PROVINCE OF BRITISH COLUMBIA

DEPARTMENT OF LANDS

HON. N. S. LOUGHEED, *Minister.*

H. CATHCART, *Deputy Minister.* P. Z. CAVERHILL, *Chief Forester.*

REPORT

OF

THE FOREST BRANCH

FOR THE

YEAR ENDED DECEMBER 31ST

1932

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1933.

VICTORIA, B.C., February 25th, 1933.

To His Honour J. W. FORDHAM JOHNSON,

Lieutenant-Governor of the Province of British Columbia.

MAY IT PLEASE YOUR HONOUR:

Herewith I beg respectfully to submit the Annual Report of the Forest Branch of the Department of Lands for the year 1932.

N. S. LOUGHEED,

Minister of Lands.

The Hon. N. S. Lougheed,

Minister of Lands, Victoria, B.C.

SIR,—There is submitted herewith the Annual Report on activities of the Branch during the calendar year 1932.

P. Z. CAVERHILL,

Chief Forester.

REPORT OF THE FOREST BRANCH.

ORGANIZATION AND PERSONNEL.

The reorganization of the personnel of the Forest Branch which began in 1930 was continued and ten additional positions eliminated during the year, besides a greatly reduced temporary staff. The permanent staff at December 31st was 204, as compared with 254 in 1931, and 287 positions on the taking-over of the Railway Belt in 1930. The particulars and distribution of the staff are shown in the following table:—

DISTRIBUTION OF FORCE, 1932.

Forest District.	Permanent.											Temporary.				
	Chief Forester, Assistant Chief Forester, and Foresters.	Lumber Commissioner and Assistants.	District Foresters and Assistant District Foresters.	Supervisors of Scalers and Assistants.	Scalers and Assistant Scalers.	Assistant Foresters and Junior Foresters.	Inspectors, Royalty, Mechanical, and Export.	Supervisors of Rangers and Fire Inspectors.	Rangers.	Draughtsmen.	Clerks, Stenographers, and Messengers.	Assistant Rangers.	Patrolmen, Lookout-men, and Dispatchers.	Launch Crews and Repairmen.	Cruisers, Compass-men, and Packers.	Total.
Kamloops	....	....	2	....	....	2	....	2	14	1	8	....	3	....	....	32
Fort George	....	....	2	....	....	....	....	....	7	....	4	....	9	....	....	22
Prince Rupert	....	....	2	....	1	....	....	1	7	....	6	....	9	4	....	30
Southern Interior	....	....	2	1	....	....	....	3	10	1	9	....	8	....	....	34
Vancouver	....	....	2	3	23	2	1	3	15	1	17	....	11	7	....	85
Victoria	6	..	....	1	....	10	2	....	1	7	29	....	....	....	26	82
Toronto	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	2
Totals	6	2	10	5	24	14	3	9	54	10	73	....	40	11	26	287

Popular opinion associates forest activities largely with collections of forest revenue and control of fires. This conception is far from correct. Many other activities go to make up the schedule of the average forest officer—activities which require extensive field travel and time. For example, every area of land applied for as a pre-emption must be examined to determine its forest and economic value, and thereafter a yearly examination is made to ascertain if the pre-emptor is fulfilling his duties as required by law. Every area for which application is made to purchase or lease must likewise be examined and reported upon. Timber-sales must be cruised and appraised, logging operations inspected, lines located and marked to prevent trespass and to see that regulations are being carried out. Grazing areas must be examined and disputes with regard to range-use settled. Service must be given in respect to land-clearing and slash-disposal, the area visited, advice given on how and when to burn with greatest safety, and permits issued. All these are largely non-revenue-producing services, and yet occupy the major part of the time of the Forest staff. The volume of this work is shown by the fact that, during 1932, 11,470 reports involving field examinations were received and 11,247 slash-disposal permits issued.

The present conditions have turned more attention to the land, and the volume of this work has been increased rather than decreased by the slump. Moreover, heretofore we have had the help during the summer of some seventy-five Assistant Rangers who were not available this year.

PROVINCIAL FORESTS.

No new Forests were created during the year, but the boundaries of the Yahk Forest (south of Cranbrook) were revised following an examination made in order to determine the value of the land for forest purposes. The reserve over two Forests in the Railway Belt, the Long Lake Forest and the northern half of the Nicola Forest, was cancelled as a result of the survey made last year, by which it was found that they were of very low value for the production of com-

mercial timber. Cancellation was made in the interest of economy in forest-protection and general administration.

Forest Surveys.

Financial conditions necessitated a reduced programme of surveys. The Arrowstone, Hat Creek, Shuswap, Larch Hills, and Mount Ida Forests, some of the National Forests in the Railway Belt transferred by the Dominion to the Province, were examined. The field-work has been completed and a reduced staff is now making estimates and maps.

Forest surveys are continued, although on a reduced scale, since they provide an essential foundation for informed forest administration and have an important place in the policy of maintaining the productive capacity of forest lands to as great an extent as economic conditions will allow. The information supplied as to the comparative value of different areas is also a basis for effecting economies in forest administration, particularly in protection and fire-suppression. The classification of land made prior to the setting-aside of forest land as a Provincial Forest assists in settlement by providing information as to the agricultural value of marginal lands in the vicinity of the Forest, and in many cases has saved intending settlers years of unprofitable labour by directing them to more favourable locations.

Topographic and forest maps and reports were completed for the Niskonlith, Monte Hills, Martin Mountain, and Fly Hill Forests (National Forests transferred by the Dominion).

The *Niskonlith Forest*, situated north of Kamloops and east of the North Thompson River, covers 288,000 acres, classified as follows:—

	Acres.	Acres.
Area capable of producing Commercial Timber—		
Mature timber—		
Alienated	25,500	
On vacant Crown land	89,400	
		114,900
Immature timber—		
1– 20 years old	15,700	
21– 40 years old	17,000	
41– 60 years old	61,500	
61– 80 years old	4,900	
81–100 years old	1,600	
		100,700
Burned, not reforested	10,200	
Non-commercial cover	45,100	
		55,300
Total sites of productive quality		270,900
Area incapable of producing Commercial Timber—		
Barren and scrub-covered		10,000
Grass and meadows		4,500
Water and swamps		2,600
Total non-productive sites		17,100

The mature timber is estimated as follows to a minimum D.B.H. of 11 inches:—

Species.	Crown.	Alienated.	Total.
	M.B.M.	M.B.M.	M.B.M.
Engelmann spruce	345,200	88,800	434,000
Douglas fir	226,900	112,800	339,700
Silver fir (balsam)	81,900	29,100	111,000
Western red cedar	8,800	25,000	33,800
Lodgepole pine	26,100	4,800	30,900
Yellow pine	22,100	2,400	24,500
Western hemlock	1,500	9,400	10,900
White pine	100	4,300	4,400
Totals	712,600	276,600	989,200

Of the above estimate, 427,000 M. is suitable for sawlogs only; about one-half of the area, however, carries a stand which should be developed for pulp-wood cutting and would produce 1,496,000 cords, 67 per cent. spruce, down to a minimum diameter of 7 inches.

A large logging operation was carried on in the Bear Creek Valley for thirteen years prior to 1926 for the Chase sawmill. In addition, small operators have taken out yellow pine saw-timber, fir ties, and cedar poles. In its present condition the area could provide a sustained annual yield of 8,400,000 F.B.M. saw-timber and 26,000 cords of pulp-wood without depleting the growing stock.

The *Monte Hills Forest* lies south and west of Westwold, between Kamloops and Vernon, and covers 222,900 acres, classified as follows:—

	Acres.	Acres.
Area capable of producing Commercial Timber—		
Mature timber	.....	56,500
Immature timber—		
1– 20 years old	3,950	
21– 40 years old	5,450	
41– 60 years old	89,300	
61– 80 years old	8,050	
81–100 years old	1,350	
Logged selection	2,900	
		111,000
Burned, not reforested	11,700	
Non-commercial cover	13,000	
		24,700
Total sites of productive quality		192,200
Incapable of producing Commercial Timber—		
Alpine and scrub lands		27,200
Grass and wild meadows		850
Swamp and water		2,650
Total non-productive sites		30,700

The mature timber standing in the Forest, with a minimum diameter of 17 inches for yellow pine and 11 inches for other species, is as follows: Douglas fir, 197,500 M.B.M.; spruce, 14,600 M.B.M.; yellow pine, 9,800 M.B.M.; lodgepole pine, 1,200 M.B.M.; total volume, 223,100 M.B.M. In addition, there are 44,200 cords of fuel-wood, chiefly fir. With the exception of the spruce and lodgepole pine, this timber is accessible; two sawmills near Westwold are now getting their logs from the Forest and three other mills are in close proximity to it. The cut is 75 per cent. yellow pine, mostly for fruit-boxes. The pine remaining will last for about ten years, when the mills will have to find a market for the less desirable fir or transfer their activities to the spruce of the Fly Hill, Niskonlith, and other Forests for box material. With a market for fir, the Forest could produce a sustained annual yield of 2,500,000 F.B.M. The large area of non-commercial cover is accounted for by the effect of bark-beetles in the lodgepole pine. Most of the mature lodgepole pine has been killed and the epidemic is now dying out.

The *Martin Mountain Forest* is a small forest south-west of Salmon Arm. Its revised boundaries enclose 56,400 acres, classified as follows:—

	Acres.	Acres.
Area capable of producing Commercial Timber—		
Mature timber	.....	22,500
Immature timber—		
21–40 years old	6,900	
41–60 years old	12,750	
61–80 years old	1,000	
Logged selection	2,150	
		22,800
Recently burned	600	
Beetle-killed and non-commercial	4,800	
		5,400
Total sites of productive quality		50,700

	Acres.
Incapable of producing Commercial Timber—	
Alpine and scrub sites	5,550
Water, swamp, and grass	150
Total non-productive sites	5,700

There is an estimated volume of 79,900,000 F.B.M. saw-timber, 76 per cent. fir, 20 per cent. yellow pine, and 19,000 cords of pulp-wood, 68 per cent. spruce. Two local sawmills get their logs from this Forest, cutting yellow pine for fruit-boxes and fir for ties and low-grade lumber. A sustained annual yield of 1,000,000 F.B.M. saw-timber could be produced, but present utilization is about double this volume. The yellow pine will last about ten years at the present rate of cutting. When the immature stands have developed there will be an additional annual yield of 5,500 cords of pulp-wood available, chiefly lodgepole pine, or 15,500 ties if this product is preferred. There are local epidemics of bark-beetles in the yellow pine and tussock-moth in the fir; affected areas should be logged as soon as possible.

The *Fly Hill Forest*, located immediately west of Salmon Arm, covers 162,900 acres, classified as follows:—

	Acres.	Acres.
Area capable of producing Commercial Timber—		
Mature timber	.....	52,850
Immature timber—		
1–20 years old	3,100	
21–40 years old	27,550	
41–60 years old	32,350	
61–80 years old	3,050	
Logged selection	1,150	
		67,200
Recently burned	2,150	
Deciduous, non-commercial	19,500	
		21,650
Total sites of productive quality		141,700
Incapable of producing Commercial Timber—		
Alpine and scrub lands		19,400
Water, swamp, and grass		1,800
Total non-productive sites		21,200

The Forest contains 299,500 M.B.M. standing timber suitable for the sawmill, of which 201,000 M.B.M. is accessible. The species are: Spruce, 201,400 M.; Douglas fir, 49,250 M.; silver fir (balsam), 29,250 M.; yellow pine, 12,500 M.; lodgepole pine, 4,700 M.; cedar, 2,400 M. It could support a sustained annual yield of 4,360,000 F.B.M.; this will be available for the markets now supplied by the neighbouring Monte Hills and Martin Mountain Forests when the saw-timber of those areas has been cut.

In conjunction with the survey of the Monte Hills Forest, the territory between it and the Okanagan Forest was examined and found to be suitable for timber production. It is topographically distinct from both the Forests named and is known as the Pennask Forest, surrounding Pennask Lake and south-east of the Douglas Lake and Quilchena Ranges. It is entirely unsuitable for agricultural development and is classified as follows:—

	Acres.	Acres.
Area capable of producing Commercial Timber—		
Mature timber	.....	77,800
Immature timber—		
21–40 years old	8,000	
41–60 years old	66,700	
61–80 years old	71,800	
Understocked selection	5,300	
		151,800
Burned, not reforested	5,700	
Beetle-killed and non-commercial	29,100	
		34,800
Total sites of productive quality		264,400

Incapable of producing Commercial Timber—	Acres.
Alpine and scrub lands	21,800
Grass and hay meadows	1,700
Water and swamp	7,400
Total non-productive sites	30,900

There are 106,300 M.B.M. fir and 2,300 M.B.M. yellow pine saw-timber and 893,000 cords of pulp-wood, 35 per cent. spruce and 60 per cent. lodgepole pine. The area, with the adjoining Forests, provides a source of supply for future pulp industry and is of present importance as an irrigation watershed supplying the Nicola and Quilchena Rivers.

