injuries. When the other workers found the owner trapped, they did not know how to disengage the saw in order to free him. It was not until the fire department arrived that the victim was released.

The investigation concluded that it should not have been necessary for the owner to leave the front of the machine during its operation and place himself in an unsafe position. The manufacturer of the table saw was notified of the incident and since then a safeguard has been installed to eliminate the pinch point.

YEAR:	2000	FILE:	950
OCCUPATION:	Journeyman Cabinetmaker	AGE:	40
INDUSTRY:	Wood Products Manufacturing		
EXPERIENCE:	10 Years or more		

DESCRIPTION: A cabinetmaker proceeded past several racks of wood sheets to a stack of 24 wood sheets leaning almost vertically against the wall. A witness observed the cabinetmaker standing beside the stack of wood sheets, with the cabinetmaker holding some of them on the left-hand side of the stack with his right hand. Some of the wood sheets started tipping towards the cabinetmaker, eventually all 24 sheets tipped. The cabinetmaker was forced backwards by the wood sheets, falling and striking the back of his head on the concrete floor. The witness and

other workers immediately went over to the Cabinetmaker. He was unresponsive and died two days later as a result of his injuries.

YEAR:	2000	FILE:	966
OCCUPATION:	Welder	AGE:	36
INDUSTRY:	Sawmills and Planing Mills		
EXPERIENCE:	4 Years		

DESCRIPTION: A welder was installing a guardrail and attempted to start the first line conveyor but experienced a problem. A production foreman and an electrician came to investigate. The electrician inspected the motor and found it was burnt out. Discussions followed and a decision was made to start the adjacent second line. The electrician remained by the burnt out motor, and the foreman went to operator's control for the second line. The welder decided to watch the electrician and walked up the second line conveyor belt instead of using the catwalk. The electrician was aware of the welder but assumed that he was standing on the floor. The foreman started the conveyor belt. The welder was either still standing on the belt or inadvertently stepped on it. Falling, the welder was carried by the belt and was caught under a lumber deflector guard.

Note: There was one fatality in 1999 and two in 2000 that are still under investigation.

Appendix A: Terms, Definitions, and Formulas

Lost-Time Claim A lost-time claim (LTC) is a claim for an occupational injury or disease, which disables the worker beyond the day of injury. Included are claims for which wages compensation are paid, permanent disability claims, fatalities, and cases in which the injured worker is assigned light duties or other modified work.

Person-Years Person-year estimates are calculated from wage and payroll data provided by account holders to the WCB. Alberta Human Resources and Employment uses these data to estimate an average industry wage, and uses the average industry wage and employer payroll data to estimate person-years for each employer and each industry. One person-year is equivalent to one full-time worker working for one year, and can be assumed to equal 2,000 hours worked.