An examination was made of certain coast areas in the Vancouver Forest District which are believed to be suitable for permanent timber production, including Loughborough Inlet, Broughton and neighbouring islands, where much logging has been done. A map and report on the timber and condition of the logged lands is being prepared.

PROVINCIAL FOREST INVENTORY.

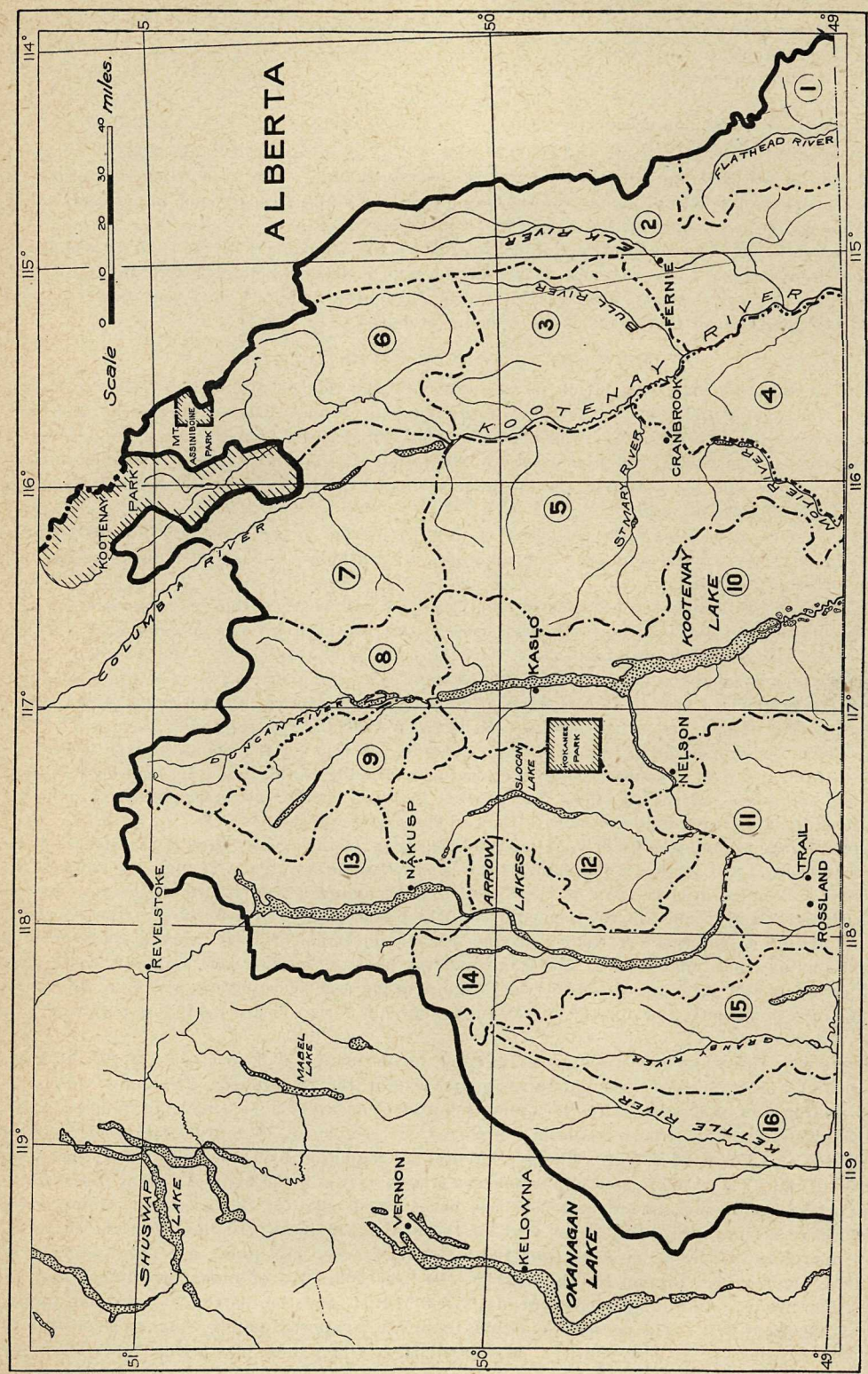
The forest atlas and compilation of estimates for the Southern Interior (Nelson) Forest District were completed. As in the case of the Vancouver and Prince Rupert Districts, previously reported, the information was obtained from all available public and private sources. Reconnaissance was made to obtain necessary details of two important areas of which reliable forest knowledge was not available, the drainage-basins of the Duncan and Lardeau Rivers, and the Big Bend of the Columbia.

The classification of land and estimates of standing timber of the Southern Interior District are given on pages 11, 12, and 13. The area has been divided into sixteen drainages shown on the accompanying index map.

In contrast with forest conditions on the Coast, it will be seen that merchantable timber occupies only 32 per cent. of the productive area in the Southern Interior as compared with 62 per cent. on the Southern Mainland Coast, but the total productive land is 40 per cent. of the whole territory as compared with 23 per cent. on the Coast. Immature timber occupies 43½ per cent. of the productive area, while logged and burned forest-sites account for only 24 per cent.; this means that 64 per cent. of the burned and logged forest land has reforested naturally, while on the Coast the proportion is less than half. Also 58 per cent. of the young growth is over 25 feet in height and well advanced; selective logging is already taking place in some of the most advanced for poles and railway-ties. In addition to being further advanced, there is a better proportion of immature stands to mature than in the Coast forests.

The average annual loss by fire of timber and young growth reported during the last fourteen years has been 71,300 acres, 1.2 per cent. of the productive forest area. Though the fire risk in the Interior is much greater than on the Coast, it is becoming less of a risk to forests than on non-productive lands; most of the burned areas which are so marked a feature of the Southern Interior are of no interest for timber production, though some of them were once good sites brought to this condition by fire. These burns cover part of the 8,600,000 acres of waste land which comprises 58 per cent. of the territory. In defining and isolating the areas on which the risk of fire is sufficiently low for the successful practice of forestry, fire itself has been and is a major factor.

Private or Government cruises were available for estimates of 25 per cent. of the standing timber, and Forest Service reconnaissance estimates for the remainder. The total volume is 13,665 million feet, compared with the Commission of Conservation's estimate of 21,000 million in 1917. Since that time there has been a reported cut of about 3,500 million feet, and reported loss by fire of 1,130 million feet. The average annual depletion by these two factors has been 327,000 M.B.M. The rate of growth of immature stands varies in the many different forest types found in the Southern Interior, and has been ascertained only for the areas on which forest surveys have been made, about 20 per cent. of the productive total. In these forests the mean annual increment varies from 50 to over 100 F.B.M. per acre. Assuming a general average of 75 F.B.M. per acre per annum for the district, the 2,600,000 acres of immature timber may be expected to produce an annual increment of 195,000 M.B.M. and the district a sustained annual yield of 300,000 M.B.M. The present depletion, therefore, is approximately equal to the district's increment irrespective of accessibility. The possibility of increased production depends chiefly upon improved protection from fire.



PROVINCIAL FOREST INVENTORY.

Key to drainage-basins of the *Southern Interior Forest District.*
Numbers refer to drainages in accompanying schedules.

PROVINCIAL FOREST INVENTORY.

Classification of Areas (in Acres) in Southern Interior Forest District.

No. on Map.	Drainage-basin.	Merchantable Timber.	Immature Timber. Over 25 Feet. Fully Stocked.	Immature Timber. Over 25 Feet. Sparse.	Immature Timber. Under 25 Feet. Fully Stocked.	Immature Timber. Under 25 Feet. Sparse.	Total Immature Timber.	Not Restocking. Logged.	Not Restocking. Burned.	Not Restocking. Logged and Burned.	Total Productive Forest Land.	Non-productive. Barren.	Non-productive. Scrub.	Non-productive. Swamp and Water.	Total Non-productive.	Cultivated and Grass Land.	Total Area.
1	Flathead River	70,994	26,780	....	20,216	...	46,996	....	52,640	....	170,630	132,840	83,550	3,980	220,370	....	391,000
2	Elk River	113,265	112,100	100	113,795	8,580	234,575	7,279	160,800	8,391	524,310	723,020	13,445	8,900	745,365	39,659	1,309,334
3	Kootenay River East	133,808	43,030	....	33,950	....	76,980	47,255	101,588	12,530	372,161	122,810	263,470	6,245	392,525	7,070	771,756
4	Yahk	146,275	86,166	538	199,475	17,656	303,835	1,347	72,255	2,627	526,339	24,880	106,506	6,147	137,533	1,825	665,697
5	Kootenay River West	153,835	95,110	21,770	70,935	42,280	230,095	19,260	118,529	44,624	566,343	529,215	243,607	11,810	784,632	36,320	1,387,295
6	Upper Kootenay River	114,699	83,082	....	24,999	8,920	117,001	3,860	20,180	....	255,740	605,090	167,942	7,163	780,195	....	1,035,935
7	Upper Columbia River	141,928	12,537	25,477	38,629	8,999	85,642	22,120	29,840	2,090	281,620	396,975	219,518	28,410	644,903	5,910	932,433
8	Duncan River	101,449	32,560	12,700	8,520	3,080	56,860	50	34,160	....	192,519	253,925	256,415	8,200	518,540	1,400	712,459
9	Lardeau River	77,380	40,390	...	1,240	13,730	55,360	....	7,710	....	140,450	81,400	161,900	8,400	251,700	200	392,350
10	Kootenay Lake	192,219	206,716	56,350	26,440	83,280	372,786	6,310	84,525	11,740	667,580	579,400	320,530	115,330	1,015,260	54,170	1,737,010
11	Lower Columbia River	101,716	94,599	29,350	19,865	75,431	219,245	10,900	118,015	37,855	487,731	119,053	163,611	7,500	290,164	29,950	807,845
12	Slocan	87,560	66,180	560	32,180	27,310	126,230	7,680	28,740	16,980	267,190	233,560	294,870	20,460	548,890	10,260	826,340
13	Upper Arrow Lake	159,052	96,166	....	28,890	7,765	132,821	6,530	17,400	....	315,803	428,430	181,974	62,220	672,624	8,940	997,367
14	Lower Arrow Lake	89,023	113,261	12,325	34,600	14,100	174,286	9,350	48,439	5,130	326,228	102,670	433,455	43,780	579,905	18,290	924,423
15	Granby	75,197	45,006	18,919	30,354	8,549	102,828	8,320	60,540	5,930	252,815	66,387	322,481	9,035	397,903	29,749	680,467
16	Kettle River	177,411	178,684	....	87,387	5,000	271,071	14,822	167,223	2,990	633,517	30,310	597,828	7,000	635,138	44,410	1,313,065
	Totals	1,935,811	1,332,367	178,089	771,475	324,680	2,606,611	165,083	1,122,584	150,887	5,980,976	4,429,965	3,831,102	354,580	8,615,647	288,153	14,884,776
		....	51.1%	6.8%	29.6%	12.5%	100%	....	....	....	....	....	....	....	....	....	....
		32.4%	.....	....	....	....	43.6%	2.8%	18.8%	2.4%	100%	51%	45%	4%	100%	....	....
		13.0%	.....	....	....	....	17.5%	1.1%	7.6%	1.0%	40.2%	29.8%	25.7%	2.4%	57.9%	1.9%	100%

PROVINCIAL FOREST INVENTORY—*Continued.*

Accessible Merchantable Timber in Southern Interior Forest District.