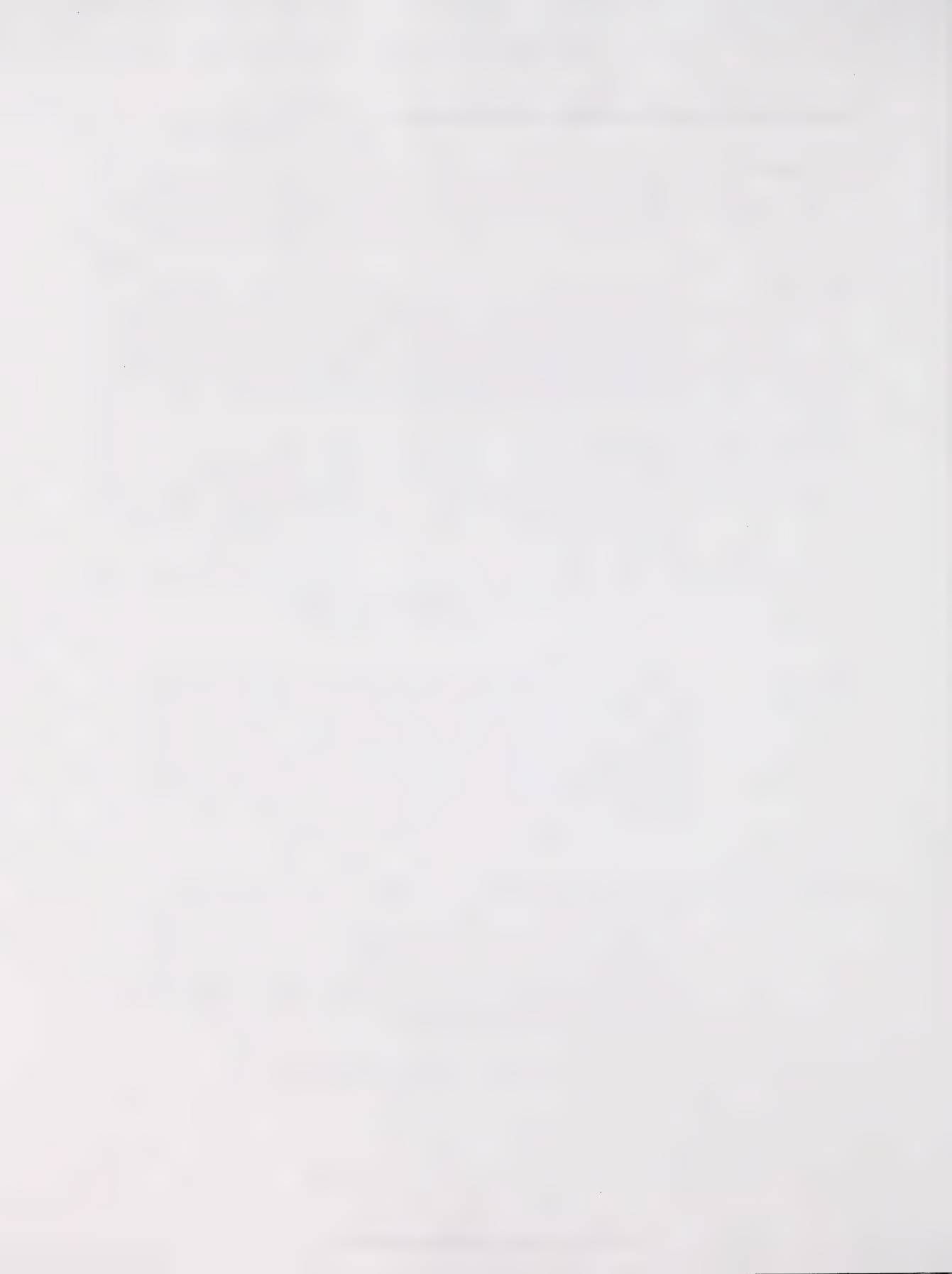
LTC Rate The lost-time claim (LTC) rate is calculated by dividing the number of lost-time claims by the person-year estimate, and multiplying the result by 100. The LTC rate represents the probability or risk of disabling injury or disease to a worker during a period of one-year work. Comparisons of LTC rates between industries, or between years, can be used to indicate increases, decreases, or differences in this risk.

$$\text{LTC Rate} = \frac{\text{Number of LTCs} \times 100}{\text{Estimated Person-years}}$$

Duration (Days Lost) The duration of disability is the number of days following the injury or disease for which the worker was disabled, and unable to perform normal work duties. This information is obtained for this report from data on compensation days paid on each claim from WCB. Alberta Human Resources and Employment obtains these data on March 31 of the year following the claim year, and does not update the information, even though many injured workers continue to be disabled beyond this date. As a result, the duration information reported here underestimates the true impact of lost-time injury and disease.

Duration Rate The duration rate is calculated by dividing the number of workdays lost (disability days) by the person-year estimate, and multiplying by 100. The result is expressed as days lost per 100 person-years worked, and indicates, in part, the economic impact of occupational injury and disease. Duration rates are not recommended as reliable indicators of full economic cost. In addition, readers are warned that duration rates are highly unstable when based on only a few lost-time claims; it is recommended that the duration rate not be calculated based upon fewer than 30 lost-time claims.

$$\text{Duration Rate} = \frac{\text{Disability Days} \times 100}{\text{Estimated Person-Years}}$$



Appendix B: Forestry and Related Industries 2001 Industry Codes

Forestry

Industries: 03100-Logging and Woodlands Operations, including Trucking of Logs
03902-Timber Management

Forest Product Manufacturers

Industries: 25100-Sawmills and Planing Mills
25401-Wood Products Manufacturing
25900-Peeling and Pointing of Posts
25901-Treating of Timber
27102-Pulp Mills
27103-Plywood, Chipboard, Strandboard and Fibreboard Mills



For Further Information Contact:

Resources and Employment
Data Development and Evaluation Branch
2nd Floor, 10808 – 99 Avenue
Edmonton, Alberta
T5K 0G2

Phone: 780-427-8531
Fax: 780-422-5070

Resources and Employment website:
<http://www.gov.ab.ca/hre>

Alberta Workplace Health and Safety website:
<http://www.gov.ab.ca/hre/whs>

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