No. on Map.	Drainage-basin.	Merchantable Acreage.	Thousand Board-feet, B.C. Log Scale.									Total.
			F.	C.	H.	S.	B.	Pw.	Py.	Pl.	L.	
1	Flathead River	69,334	60.500	.....	.....	519,870	44,410	.....	.....	102,920	21,700	749,400
2	Elk River	106,400	99,870	29,530	820	714,000	65,950	3,620	23,950	143,920	30,200	1,111,860
3	Kootenay River East	106,468	138,630	15,740	310	181,960	74,480	.....	58,140	60,170	57,880	587,310
4	Yahk	146,275	181,170	31,810	.....	392,860	82,320	15,390	42,660	191,700	528,120	1,466,030
5	Kootenay River West	126,965	132,180	63,190	16,610	311,040	37,680	34,820	26,060	78,160	296,730	996,470
6	Upper Kootenay River	59,111	130,960	10,450	.....	87,320	.....	.....	880	6,400	164,390	400,400
7	Upper Columbia River	123,488	337,040	.....	.....	29,280	5,390	.....	5,580	25,800	38,480	441,570
8	Duncan River	24,579	22,440	114,820	77,080	14,510	5,000	10,370	.....	.....	8,940	253,160
9	Lardeau River	41,746	31,730	197,530	141,520	53,480	13,460	18,430	.....	.....	2,280	458,430
10	Kootenay Lake	101,015	97,280	132,740	164,400	145,220	32,840	61,230	36,860	4,750	79,720	755,040
11	Lower Columbia River	87,841	98,990	164,530	136,310	85,740	17,900	62,060	780	9,840	65,500	641,650
12	Slocan	59,470	128,520	88,210	118,380	29,380	4,270	44,850	9,970	11,060	32,890	467,530
13	Upper Arrow Lake	102,249	85,550	240,570	218,250	25,940	10,870	47,270	.....	.....	7,910	636,360
14	Lower Arrow Lake	30,608	47,050	69,660	22,500	20,770	6,350	17,460	9,170	3,120	17,950	214,030
15	Granby	33,918	43,670	18,070	5,410	9,380	2,850	2,860	9,220	1,290	25,830	118,580
16	Kettle River	96,738	145,740	1,860	.....	11,500	250	.....	35,970	22,240	97,530	315,090
	Totals	1,316,205	1,781,320	1,178,710	901,590	2,632,250	404,020	318,360	259,240	661,370	1,476,050	9,612,910
		.....	18.5%	12.3%	9.4%	27.4%	4.2%	3.3%	2.7%	6.9%	15.3%	100%
	Vacant Crown lands	713,031	966,910	447,200	398,120	1,628,850	263,270	122,360	126,440	456,980	762,850	5,172,980
	Timber licences and leases	198,028	254,610	451,230	305,470	461,330	62,210	99,280	13,920	90,180	338,880	2,077,110
	Crown grants	405,146	559,800	280,280	198,000	542,070	78,540	96,720	118,880	114,210	374,320	2,362,820

Abbreviations—F=Douglas fir. C=Red cedar. H=Western hemlock. S=Engelmann spruce. B=Silver fir (balsam).
Pw=White pine. Py=Yellow pine. Pl=Lodgepole pine. L=Western larch (tamarack).

PROVINCIAL FOREST INVENTORY—*Continued.*

Total Merchantable Timber in Southern Interior Forest District.

No. on Map.	Drainage-basin.	Merchantable Acreage.	Thousand Board-feet, B.C. Log Scale.									Total.
			F.	C.	H.	S.	B.	Pw.	Py.	Pl.	L.	
1	Flathead River	70,994	60,800	.....	.....	531,470	45,310	.....	.....	104,320	21,800	763,700
2	Elk River	113,265	100,650	29,560	820	764,230	67,680	3,620	23,950	155,900	30,200	1,176,610
3	Kootenay River East	133,808	154,250	17,740	310	217,760	75,980	.....	60,840	100,470	66,760	694,110
4	Yahk	146,275	181,170	31,810	.....	392,860	82,320	15,390	42,660	191,700	528,120	1,466,030
5	Kootenay River West	153,835	142,410	84,470	20,380	387,180	49,900	35,120	24,170	100,450	329,910	1,173,990
6	Upper Kootenay River	114,699	158,890	12,640	1,200	292,580	70,240	.....	880	118,450	178,490	833,370
7	Upper Columbia River	141,928	353,630	.....	.....	69,860	9,990	.....	5,580	39,000	40,740	518,800
8	Duncan River	101,449	36,380	262,730	328,700	273,860	75,440	26,000	.....	3,080	14,800	1,020,990
9	Lardeau River	77,380	34,370	294,720	291,990	171,380	35,560	23,050	.....	.....	2,460	853,530
10	Kootenay Lake	192,219	157,190	239,790	280,640	245,240	81,240	98,450	36,860	9,530	117,560	1,266,500
11	Lower Columbia River	101,716	99,390	195,720	174,130	97,840	26,460	71,800	780	9,840	70,140	746,100
12	Slocan	87,560	159,230	136,350	175,300	59,460	11,480	57,890	11,160	11,100	34,880	656,850
13	Upper Arrow Lake	159,052	107,760	391,070	346,540	70,060	26,110	72,750	.....	.....	10,930	1,025,220
14	Lower Arrow Lake	89,023	88,890	142,590	75,180	113,840	69,270	28,730	12,050	5,700	34,980	571,230
15	Granby	75,197	73,900	50,530	33,480	29,730	5,950	9,110	16,090	14,120	43,780	276,690
16	Kettle River	177,411	214,850	7,720	.....	72,860	50,980	.....	38,760	83,520	152,430	621,120
	Totals	1,935,811	2,123,760	1,897,440	1,728,670	3,790,210	783,910	441,910	273,780	947,180	1,677,980	13,664,840
		.....	15.6%	13.9%	12.7%	27.7%	5.7%	3.2%	2.0%	6.9%	12.3%	100%
	Vacant Crown lands	1,245,366	1,267,230	1,005,670	1,052,710	2,654,750	597,470	216,570	139,750	721,160	937,860	8,593,170
	Timber licences and leases	231,152	269,720	555,630	415,660	511,730	80,380	114,770	13,920	91,960	343,030	2,396,800
	Crown grants	459,293	586,810	336,140	260,300	623,730	106,060	110,570	120,110	134,060	397,090	2,674,870

Abbreviations—F=Douglas fir. C=Red cedar. H=Western hemlock. S=Engelmann spruce. B=Silver fir (balsam). Pw=White pine. Py=Yellow pine. Pl=Lodgepole pine. L=Western larch (tamarack).

LAND CLASSIFICATION.

In conjunction with the forest surveys, certain areas of land were examined for the purpose of defining permanent boundaries for the *Shuswap, Fly Hill,* and *Monte Hills Forests.*

With the exception of two lots of 160 acres each, the land capable of agricultural development adjacent to the *Shuswap Forest* has been alienated. Settlements along the north shore of Shuswap Lake form the southern boundary of the Forest. Two thousand six hundred and ten acres in all were examined, 2,290 being found to be suitable for growing timber, but too dry or too stony for farming.

Areas totalling 9,600 acres adjacent to the *Fly Hill Forest* were examined; 6,920 acres were found to have soil unsuitable for farming or needing irrigation, for which water is not available; they will grow timber, however, and are recommended for inclusion in the Forest. One thousand two hundred and forty acres of good land, although alienated, are not now occupied, and 1,440 additional acres of vacant agricultural land are available in the Chase Creek and Charcoal Creek Valleys.

In an examination of boundary lands for the *Monte Hills Forest* 7,040 acres were examined, but no vacant land suitable for farming was found. The boundaries of this Forest, where they do not touch land already settled, are on high rolling uplands without water for irrigation and usually too steep for the plough. Practically all the farm land in this vicinity lies in the Salmon River Valley, which has long been settled.

Areas examined for Miscellaneous Purposes of "Land Act," 1932.

Forest District.	Applications for Crown Grants.		Applications for Grazing and Hay Leases.		Applications for Pre-emption Records.		Applications to Purchase.		Miscellaneous.	
	No.	Acres.	No.	Acres.	No.	Acres.	No.	Acres.	No.	Acres.
Fort George	..	.....	7	963	49	7,235	36	5,672	32	4,274
Kamloops	..	.....	81	14,008	72	9,609	48	6,931	101	10,381
Prince Rupert	..	.....	..	.....	11	1,550	20	2,759	29	4,030
Southern Interior	1	29	2	481	1	38	43	5,219	8	1,020
Vancouver	1	19	1	80	44	3,371	62	5,414	34	2,429
Totals	2	48	91	15,532	177	21,803	209	25,995	204	22,134

Classification of Areas examined in 1932.

Forest District.	Total Area.	Agricultural Land.	Non-agricultural Land.	Merchantable Timber Land.	Estimate of Timber on Merchantable Timber Land.
	Acres.	Acres.	Acres.	Acres.	M.B.M.
Fort George	18,144	10,302	7,842	757	7,134
Kamloops	40,929	4,084	36,845	502	3,065
Prince Rupert	8,339	1,827	6,512	235	2,775
Southern Interior	6,787	927	5,860	160	960
Vancouver	11,313	2,061	9,252	661	7,349
Totals	85,512	19,201	66,311	2,315	21,283

FOREST RESEARCH.

The research programme for 1932 was reduced to what might be termed a maintenance basis. With a reduced staff, efforts were made to maintain projects already under way, but no new work could be undertaken.

Experiment Stations.

Cowichan Lake.—The value of this Station for scientific work in forestry is becoming more evident each year. Excellent opportunities exist at the Station and on adjacent areas for experiments in such intensive forest-management as seeding, planting, pruning and thinning, and for the observation of important factors such as growth, seed-production, and insect and fungus damage. As the work develops it will be possible to expand our sample plots at

Cowichan Lake into practical demonstrations of the various measures which are necessary to maintain Douglas fir forests in a productive condition.

Six plots at this Station were re-examined for germination and growth during the year. The trees under observation for seed-production were given their annual examination. One new plot was laid out, dealing with the survival of young seedlings. A small amount of improvement-work was done on the road and trails of the Station.

Aleza Lake.—Routine measurements were made on twenty-four permanent plots. Eight test strips in logged-off areas were examined in order to improve our data concerning general conditions for natural reforestation on this type of land. Minor investigations included soil studies, measurements of tree-growth, and seasonal weather records. Necessary maintenance-work was done on the Station road and buildings.

Reproduction and Silviculture.

Weather during the 1932 season was favourable for tree-growth, and it was observed that established seedlings showed exceptional development. The number of new seedlings was disappointing, particularly in view of the fact that the previous year's seed-crop was better than usual. Dry weather during June probably was responsible for heavy mortality among the current year's seedlings.

Twenty-three plots were re-examined during the summer, this work occupying most of the time given to reproduction studies. The field-work for the 1932 season in the Block "W" area near Haney was undertaken by the Dominion Forest Service, and examination of three plots and a considerable number of history-map strips was assumed by the Dominion foresters. This work was a beginning of co-operation between the two Services which we hope will develop and go a long way toward the solution of some of our silvicultural problems.

Forest Mensuration.

In mensuration our efforts were confined to the upkeep of the permanent records in projects already under way. The summer field-work consisted almost entirely of the remeasurement of permanent sample plots established some years ago in the Douglas fir and western hemlock types of the Coast.

A preliminary set of normal yield tables for western hemlock, based on data from fifty-one temporary sample plots established in the Johnstone Strait region, was compiled during the year. The tables are presented herewith, giving the dimensions of average trees and the yields per acre which are found in fully stocked stands on various site qualities at different ages.

Natural growth over large areas is commonly irregular and understocked, and therefore in forecasting the yield of such stands it is necessary to reduce the tabular values to some extent. The usual method of applying the tables to actual stands is as follows:—

(1.) Determine the age of the stand and the average height of the trees of mean diameter.

(2.) Determine the site index table applicable to the stand by comparing the age-height combination of the stand with that of the tables. The table showing an average height nearest to the average height of the stand at the same age is the one most applicable.

(3.) By tallies of cruise strips, determine the average basal area per acre and then calculate the ratio of the basal area of the stand in question to the basal area given in the table for the same age and site.

(4.) The yield at any age may then be found by modifying the tabulated yield by this ratio.

Site Index Yield Tables for Western Hemlock.

The classification of site or location quality is based on the average height attained by the trees of mean diameter at 100 years of age. The values given in columns 1 to 4 are based on all trees of the stand 1 inch and over, while those of columns 5 and 6, stating merchantable yields, are based on trees 7 inches and over and 10 inches and over respectively.

Site Index 80.

B.H.* Age.	Mean D.B.H. (1.)	Mean Height. (2.)	No. of Trees per Acre, 1″+. (3.)	Basal Area per Acre, 1″+. (4.)	Merchantable Volume.	
					Cu. Ft., 7″+. (5.)	B.M., 10″+. (6.)
20	1.8	23	.....	122	.....	.....
40	3.8	44	2,000	155	1,260	.....
60	5.2	59	1,200	175	3,360	7,000
80	6.6	71	800	190	5,120	15,700
100	7.8	80	580	202	6,380	23,800
120	8.7	87	490	212	7,350	29,400
140	9.5	93	420	218	8,400	34,400
160	9.7	97	410	223	9,000	37,700

Site Index 100.

20	2.7	29	3,300	143	.....	.....
40	5.5	55	1,100	180	3,300	7,700
60	7.7	75	600	202	5,820	20,400
80	9.8	89	400	220	8,000	32,800
100	11.5	100	315	235	10,100	42,500
120	12.7	109	270	247	11,300	51,600
140	13.6	116	245	255	12,250	58,800
160	14.0	121	235	258	13,100	63,500

Site Index 120.

20	3.5	35	2,200	153	.....	.....
40	7.2	65	680	195	4,900	14,900
60	10.1	90	380	224	8,170	33,800
80	12.5	107	280	245	10,900	49,000
100	14.7	120	220	262	13,200	63,800
120	16.2	131	190	276	15,000	76,000
140	17.5	139	170	287	16,700	85,000
160	17.7	145	163	293	17,600	91,200

Site Index 140.

20	4.1	41	1,250	160	.....	.....
40	8.3	76	540	205	6,480	22,700
60	11.5	105	315	237	10,400	44,800
80	14.1	125	235	261	13,900	66,000
100	17.0	140	175	280	16,400	84,000
120	18.7	152	153	295	18,400	100,000
140	20.0	163	139	307	20,100	114,000
160	20.7	171	130	313	20,800	122,000

Site Index 160.

20	4.3	46	1,600	165	1,920	.....
40	8.8	87	480	210	7,450	29,200
60	12.2	120	290	245	12,500	57,200
80	15.3	142	205	270	15,800	81,000
100	18.1	160	160	290	19,200	104,000
120	20.0	174	139	305	21,500	123,700
140	21.2	186	128	317	23,700	141,000
160	21.8	195	122	325	25,700	146,700

* For total age add 10 years, which is the approxmate length of time required to grow to B.H.

REFORESTATION.

Seed Collections.—With the exception of western red cedar, the 1932 seed-crop of all coniferous species was poor, and the few cones produced were badly infested with insects. The production of Douglas fir and grand fir (*Abies grandis*) was particularly poor on Vancouver Island. Small collections were made of cedar, maple, and birch, and an effort was made to assist the Dominion Forest Service in collecting grand fir (*Abies grandis*) seed for export orders.

Forest Nurseries.—One hundred beds were sown at the experimental nursery near Victoria. As the main nursery at Green Timbers now is developed to a point where it can provide all the seedlings required for reforestation in the coastal region, the stock from these beds will be the last to be grown at the Victoria nursery.

The most important feature of the nursery-work at Green Timbers during 1932 was the production of 540,700 seedlings, mostly 2-year-olds, for the various planting projects of the year. Approximately 100,000 trees are now available in the nursery. Forty-four new seed-beds were sown at this nursery, making with those at Victoria 144.

Various experimental studies were conducted in connection with the main work of growing seedlings, and other investigations dealt with reforestation by seeding, control of spruce-gall aphis, damage by rodents, etc. Tests of seed-bed preparation, transplanting, and planting, in the fall of the year, indicated that these operations are likely to be unsuccessful in comparison with similar work done in the spring, with the possible exception of fall seed-bed sowing. Fall sowing may give satisfactory results if done late enough in the year to prevent the development of fall germination, seedlings from which will not survive winter conditions.

No extensive development-work was possible at the Green Timbers Nursery, but numerous small jobs were completed which improved the appearance and usefulness of the Station. Several minor areas were cleared and graded, the fencing was extended, and ground was cleaned up for windbreak plantations. Roadside trees and shrubbery were set out and the nursery roads were improved. An earth and crib-work dam was built to test the possibilities of water-storage on the small stream at the nursery.

Gifts and exchanges of nursery stock to various organizations and individuals included thirty-seven lots of seedlings, comprising 7,000 trees, and twenty-one lots of seed.

Considerable work was done on the organization and completion of office records, particularly for the purpose of enabling plantation records and cost data to be kept on a long-term basis and in an efficient manner.

Plantations.—The planting projects undertaken during the year were as follows:—

Location of Planting.	Number of Trees planted.				
	Douglas Fir.	Sitka Spruce.	Yellow Pine.	Others.	Total.
Green Timbers	83,000	80,000	26,000	12,000	201,000
West Thurlow Island	178,650	37,300	21,350	.....	237,300
Campbell River	85,200	5,200	.....	.....	90,400
Miscellaneous	5,000	6,000	.....	1,000	12,000
Total number of trees planted	.....	.....	.....	.....	540,700

The Green Timbers planting covered 249 acres of the logged-off land adjacent to the nursery.

At Thurlow Island the work was done on cut-over Crown land near Knox Bay. This area, located in the West Thurlow Island Provincial Forest, was selected in 1931 as a desirable site for some of the first reforestation-work of the Service. Full planting was carried out on 307 acres, and experimental plantings, by means of strips, plots, and irregular groups, covered an additional 238 acres.

Sixty acres of both standard and group planting were completed at Campbell River in the new experimental forest at that place. Some fencing-work was later done to protect these plantings, and the boundaries of the forest were surveyed to facilitate the laying-out of future work.

The test, begun in 1931, of impregnating poles and piling with the Lipman-Gordon preservative solution and the cap method of treatment was completed and report submitted.

LUMBER TRADE EXTENSION.

The trade-extension work in Eastern Canada was discontinued at the end of September for economic reasons, and because it was felt that funds available would produce better results in other markets.

In co-operation with the British Columbia Lumber and Shingle Manufacturers, Limited, the work in the United Kingdom market was continued. Results began to be shown in increasing volume and percentage of export to this market. They were for:—

1930— 96,000 M.B.M., or 32 per cent. of North Pacific trade.

1931— 91,000 M.B.M., or 45 per cent. of North Pacific trade.

1932—108,000 M.B.M., or 72 per cent. of North Pacific trade.

Considerable work was done in preparing and presenting the case of lumber at the British Empire Economic Conference, and as a result a much firmer foundation for future trade in Empire timbers was laid.

During November and December the technical officer of the association paid a visit to China, and reports that prospects for an increasing timber trade there are good if the market opportunities are actively followed up.

The extent of our offshore lumber trade is shown in the following table, our position having been maintained remarkably well, except in the United States, where the tariff effective from July practically shut us out of this market:—

WATER-BORNE LUMBER TRADE (IN F.B.M.).

Destination.	1926.	1927.	1928.	1929.	1930.	1931.	1932.
Australia	36,809,373	53,502,046	29,843,132	41,493,476	33,076,587	50,803,023	125,551,388
New Zealand	16,201,328	10,847,545	8,531,322	8,559,208	6,416,105	2,578,740	979,148
South America	1,160,947	2,168,973	10,304,032	2,449,494	1,774,697	1,354,028	140,945
China	4,615,921	9,178,973	16,902,137	43,323,398	55,224,104	53,854,005	53,341,172
Japan	177,193,559	191,597,552	219,361,557	192,411,505	150,869,880	138,851,607	60,031,785
United Kingdom and Continent	41,575,593	36,427,449	67,075,872	69,903,655	98,037,621	81,356,058	108,314,682
South Africa	17,651,788	18,562,680	13,625,781	15,889,002	17,685,896	13,120,035	5,664,646
India and Straits Settlements	1,653,675	3,566,713	411,577	243,807	241,129	369,689	544,271
United States and Atlantic Coast	400,347,692	392,074,528	384,107,908	351,526,590	259,093,570	207,586,216	79,682,896
Philippine and Hawaiian Islands	221,378	1,734,314	56,681	.....	122,744	.....	.....
West Indies and Cuba	8,792,765	16,023,319	8,356,571	14,347,317	12,781,209	7,520,512	8,239,598
South Sea Islands	3,791,670	1,884,632	5,496,319	5,508,978	3,230,759	2,527,526	2,009,102
Mexico and Central America	.....	.....	333,660	623,766	550,018	478,794	1,746,278
Egypt	2,573,529	2,649,559	1,149,573	4,744,180	.....	4,195,326	.....
*Belgium	.....	.....	.....	.....	.....	336,428	79,474
*Denmark	.....	.....	.....	.....	.....	62,129	.....
*France	.....	.....	.....	.....	.....	241,865	148,901
*Germany	.....	.....	.....	.....	.....	154,135	120,519
*Holland	.....	.....	.....	.....	.....	419,373	144,018
*Italy	.....	.....	.....	.....	.....	301,561	128,678
*Norway and Sweden	.....	.....	.....	.....	.....	18,200	.....
Spain	.....	.....	.....	.....	.....	.....	15,955
Foreign, unclassified	154,038	12,047	.....	50,494,046	73,195,238	.....	6,087
Totals	712,743,256	740,230,330	765,556,122	801,518,422	712,299,557	566,129,250	446,889,543

*Previously included with United Kingdom.

FOREST INDUSTRIES.

The forest industries felt the effects of the economic conditions acutely, both in volume and price of lumber products, and from an industrial point of view the year was the worst experienced since 1914. The following tables give a review of general conditions, compared for several years:—

Estimated Value of Production, including Loading and Freight within the Province.

Product.	1926.	1927.	1928.	1929.	1930.	1931.	1932.
Lumber	$42,516,000	$40,487,000	$48,346,000	$50,140,000	$32,773,000	$16,738,000	$13,349,000
Pulp and paper	16,315,000	18,505,000	16,755,000	14,400,000	16,520,000	13,508,000	11,156,000
Shingles	10,500,000	6,800,000	10,000,000	8,300,000	4,161,000	2,721,000	2,805,000
Boxes	3,000,000	1,707,000	2,501,000	2,437,000	2,287,000	1,315,000	1,100,000
Piles, poles, and mine-props	2,792,000	4,030,000	4,684,000	5,500,000	4,726,000	2,453,000	772,000
Cordwood, fence-posts, and mine-ties.	1,414,000	1,405,000	1,633,000	1,734,000	1,596,000	1,405,000	1,576,000
Ties, railway	1,420,000	1,440,000	1,873,000	2,116,000	1,253,000	1,044,000	502,000
Additional value contributed by the wood-using industry	2,100,000	2,100,000	2,200,000	2,100,000	2,387,000	1,350,000	1,014,000
Laths and other miscellaneous products	1,500,000	2,000,000	2,100,000	2,400,000	1,500,000	1,500,000	1,125,000
Logs exported	3,170,000	4,561,000	3,580,000	4,124,000	2,492,000	2,370,000	1,730,000
Pulp-wood exported	75,000	52,000	115,000	50,000	42,000	43,000	28,000
Totals	$84,802,000	$83,087,000	$93,787,000	$93,301,000	$69,737,000	$44,447,000	$35,157,000

Pulp (in Tons).

Pulp.	1926.	1927.	1928.	1929.	1930.	1931.	1932.
Sulphite	108,381	119,005	120,413	112,925	130,462	124,521	85,419
Sulphate	15,000	13,700	15,050	15,647	13,055	11,744	10,889
Ground wood	136,123	163,548	170,005	151,066	172,539	170,432	161,502

Paper (in Tons).

Product.	1926.	1927.	1928.	1929.	1930.	1931.	1932.
Newsprint	176,924	214,010	225,477	201,009	224,928	217,562	205,050
Other papers	10,389	13,745	15,960	19,492	20,446	17,709	24,051

Total Amount of Timber scaled in British Columbia during Years 1931–32. (F.B.M.)

Forest District.	1931.	1932.	Gain.	Loss.	Net Gain.	Net Loss.
Cariboo*	5,041,570	.....	.....	5,041,570	.....	.....
Fort George	35,276,624	20,563,841	.....	14,712,783	.....	.....
Kamloops	38,719,803	64,752,039	26,032,236	.....	.....	.....
Southern Interior	209,176,263	84,294,505	.....	124,881,758	.....	118,603,875
Totals, Interior	288,214,260	169,610,385	26,032,236	144,636,111	.....	.....
Prince Rupert	116,219,490	93,868,874	.....	22,350,616	.....	.....
Vancouver	1,543,970,523	1,347,979,202	.....	195,991,321	.....	.....
Totals, Coast	1,660,190,013	1,441,848,076	.....	218,341,937	.....	218,341,937
Totals for Province	1,948,404,273	1,611,458,461	26,032,236	362,978,048	.....	336,945,812

* Now included within Fort George and Kamloops, also part Southern Interior now within Kamloops.

Timber scaled in British Columbia in 1932. (By Months and Districts.)

		Kamloops.	Fort George.	Southern Interior.	Prince Rupert.	Vancouver.	Total, F.B.M.	Total Lineal Feet.	Total Cords.	Total Hewn Ties.
January	F.B.M.	2,543,219	474,469	3,485,133	135,943	79,097,859	85,736,623	.....	.....	.....
"	lineal ft.	87,433	.....	15,336	81,920	188,829	.....	373,518	.....	.....
"	cords	1,440	91	1,418	230	4,091	.....	.....	7,270	.....
"	hewn ties	2,183	16,073	24,417	21,254	.....	.....	.....	.....	63,927
February	F.B.M.	1,879,193	688,007	2,537,881	17,941	74,962,756	80,085,778	.....	.....	.....
"	lineal ft.	30,179	1,550	20,866	26,264	256,794	.....	335,653	.....	.....
"	cords	2,166	16	2,034	27	4,175	.....	.....	8,418	.....
"	hewn ties	685	491	5,341	4,662	.....	.....	.....	.....	11,179
March	F.B.M.	2,877,544	381,104	3,368,603	86,011	103,520,518	110,233,780	.....	.....	.....
"	lineal ft.	29,870	2,427	165,975	62,272	225,691	.....	486,235	.....	.....
"	cords	1,591	272	2,623	16	3,934	.....	.....	8,436	.....
"	hewn ties	16,127	3,015	41,092	1,250	.....	.....	.....	.....	61,484
April	F.B.M.	1,699,487	571,046	2,153,764	4,501,612	156,563,294	165,489,203	.....	.....	.....
"	lineal ft.	23,938	3,805	94,727	58,325	278,850	.....	459,645	.....	.....
"	cords	2,490	84	2,276	12	6,540	.....	.....	11,402	.....
"	hewn ties	49,484	5,099	27,168	6,894	6,370	.....	.....	.....	95,015
May	F.B.M.	3,080,527	1,448,275	3,429,966	7,751,820	168,582,623	184,293,211	.....	.....	.....
"	lineal ft.	147,670	.....	44,748	20,187	82,586	.....	295,191	.....	.....
"	cords	876	364	1,471	121	21,905	.....	.....	24,737	.....
"	hewn ties	31,228	19,923	13,731	17,196	198,014	.....	.....	.....	280,092
June	F.B.M.	4,696,215	1,237,019	8,013,532	11,665,021	152,928,682	178,540,469	.....	.....	.....
"	lineal ft.	62,335	2,835	167,928	79,867	206,423	.....	519,388	.....	.....
"	cords	729	122	2,080	486	8,542	.....	.....	11,959	.....
"	hewn ties	61,121	17,448	24,044	33,157	.....	.....	.....	.....	135,770
July	F.B.M.	4,106,472	1,015,590	6,556,294	14,584,887	102,749,843	129,013,086	.....	.....	.....
"	lineal ft.	89,310	123,865	276,670	39,468	228,186	.....	757,499	.....	.....
"	cords	768	534	1,107	385	7,992	.....	.....	10,786	.....
"	hewn ties	64,283	.....	62,144	2,049	637	.....	.....	.....	129,113
August	F.B.M.	3,968,228	1,570,460	10 430,081	18,644,036	86,460,230	121,073,035	.....	.....	.....
"	lineal ft.	66,633	.....	67,262	430,146	536,639	.....	1,100,680	.....	.....
"	cords	640	32	1,776	228	8,361	.....	.....	11,037	.....
"	hewn ties	38,671	3,415	57,938	11,713	2,067	.....	.....	.....	113,804
September	F.B.M.	2,996,383	4,288,765	3,953,958	9,335,541	76,608,241	97,188,888	.....	.....	.....
"	lineal ft.	46,592	52,335	62,758	43,145	228,092	.....	432,922	.....	.....
"	cords	1,923	346	1,288	417	9,518	.....	.....	13,492	.....
"	hewn ties	14,307	1,204	26,855	.....	2,693	.....	.....	.....	45,059
October	F.B.M.	1,591,976	2,849,183	4,359,370	12,052,925	89,275,333	110,128,787	.....	.....	.....
"	lineal ft.	211,555	.....	82,750	55,800	293,355	.....	643,460	.....	.....
"	cords	1,817	95	3,601	162	12,139	.....	.....	17,814	.....
"	hewn ties	9,046	3,143	17,685	720	2,283	.....	.....	.....	32,877
November	F.B.M.	2,327,164	1,038,198	2,537,186	5,128,069	88,796,991	99,827,608	.....	.....	.....
"	lineal ft.	738,708	10,650	33,184	5,600	28,899	.....	817,041	.....	.....
"	cords	3,625	108	2,633	184	10,519	.....	.....	17,069	.....
"	hewn ties	10,164	.....	6,186	6,962	250	.....	.....	.....	23,562
December	F.B.M.	648,136	200,590	3,014,512	152,448	76,474,937	80,490,623	.....	.....	.....
"	lineal ft.	462,056	320	19,301	20,090	231,315	.....	733,082	.....	.....
"	cords	1,149	270	2,091	47	6,382	.....	.....	9,939	.....
"	hewn ties	132	.....	1,739	8,600	.....	.....	.....	.....	10,471
Totals for year	F.B.M.	32,414,544	15,762,706	53,846,280	84,056,254	1,256,021,307	1,442,101,091	.....	.....	.....
"	lineal ft.	1,996,279	197,787	1,051,505	923,084	2,785,659	.....	6,954,314	.....	.....
"	cords	19,214	2,334	24,398	2,315	104,098	.....	.....	152,359	.....
"	hewn ties	297,431	69,811	308,340	114.457	212,314	.....	.....	.....	1,002,353

Total scaled in F.B.M. = 1,611,458,461.

TOTAL SCALE SEGREGATED, SHOWING LAND STATUS. (IN F.B.M.)

Forest District.	Timber Licences	Timber Leases.	Hand-loggers' Licences.	Timber-sales.	Pre-emptions S.R., and Miscellaneous.	Crown Grants.				Dominion Lands.	Totals.
						To 1887.	1887-1906.	1906-1914.	1914 to Date.		
Fort George	3,619,246	.....	.....	13,225,673	2,378,445	.....	68,400	591,180	680,897	.....	20,563,841
Kamloops	15,366,219	.....	.....	19,735,367	7,121,303	7,116,563	2,633,288	6,559,675	5,319,697	899,927	64,752,039
Prince Rupert	33,992,943	601,311	5,182,539	40,163,385	964,718	28,680	1,527,545	4,586,343	1,115,538	5,705,872	93,868,874
Southern Interior	11,397,635	.....	.....	13,965,111	4,204,400	152,136	40,286,697	7,973,715	6,158,561	156,250	84,294,505
Vancouver	334,706,122	389,892,817	120,583	111,187,592	9,590,341	432,967,028	26,019,055	8,847,454	24,708,207	9,940,003	1,347,979,202
Totals, 1932	399,082,165	390,494,128	5,303,122	198,277,128	24,259,207	440,264,407	70,534,985	28,558,367	37,982,900	16,702,052	1,611,458,461
Totals, 1931	283,982,547	386,584,819	4,938,797	238,645,632	35,381,654	647,262,567	165,875,691	41,867,865	31,120,290	112,744,411	1,948,404,273
Totals, 1930	444,717,322	420,727,159	5,413,150	321,230,000	25,830,560	888,519,895	226,834,133	69,744,896	44,489,545	186,245,678	2,663,752,338
Totals, 1929	575,187,828	374,329,611	5,912,880	383,375,816	25,117,698	1,223,710,572	287,184,092	99,437,752	59,209,983	312,678,055	3,346,144,287
Totals, 1928	601,586,290	410,384,094	5,249,856	324,618,812	40,523,494	1,103,204,936	264,833,742	89,743,869	63,531,354	303,229,019	3,206,905,466
Totals, 1927	575,430,088	383,905,689	5,195,168	291,505,941	28,844,603	905,838,664	249,714,968	74,197,517	52,915,769	286,154,055	2,853,702,462
Totals, 1926	553,819,858	424,159,254	7,505,570	296,134,949	35,988,023	860,781,276	269,782,298	118,581,259	58,143,748	293,222,967	2,918,119,202
Totals, 1925	530,863,844	342,943,804	10,542,541	315,669,296	60,664,065	615,470,589	281,322,987	106,202,808	44,850,733	302,735,860	2,611,266,527

Timber from lands in the former Dominion Government Railway Belt which has passed over to the jurisdiction of this Province is included under the various land status headings shown above.

Only timber from Indian Reserves and other lands still under the jurisdiction of the Dominion Government is shown under the heading "Dominion Lands."

Species cut (in F.B.M.).

Forest District.	Fir.	Cedar.	Spruce.	Hemlock.	Balsam.	Yellow Pine.	White Pine.	Jack-pine.	Larch.	Cottonwood.	Miscel.	Totals.
Fort George	1,371,790	1,147,364	13,538,879	.....	728,564	.....	.....	2,021,753	.....	35,266	1,720,225	20,563,841
Kamloops	12,694,110	13,416,605	6,471,033	23,856	18,336	11,306,821	1,205,785	699,131	58,920	54,263	18,803,179	64,732,039
Southern Interior	23,274,575	10,146,556	2,212,860	2,877,155	100,588	2,047,991	7,730,714	1,199,446	21,411,205	460,217	12,833,198	84,294,505
Totals, Interior	37,340,475	24,710,525	22,222,772	2,901,011	847,488	13,354,812	8,936,499	3,920,330	21,470,125	549,746	33,356,602	169,610,385
Prince Rupert	146,008	7,215,857	40,775,409	30,142,253	10,459,670	.....	.....	3,550,792	.....	9,488	1,569,397	93,868,874
Vancouver	715,071,686	287,160,596	43,363,612	212,125,922	42,975,116	12,415	9,055,870	.....	.....	2,382,758	35,831,227	1,347,979,202
Totals, Coast	715,217,694	294,376,453	84,139,021	242,268,175	53,434,786	12,415	9,055,870	3,550,792	.....	2,392,246	37,400,624	1,441,848,076
Grand totals, 1932.	752,558,169	319,086,978	106,361,793	245,169,186	54,282,274	13,367,227	17,992,369	7,471,122	21,470,125	2,941,992	70,757,226	1,611,458,461
Grand totals, 1931.	997,513,398	356,478,825	123,056,421	267,283,560	45,153,077	26,109,228	27,006,894	38,555,460	17,700,108	4,029,782	45,517,520	1,948,404,273
Grand totals, 1930.	1,319,093,565	570,071,915	185,696,765	329,447,130	65,513,782	30,463,015	28,029,526	55,368,482	20,585,633	2,912,598	56,569,927	2,663,752,338
Grand totals, 1929.	1,660,527,087	746,556,671	220,827,354	394,748,152	71,980,723	32,917,115	21,740,327	77,033,230	39,082,808	4,714,361	76,016,459	3,346,144,287
Grand totals, 1928.	1,604,941,926	738,626,482	204,110,500	353,268,734	68,264,722	31,919,089	23,073,267	75,567,367	24,386,323	5,234,832	77,512,224	3,206,905,466
Grand totals, 1927.	1,411,296,248	656,030,374	188,234,622	306,859,508	70,013,721	34,165,320	35,157,414	63,578,562	27,607,809	1,927,889	58,830,995	2,853,702,462
Grand totals, 1926.	1,306,615,563	705,409,476	248,706,996	332,691,280	90,419,605	29,368,123	30,079,384	45,565,603	40,696,415	.....	88,566,757	2,918,119,202
Grand totals, 1925.	1,016,931,573	761,424,202	209,036,148	305,659,173	69,757,874	41,116,018	30,653,478	56,350,628	46,715,296	.....	73,622,137	2,611,266,527
Grand totals, 1924.	1,036,019,000	610,201,000	267,899,000	322,715,000	66,069,000	38,354,000	25,243,000	75,895,000	56,896,000	.....	50,409,000	2,549,700,000
Grand totals, 1923.	1,139,149,000	573,615,000	209,017,000	332,217,000	71,538,000	61,790,000	31,183,000	53,491,000	44,887,000	.....	4,848,000	2,521,735,000
Grand totals, 1922.	846,171,000	461,265,000	149,247,000	238,891,000	38,904,000	43,630,000	34,405,000	43,774,000	39,759,000	.....	3,112,000	1,899,158,000

Logging Inspection.

Forest District.	Operations.				No. of Inspections.
	Timber-sales.	Hand-loggers' Licences.	Leases, Licences, Crown Grants, and Pre-emptions.	Totals.	
Fort George	103	...	102	205	487
Kamloops	229	...	470	699	1,447
Prince Rupert	297	36	112	445	1,465
Southern Interior	163	...	138	301	1,464
Vancouver	332	1	494	827	2,410
Totals, 1932	1,124	37	1,316	2,477	7,273
Totals, 1931	1,562	92	1,675	3,329	8,969
Totals, 1930	1,932	100	1,862	3,894	8,859
Totals, 1929	1,907	99	2,002	4,008	9,512
Totals, 1928	1,623	50	2,023	3,696	9,596
Totals, 1927	1,584	133	1,873	3,590	8,661
Totals, 1926	1,475	84	1,921	3,453	7,921

Trespasses.

Forest District.	No. of Cases.	Areas cut over (Acres).	Quantity cut.				No. of Resulting Seizures.	Amount.
			Feet B.M.	Lineal Feet.	Cords.	Ties.		
Fort George	18	37	291,921	1,000	132	2,059	..	$478 02
Kamloops	27	138	17,691	22,915	363	1,955	1	893 33
Prince Rupert	7	10	7,680	3,249	405	500	..	109 23
Southern Interior	22	120	59,016	7,800	166	933	11	379 28
Vancouver	21	63	391,588	520	1,074	3,818	2	1,630 98
Totals, 1932	95	368	767,896	35,484	2,140	9,265	14	$3,490 84
Totals, 1931	84	397	1,579,465	118,704	1,048	12,425	2	$5,633 68
Totals, 1930	96	1,000	969,351	165,729	1,457	9,612	4	$7,534 01
Totals, 1929	99	370	984,309	88,997	569	5,906	9	$5,431 07
Totals, 1928	105	878	5,867,052	98,279	4,713	16,599	12	$17,787 10
Totals, 1927	83	399	2,290,926	47,871	2,862	9,660	9	$9,097 53
Totals, 1926	84	541	1,972,843	144,357	433	10,233	6	$9,457 64

Pre-emption Inspections, 1932.

Pre-emption records examined by districts are:—

Fort George	585
Kamloops	795
Prince Rupert	218
Vancouver	397
Southern Interior	106
Total	2,101

Areas cruised for Timber-sales.

Forest District.	Number cruised.	Acreage.	Saw-timber (M.B.M.).	Poles and Piles (Lineal Feet).	Shingle-bolts and Cordwood (Cords).	Railway-ties (No.).	Car Stakes & Posts (No.).
Fort George	94	15,099	9,227	73,210	1,665	107,998	16,000
Kamloops	164	29,284	38,353	551,712	19,767	218,574	.....
Prince Rupert	169	24,819	45,327	484,345	1,951	98,376	5,000
Southern Interior	169	32,829	10,393	352,753	19,157	58,397	48,900
Vancouver	279	42,738	99,121	297,885	25,874	5,310	.....
Totals, 1932	875	144,769	202,421	1,759,905	68,414	488,655	69,900
Totals, 1931	818	145,214	297,825	2,629,054	62,680	664,413	142,400
Totals, 1930	943	197,065	526,261	10,345,822	26,431	731,640	620,100
Totals, 1929	1,061	214,874	500,420	13,043,603	17,629	1,305,110	185,740
Totals, 1928	1,111	233,889	754,095	9,623,599	43,266	2,056,604	447,630
Totals, 1927	844	225,191	974,626	7,092,844	21,027	1,747,441	35,600
Totals, 1926	819	142,515	369,717	4,236,881	15,248	1,299,826	20,200

Timber Sales awarded by Districts, 1932.

Forest District.	No. of Sales.	Acreage.	Saw-timber (Ft. B.M.).	Poles and Piles (Lineal Feet).	No. of Posts.	No. of Cords.	No. of Ties.	Estimated Revenue.
Kamloops	158	24,916	44,209,000	543,336	75,500	13,698	64,526	$60,177 13
Fort George	71	12,436	13,725,000	16,000	20,400	1,169	155,053	43,195 08
Nelson	171	27,482	7,255,000	70,660	65,700	11,545	78,504	30,210 86
Prince Rupert	183	27,142	37,763,000	792,495	.....	2,310	123,093	112,524 22
Vancouver	253	42,892	78,518,000	324,125	.....	25,432	2,500	204,420 81
Totals, 1932	836	134,868	181,470,000	1,746,616	161,600	54,154	423,676	$450,528 10
Totals, 1931	842	148,523	217,474,000	2,272,082	173,300	41,032	606,160	$624,596 27
Totals, 1930	866	162,043	199,485,000	9,963,164	398,150	19,997	494,202	$689,481 29
Totals, 1929	974	216,222.28	691,973,000	9,356,837	374,065	23,197	1,505,951	$1,908,100 70
Totals, 1928	1,033	194,929.37	525,250,760	6,537,002	880,000	48,728	1,996,457	$1,344,273 93
Totals, 1927	821	258,097.26	1,611,612,079	7,332,939	736,100	22,057	1,380,553	$2,666,678 32
Totals, 1926	687	118,815.23	295,486,743	5,497,707	207,190	13,455	1,044,999	$1,038,536 69

Average Sale Price by Species.

Saw-timber.	Figures for 1932.		Figures for 1931.		Figures for 1930.		Figures for 1929.	
	Board-feet.	Price per M.	Board-feet.	Price per M.	Board-feet.	Price Per M.	Board-feet.	Price Per M.
Douglas fir	44,105,000	$1 19	48,265,000	$1 39	55,490,000	$1 52	100,886,000	$1 65
Cedar	28,217,000	1 15	17,509,000	1 50	21,558,000	1 46	59,142,000	1 62
Spruce	31,151,000	1 63	63,409,000	1 24	35,082,000	1 48	306,370,000	1 25
Hemlock	41,552,000	76	41,083,000	84	37,972,000	91	70,737,000	82
Balsam	12,498,000	77	16,038,000	89	17,973,000	89	26,622,000	80
White pine	2,565,000	1 43	4,006,000	1 78	4,709,000	2 39	8,229,000	2 44
Western soft pine	9,807,000	1 25	11,457,000	1 47	7,132,000	1 74	8,949,000	1 47
Tamarack ("Larch")	2,081,000	84	5,538,000	1 68	5,501,000	1 05	5,547,000	1 01
Other species	9,494,000	94	7,839,000	1 00	5,075,000	68	7,277,000	97
Totals	181,470,000	$1 12	215,144,000	$1 22	190,492,000	$1 32	593,759,000	$1 29

Note.—2,330,000 board-feet pulp saw-timber not included in 1931 totals.
8,993,000 board-feet pulp saw-timber not included in 1930 totals.
98,214,000 board-feet pulp saw-timber not included in 1929 totals.

Timber cut from Timber-sales during 1932.

Forest District.	Feet B.M.	Lineal Feet.	Cords.	Ties.	Posts.
Kamloops	14,001,440	310,941	3,587.38	82,864	20,149
Fort George	11,610,945	144,462	797.50	27,882	10,628
Nelson	9,321,737	376,721	4,759.35	57,865	49,108
Prince Rupert	33,263,664	576,399	917.75	87,430	.....
Vancouver	97,469,143	175,432	20,584.64	2,243	.....
Totals, 1932	165,666,929	1,583,955	30,646.62	258,284	79,885
Totals, 1931	177,172,765	5,697,152	15,499.20	662,120	255,545
Totals, 1930	227,019,617	11,960,055	17,176.17	1,341,426	388,749
Totals, 1929	266,016,942	7,966,223	24,663.46	1,554,870	332,038
Totals, 1928	203,208,331	7,672,294	24,389.35	1,714,709	376,253
Totals, 1927	214,209,921	6,368,269	27,508.54	1,359,902	86,109
Totals, 1926	242,973,524	4,974,620	16,676.45	1,198,922	83,763

Saw and Shingle Mills of the Province.

Forest District.	Operating.				Shut Down.			
	Sawmills.		Shingle-mills.		Sawmills.		Shingle-mills.	
	No.	Estimated Daily Capacity, M.B.M.	No.	Estimated Daily Capacity, Shingles, M.	No.	Estimated Daily Capacity, M.B.M.	No.	Estimated Daily Capacity, Shingles, M.
Fort George	23	421	..	....	13	296	..	....
Kamloops	93	1,012	..	....	22	85	..	....
Prince Rupert	16	431	1	8	25	749	1	200
Southern Interior	52	1,000	4	120	16	860	..	....
Vancouver	109	4,777	40	6,685	63	2,631	12	1,270
Totals, 1932	293	7,641	45	6,813	139	4,621	13	1,470
Totals, 1931	334	10,167	46	7,470	158	4,109	19	1,871
Totals, 1930	301	11,020	43	7,164	141	3,204	17	1,695
Totals, 1929	354	11,896	53	7,881	95	2,200	15	1,726
Totals, 1928	314	11,919	56	8,280	120	2,459	15	2,710
Totals, 1927	375	12,176	65	12,042	110	2,549	22	2,740
Totals, 1926	391	12,962	87	15,614	102	1,675	6	460

Export of Logs. (In F.B.M.)

Species.	Grade No. 1.	Grade No. 2.	Grade No. 3.	Ungraded.	Totals.
Fir	4,873,435	56,291,039	22,528,645	.....	83,693,119
Cedar	13,594,916	28,139,364	17,950,459	.....	59,684,739
Spruce	103,669	2,485,500	1,780,092	.....	4,369,261
Hemlock	.....	.....	.....	11,546,349	11,546,349
Balsam	.....	.....	.....	2,754,667	2,754,667
White pine	.....	.....	.....	1,236,863	1,236,863
Cottonwood	.....	307,211	2,120,970	.....	2,428,181
Miscellaneous	.....	.....	.....	51,504	51,504
Totals, 1932	18,572,020	87,223,114	44,380,166	15,589,383	165,764,683
Totals, 1931	12,886,187	106,331,594	51,909,961	49,048,420	220,176,162
Totals, 1930	11,571,481	86,502,990	40,147,841	34,696,715	172,919,027
Totals, 1929	13,015,146	133,997,595	60,002,711	29,978,125	236,993,577
Totals, 1928	20,563,249	106,084,161	47,994,423	37,305,398	211,947,231
Totals, 1927	36,545,972	144,942,558	51,584,928	48,510,833	281,584,291
Totals, 1926	32,195,991	105,322,879	53,113,521	33,845,324	224,477,715

Shipments of Poles, Piling, Mine-props, Fence-posts, Railway-ties, etc.

Forest District.		Quantity exported.	Approximate Value, F.O.B.	Where marketed.	
				United States.	Canada.
Kamloops—					
Poles and piling	lineal ft.	802,675	$96,925	707,935	94,740
Mine-props	cords	32	352	.....	32
Fence-posts	cords	221	1,878	.....	221
Fort George—					
Poles and piling	lineal ft.	142,670	11,414	119,235	23,435
Mine-props	cords	16	128	.....	16
Fence-posts	cords	154	924	.....	154
Railway-ties	No.	46,687	21,968	.....	46,687
Prince Rupert—					
Poles and piling	lineal ft.	1,093,065	109,306	1,011,445	81,620
Railway-ties	No.	76,363	35,931	.....	76,363
Vancouver—					
Poles and piling	lineal ft.	2,678,741	214,299	2,486,924	191,817
Cordwood	cords	1,423	4,980	1,423	.....
Pulp-wood	cords	6,525	27,732	6,525	.....
Southern Interior—					
Poles and piling	lineal ft.	996,624	101,161	767,195	229,429
Mine-props	cords	3,649	29,192	.....	3,649
Fence-posts	cords	3,587	28,696	892	2,695
Railway-ties	No.	262,858	131,429	12,123	250,735
Total value, 1932		.....	$816,315	.....	.....
Total value, 1931		.....	$2,543,511	.....	.....

TIMBER-MARKING.

Timber-marks issued for the Years 1930, 1931, and 1932.

	1930.	1931.	1932.
Old Crown grants	90	94	303
Crown grants, 1887–1906	84	40	66
Crown grants, 1906–1914	97	86	62
Section 53A, "Forest Act"	212	188	163
Stumpage reservations	90	72	40
Pre-emptions under sections 28 and 29, "Land Act"	16	10	18
Dominion lands	26	.....	1
Permit berths	.....	38	7
Timber berths	13	21	26
Indian reserves	8	7	11
Timber-sales	866	842	836
Hand-loggers	11	6	14
Special marks	.....	.....	.....
Rights-of-way	1	.....	.....
Pulp licences	1	4	2
Totals	1,515	1,408	1,549
Transfers and changes of marks	242	220	183

Hand-logger Licences.

Number issued	64	38	81

Draughting Office, Forest Branch.

Month.	Number of Tracings made.							Blue-prints from Reference Maps.
	Timber-sales.	Timber-marks.	Examination Sketches.	Hand-logger Licences.	Timber-berths.	Miscellaneous.	Totals.	
January	39	60	18	2	9	10	138	5
February	43	52	37	2	17	10	161	14
March	25	108	22	4	10	13	182	6
April	24	102	31	12	3	3	175	7
May	19	95	51	4	20	13	202	6
June	18	86	24	23	15	12	178	7
July	13	61	29	3	9	7	122	11
August	13	34	21	...	16	3	87	3
September	18	38	18	1	4	14	93	18
October	12	49	31	....	8	8	108	4
November	32	59	36	....	6	19	152	4
December	40	51	28	....	3	15	137	1
Totals	296	795	346	51	120	127	1,735	86

FOREST FINANCE.

The forest revenue, as might be expected, declined with the curtailment of operations, the largest drop being in renewal fees on timber licences, which fell $334,000 below 1931 and $467,000 below 1930. This was the result of the relief legislation passed at the last session. The revenue therefrom will probably be paid before expiration of the time-limit, March 31st, 1934, and is therefore postponed rather than lost to the Province. So far as timber operations are concerned, a more satisfactory condition is shown by the amount of billings, these being $1,443,559, as against $1,672,862, a decline of $229,000, or 13 per cent.

Expenditure was drastically curtailed, the staff reduced, and every measure of economy taken. The extent of these economies is shown by the following: Revenue declined from 1929 43 per cent.; expenditures cut from 1929 66 per cent; and is the lowest expenditure since the organization of the Forest Branch, except for years when the staff, depleted by overseas service, could not undertake the work.

FOREST REVENUE.

	12 Months to Dec. 31st, 1932.	12 Months to Dec. 31st, 1931.	12 Months to Dec. 31st, 1930.	12 Months to Dec. 31st, 1929.	12 Months to Dec. 31st, 1928.	12 Months to Dec. 31st, 1927.
Timber-licence rentals	$478,458 93	$721,931 98	$854,560 87	$931,545 72	$1,015,705 19	$892,914 98
Timber-licence transfer fees	930 00	1,330 00	2,180 00	1,775 00	4,285 00	2,000 00
Timber-licence penalty fees	11,687 62	20,632 72	27,861 53	23,245 73	33,035 56	27,639 13
Hand-loggers' licence fees	2,000 00	950 00	1,575 00	1,300 00	1,400 00	1,275 00
Timber-lease rentals	70,025 38	78,202 93	72,117 52	79,873 89	79,396 72	95,236 93
Penalty fees and interest	848 88	944 24	607 44	901 43	520 70	88 93
Timber-sale rentals	12,009 29	11,675 17	35,035 94	30,162 64	40,649 01	32,494 57
Timber-sale stumpage	279,034 76	454,391 36	518,309 48	634,048 95	551,102 88	608,765 14
Timber-sale cruising	3,359 20	5,722 83	7,565 12	12,844 92	10,943 97	10,936 58
Timber-sale advertising	569 30	771 55	1,256 69	1,951 28	1,646 65	1,681 85
Timber royalty and tax	1,046,070 65	1,218,363 02	1,456,330 42	1,688,803 67	1,774,417 41	1,825,909 80
Scaling fees (not Scaling Fund)	374 42	911 07	1,204 07	1,407 92	1,147 84	1,778 02
Scaling expenses (not Scaling Fund)	20 30	24 94	150 01	191 74	103 74	156 75
Trespass penalties	2,535 16	3,686 89	5,825 68	9,161 16	12,058 89	6,481 83
Scalers' examination fees	40 00	175 00	105 00	320 00	275 00	235 00
Exchange	305 02	171 23	591 70	1,711 29	271 09	345 16
Seizure expenses	1,057 39	1,367 72	1,406 64	3,152 88	589 71	703 90
General miscellaneous	4,265 74	4,495 07	4,137 56	2,754 36	4,444 25	3,767 83
Timber-berth rentals and bonus	33,601 49	33,295 42	.....	.....	.....	.....
Interest on timber-berth rentals and bonus	597 54	688 97	.....	.....	.....	.....
Transfer fees on timber berths	270 00	63 84	.....	.....	.....	.....
Royalty interest	489 34	1,136 04	.....	.....	.....	.....
	$1,948,550 41	$2,560,931 99	$2,990,820 67	$3,425,152 58	$3,531,993 61	$3,602,411 40
Grazing fees	13,409 37	15,411 46	12,251 88	10,918 49	12,541 98	16,529 20
Taxation, Crown-grant timber lands	368,699 00	397,523 73	422,274 04	375,923 32	388,860 46	424,023 04
Total revenue from forest sources	$2,330,658 78	$2,973,867 18	$3,425,346 59	$3,811,994 39	$3,933,396 05	$4,042,963 64

REVENUE FROM LOGGING OPERATIONS, 1932.

(Amounts charged.)

Forest District.	Royalty and Tax.	Penalty.	Seizure Expenses.	Government Scale.		Scaling Fund.		Stumpage.	Total.
				Scaling Expenses.	Scaling Fees.	Scaling Expenses.	Scaling Fees.		
Vancouver	$863,145 07	$2,008 18	$266 28	$26 91	$170 17	$13,125 23	$66,481 22	$134,215 71	$1,079,438 77
Prince Rupert	66,692 02	257 88	26 20	11 25	9 36	243 21	5,114 99	62,924 25	135,279 16
Southern Int'r.	37,703 97	381 01	21 90	12 50	11 20	.....	.....	29,921 00	68,051 58
Fort George	20,127 81	368 43	47 35	6 00	35 00	.....	.....	37,835 43	58,420 02
Kamloops	58,920 05	967 53	7 00	.....	.....	.....	.....	42,475 43	102,370 01
Totals	$1,046,588 92	$3,983 03	$368 73	$56 66	$225 73	$13,368 44	$71,596 21	$307,371 82	$1,443,559 54
Totals, 1931	$1,140,282 78	$4,950 55	$994 87	$42 20	$1,092 07	$16,444 18	$82,078 03	$425,978 06	$1,672,862 74
Totals, 1930	$1,460,367 16	$6,799 66	$1,601 76	$140 57	$1,265 33	$21,644 46	$106,553 34	$638,023 79	$2,236,396 07
Totals, 1929	$1,851,535 62	$4,191 84	$1,555 56	$175 83	$1,215 22	$22,127 43	$118,481 18	$711,213 82	$2,710,496 50
Totals, 1928	$1,794,819 93	$20,867 17	$2,103 57	$156 58	$1,194 89	$20,277 64	$123,169 81	$635,292 44	$2,597,882 03
Totals, 1927	$1,767,710 60	$7,343 44	$789 47	$163 57	$2,032 43	$17,169 14	$114,979 79	$631,948 72	$2,542,137 16
Totals, 1926	$1,774,494 75	$1,589 83	$1,142 38	$98 34	$1,147 41	$17,279 88	$119,704 75	$613,365 09	$2,528,822 43

A comparison between revenue and appropriations for forest-work is illuminating.

Fiscal Year.	Forest Revenue.	Appropriation.	Appropriation in Per Cent. of Forest Revenue.	Total Provincial Revenue.	Appropriation in Per Cent. of Total Provincial Revenue.
1914–15	$2,342,679	$656,166	28	$7,974,496	8.2
1915–16	1,922,558	559,899	29	6,291,693	8.9
1916–17	2,005,940	544,844	27	6,906,783	8.0
1930–31	2,973,867	1,150,913	39	23,988,199	5.0
1932–33	2,330,658	544,399	23	24,637,766	2.2

As has been mentioned elsewhere in this report, the activities of the Forest Branch are largely non-revenue-producing. The forest is a crop and must be planted, tended, and protected if it is to be maintained. The experience in forest-management in all countries in the world shows that a minimum of 50 to 75 per cent. of the gross revenue should be returned for maintenance, many countries spending more than the gross in order to build up forest capital. On this basis and at the minimum figure of 50 per cent. there would have been allotted to forest-work in British Columbia for the current year double the funds received. Until more adequate financing is available, we can only consider that we are living off the depletion of capital assets, as far as the forests are concerned.

FOREST EXPENDITURES, FISCAL YEAR 1931–32.

Forest District.	Salaries.	Temporary Assistance.	Expenses.	Total.
Headquarters	$91,932 13	.....	$18,456 46	$110,388 59
Cariboo	7,539 95	$58 06	2,790 91	10,388 92
Kamloops	22,917 93	.....	8,358 60	31,276 53
Prince George	17,416 26	.....	4,758 21	22,174 47
Prince Rupert	21,879 63	30 00	16,843 55	38,753 18
Southern Interior	39,392 29	.....	12,451 68	51,843 97
Vancouver	50,759 04	.....	28,754 78	79,513 82
Totals	$251,837 23	$88 06	$92,414 19	$344,339 48

Lumber-trade extension (includes $17,000, Special Warrant No. 6, for trade extension in United Kingdom and Australia)	28,413 94
Reconnaissance, etc	22,641 94
Grazing range improvements	4,000 00
Grand total	$399,395 36

SCALING FUND.

Balance, April 1st, 1931 (deficit)	$26,883.04
Expenditure, fiscal year 1931–32	110,417.94
	$137,300.98
Charges, fiscal year 1931–32	91,267.44
Balance, March 31st, 1932 (deficit)	$46,033.54
Balance, April 1st, 1932 (deficit)	$46,033.54
Expenditure, 9 months, April–December, 1932	62,254.56
	$108,288.10
Charges, 9 months, April–December, 1932	68,098.16
Balance, December 31st, 1932 (deficit)	$40,189.94

FOREST RESERVE ACCOUNT.

Balance brought forward, April 1st, 1931	$34,724.27
Amount received from Treasury, April 1st, 1931, under subsection (2), section 30A	57,023.85
Moneys received under subsection (4), section 30A	537.52
	$92,285.64
Expenditure, fiscal year 1931–32	69,986.13
Balance (credit), March 31st, 1932	$22,299.51
Balance brought forward, April 1st, 1932	$22,299.51
Amount received from Treasury, April 1st, 1932, under subsection (2), section 30A	46,895.20
	$69,194.71
Expenditure, 9 months to December 31st, 1932	33,249.18
Balance (credit), December 31st, 1932	$35,945.53

FOREST PROTECTION FUND.

The following statement shows the standing of the Forest Protection Fund as of December 31st, 1932:—

Balance (deficit), April 1st, 1931		$651,962.11
Expenditure, fiscal year 1931–32	$787,366.79	
Less refunds	33,805.79	
		753,561.00
		$1,405,523.11
Collections, fiscal year 1931–32	$199,440.64	
Less refunds	4,990.36	
	$194,450.28	
Government contribution	480,000.00	
Government (special levy)	360,000.00	
		1,034,450.28
Balance (deficit), March 31st, 1932		$371,072.83
Balance (deficit), April 1st, 1932		$371,072.83
By collections, April–December, 1932 (arrears and refunds)		26,376.23
Balance (deficit), December 31st, 1932		$344,696.60

Forest Protection Fund Expenditure.

	Fiscal Years.							
	1924–25.	1925–26.	1926–27.	1927–28.	1928–29.	1929–30.	1930–31.	1931–32.
Patrols and fire prevention	$334,532	$377,427	$356,462	$358,835	$407,790 94	$373,416 71	$422,464 92	$331,667 78
Tools and equipment	25,418	33,976	30,663	30,409	31,258 82	45,401 56	41,735 46	66,785 70
Fires	258,034	650,138	514,845	84,600	75,221 43	494,645 42	466,133 17	372,002 13
Improvements and maintenance	5,690	11,890	14,172	22,482	33,428 67	22,570 79	40,152 48	16,911 18
Totals	$633,674	$1,073,431	$916,142	$496,326	$547,699 86	$936,034 48	$970,486 03	$787,366 79

EXPENDITURE BY DISTRICTS FOR TWELVE MONTHS ENDED MARCH 31ST, 1932.

Forest District.	Patrols and Fire-prevention	Tools and Equipment.	Fires.	Improvements and Maintenance.	Total.
Cariboo	$16,767 75	$2,435 06	$9,714 05	$1,000 58	$29,917 44
Kamloops	51,838 85	17,536 86	36,760 26	4,516 65	110,652 62
Prince George	27,432 48	2,428 38	6,084 66	2,238 90	38,184 42
Prince Rupert	21,911 83	4,724 31	3,785 62	399 10	30,820 86
Southern Interior	92,646 88	15,612 28	285,770 93	5,947 81	399,977 90
Vancouver	92,457 84	15,873 45	29,886 61	2,808 41	141,026 04
Victoria	28,612 15	8,175 36	.....	.....	36,787 51
Totals	$331,667 78	$66,785 70	$372,002 13	$16,911 18	$787,366 79

FOREST PROTECTION.

The record of forest-fire control in the Province shows that as early as 1874 the infant colony was conscious of the damage being wrought by uncontrolled fires, and in that year, in an attempt to alleviate the destruction, passed the "Bush Fire Act." This Act was amended from time to time, especially in 1877 and 1878. As the revenues of the day were limited, no adequate appropriations were made for enforcement, and in 1906 we hear the Hon. R. F. Green, Commissioner of Lands and Works, stating:—

"The enforcement of the law is difficult in an area as vast as British Columbia. . . . Many fires are caused by lightning. . . . The rigid enforcement of the 'Bush Fire Act' is impossible without the earnest co-operation of the people themselves. The vigilance of an army of Forest Rangers would prove inadequate to prevent the occurrence of fire without the sympathy and assistance of the community."

Following the licensing of large areas of forest land and the increased revenue therefrom, definite appropriations were made for fire-control, and in 1909 $219,493 was spent on this work. The Royal Commission on Timber, in its findings published in 1910, after commending the Government on the increased appropriations, points out:—

"Protection from fire is the supreme need of our forests." That the final stage of protection is reached "when both Government and people realize that the protection of merchantable timber is a part of the work that must be done; that the young growth on cut-over lands needs equal care, since upon it depends the future of the lumbering industry and much of the future commerce of the whole country."

I have given these quotations anew because they are as true to-day as they were a quarter of a century ago.

Since 1912, with the organization of the Forest Service, the records of forest-fire control have been set out in detail in the annual reports. This record has been one of increasing effort to combat an increasing hazard, due to the opening-up of the Province, increased industrial development, tourist travel, and the greater number of people who now flock to forest areas for business or recreation, each of which is a potential hazard; also to the increasing areas of young growth on cut-over and burned-over lands, which, in their early stages at least, are more difficult to protect than mature stands; and to a succession of dry years which have prevailed during the past decade.

The people and the field members of the Service are to be congratulated on the fact that the record of achievement shows that losses and expenditures in British Columbia compare favourably with any similar organization, whether governmental or privately controlled, in neighbouring regions.

In the past seventy years since lumber operations began the timber industry has created more than one and one-half billion dollars in wealth and has returned to the Treasury some 86 million dollars in revenue. Only 20 per cent. of the available stand has been commercialized. The balance, together with the extensive areas of young growth, is one of the Province's most valuable assets, an asset on which the Dominion Bureau of Natural Resources has placed a value of $494,000,000. In addition, there is the added value in crops and buildings of isolated settlers, mining camps, country schools, highway bridges, etc.

At what rate should we pay for a reasonable degree of protection? In cities such as Vancouver and Victoria the fire departments cost from 33/100 to 50/100 of 1 per cent. of the assessed values. Ontario has been spending 33/100 of 1 per cent. of its timber value and Quebec 18/100. In British Columbia, over the past decade, our expenditures have been 16/100 of 1 per cent. From these figures it will be readily seen that funds in British Columbia have been husbanded and economically spent.

In the spring of 1932, due to the need of economy, the Forest Protection Fund was suspended for one year and reliance placed on the energies of the permanent staff of the Branch, with authority to call, to a limited extent, on unemployment relief for fire-fighting. The patrol staff, being cut by 260 men, left the area covered by one man at about 1,000,000 acres, which it is impossible to cover and catch fires in the incipient stage. Fortunately the weather was very favourable. A heavy snowfall was followed by a summer with well-distributed rains and high humidity. (Thus at Vancouver from June 19th to the end of the season there were only sixteen hours out of 2,132 when humidity registered below 40 per cent., which is considered the hazard-point.) In general, the year was the most favourable encountered since the organization of the Branch. Moreover, a curtailment occurred in operations and travel factors, which increased hazard in previous years. The effect of these conditions is reflected in the table given herewith on number of fires, losses, etc.

FIRE OCCURRENCES BY MONTHS, 1932.

Forest District.	March.	April.	May.	June.	July.	August.	September.	October.	Total.
Kamloops	....	1	41	102	95	112	29	2	382
Fort George	....	2	37	56	24	25	1	4	149
Prince Rupert	...	11	33	19	6	9	3	....	81
Southern Interior	....	4	23	30	136	171	66	8	438
Vancouver	....	4	31	72	26	44	28	11	216
Totals	....	22	165	279	287	361	127	25	1,266
Per cent	....	1.73	13.04	22.04	22.67	28.52	10.03	1.97	100.00

NUMBER AND CAUSES OF FIRES IN PROVINCE, 1932.

Forest District.	Lightning.	Campers.	Railways Operating.	Railways under Construction.	Smokers.	Brush-burning not Railway-clearing.	Road, Power and Telephone-line Construction.	Industrial Operations.	Incendiarism.	Miscellaneous (Known Causes).	Unknown Causes.	Total.	Per Cent. of Total Fires in Province.
Kamloops	92	60	47	....	54	24	4	....	76	23	2	382	30.17
Fort George	38	37	1	....	16	24	4	1	17	5	6	149	11.77
Prince Rupert	2	23	....	....	9	26	3	....	16	2	....	81	6.40
Southern Interior	189	53	87	....	71	11	2	....	6	19	....	438	34.60
Vancouver	15	57	21	....	47	23	5	16	12	15	5	216	17.06
Totals	336	230	156	....	197	108	18	17	127	64	13	1,266	100.00
Per cent	26.54	18.17	12.32	....	15.56	8.53	1.42	1.34	10.03	5.06	1.03	100.00	....

FIRES, 1932, CLASSIFIED BY PLACE OF ORIGIN AND COST OF FIRE-FIGHTING.

Forest District.	Total Fires.	Originated on Vacant Crown Land and Lands paying F.P. Tax.	Originated on Lands not paying F.P. Tax.	Extinguished without Cost.			Cost Money to Extinguish.								Total Forest Service Costs in fighting Fire.		Average Cost per Fire.
				No.	Per Cent. of Total Fires in District.	Per Cent. of Total Fires in Province.	No.	Per Cent. of Total Fires in District.	Per Cent. of Total Fires in Province.	Cost less than $100.	Cost $100 to $1,000.	Cost $1,000 to $5,000.	Cost $5,000 to $10,000.	Cost over $10,000.	Dollars.	Per Cent. of Total spent in fighting Fires in Province.	Dollars.
Kamloops	382	175	207	336	87.96	26.54	46	12.04	3.64	41	5	....	....	....	1,835.71	18.29	4.78
Fort George	149	88	61	125	83.89	9.88	24	16.11	1.89	18	6	....	....	....	2,825.45	28.29	18.96
Prince Rupert	81	28	53	68	83.95	5.37	13	16.05	1.03	9	4	....	....	....	899.27	9.00	11.10
Southern Interior	438	331	107	352	80.36	27.80	86	19.64	6.79	80	5	1	....	....	4,005.81	40.08	9.13
Vancouver	216	46	170	196	90.74	15.48	20	9.26	1.58	19	1	....	....	....	440.95	4.34	2.00
Totals	1,266	668	598	1,077	....	85.07	189	....	14.93	167	21	1	....	....	10,007.19	100.00	7.88
Per cent	100.00	52.77	47.23	85.07	....	....	14.93	....	....	13.19	1.66	0.08	....	....	.....	....	.....
Totals, 1931	2,518	1,440	1,078	1,016	....	40.35	1,502	....	59.65	1,105	324	58	6	9	366,981.66	100.00	145.74
Per cent	100.00	57.19	42.81	40.35	....	....	59.65	....	....	43.88	12.87	2.31	0.24	0.35	.....	....	.....
Totals, 1930	2,271	1,493	778	883	....	38.88	1,388	....	61.12	909	369	93	13	4	464,455.82	100.00	204.51
Per cent	100.00	65.74	34.26	38.88	....	...	61.12	....	....	40.03	16.25	4.09	0.57	0.18	.....	....	.....

Cost to other parties (298 cost fires), $34,964.16; cost to Forest Branch (189 cost fires), $10,007.19.

Fires, 1932, classified by Size and Damage.

Forest District.	Total Fires.		Under ¼ Acre.			¼ Acre to 10 Acres.			Over 10 Acres in Extent.			Damage.		
	No.	Per Cent. of Total Fires in Province.	No.	Per Cent. of Total Fires in District.	Per Cent. of Total Fires in this Class.	No.	Per Cent. of Total Fires in District.	Per Cent. of Total Fires in this Class.	No.	Per Cent. of Total Fires in District.	Per Cent. of Total Fires in this Class.	Under $100.	Between $100 and $1,000.	Over $1,000.
Kamloops	382	30.17	115	30.10	22.73	146	38.22	33.48	121	31.68	37.34	337	35	10
Fort George	149	11.77	54	36.24	10.67	27	18.12	6.19	68	45.64	20.99	113	18	18
Prince Rupert	81	6.40	24	29.63	4.74	19	23.46	4.36	38	46.91	11.73	64	9	8
Southern Interior	438	34.60	220	50.23	43.48	152	34.70	34.86	66	15.07	20.37	403	24	11
Vancouver	216	17.06	93	43.06	18.38	92	42.59	21.11	31	14.35	9.57	206	5	5
Totals	1,266	100.00	506	....	100.00	436	....	100.00	324	....	100.00	1,123	91	52
Per cent	100.0	....	39.97	....	....	34.44	....	....	25.59	....	....	88.70	7.19	4.11
Totals, 1931	2,518	100.00	903	....	100.00	929	....	100.00	686	....	100.00	2,203	221	94
Per cent	100.0	....	35.86	....	...	36.90	....	....	27.24	....	....	87.50	8.77	3.73
Totals, 1930	2,271	100.00	973	....	100.00	724	....	100.00	574	....	100.00	20.14	186	71
Per cent	100.0	....	42.85	....	....	31.88	....	....	25.27	....	....	88.68	8.19	3.13

Damage to Property other than Forests, 1932.

Forest District.	Forest Products in Process of Manufacture.	Buildings.	Railway and Logging Equipment.	Miscellaneous.	Total.	Per Cent. of Total.
Kamloops	$6,586	$2,085	.....	$2,121	$10,792	18.92
Fort George	250	4,945	.....	1,500	6,695	11.74
Prince Rupert	359	2,085	.....	609	3,053	5.35
Southern Interior	1,706	460	.....	1,186	3,352	5.88
Vancouver	24,166	60	$8,279	633	33,138	58.11
Totals	$33,067	$9,635	$8,279	$6,049	$57,030	100.00

Damage caused by Forest Fires, 1932.

Forest District.	Merchantable Timber destroyed or damaged.				Valuable Reproduction.		Cut-over Land, Unmerchantable Timber, Old Burn, not restocking.		Grazing Range.		Area of Slash burned.	Grand Totals.					
	Area.	Quantity killed.	Quantity salvable.	Net Stumpage Loss.	Area.	Estimated Present Damage.	Area.	Estimated Damage.	Area.	Damage.	Area burned.	Area.		Quantity.		Damage.	
	Acres.	M. Ft. B.M.	M. Ft. B.M.	$	Acres.	$	Acres.	$	Acres.	$	Acres.	Acres.	Per Cent.	M. Feet B.M.	Per Cent.	$	Per Cent.
Kamloops	3,818	5,901	4,138	2,748	4,047	6,770	66,379	17,681	13,377	811	1,062	88,683	21.05	5,901	2.19	28,010	5.44
Fort George	17,462	136,710	2,060	134,567	54,669	141,804	113,657	19,634	240	12	3,455	189,483	44.97	136,710	50.76	296,017	57.52
Prince Rupert	7,036	17,816	2,852	24,836	5,310	18,003	44,904	13,728	5,794	289	3,124	66,168	15.70	17,816	6.61	56,856	11.05
Southern Interior	12,913	105,309	4,942	67,897	10,447	30,977	23,626	3,038	177	16	3,461	50,624	12.02	105,309	39.10	101,928	19.80
Vancouver	159	3,581	1,065	3,266	6,256	27,495	4,692	1,091	9	1	15,223	26,339	6.26	3,581	1.34	31,853	6.19
Totals	41,388	269,317	15,057	233,314	80,729	225,049	253,258	55,172	19,597	1,129	26,325	421,297	100.00	269,317	100.00	514,664	100.00
Per cent	9.82	100.00	5.59	45.34	19.16	43.72	60.12	10.73	4.65	0.21	6.25	100.00	.....	100.00	.....	100.00	.....
Totals, 1931	178,395	210,173	41,808	624,020	238,652	730,207	431,693	117,103	89,243	5,851	56,996	994,979	100.00	210,173	100.00	1,477,181	100.00
Per cent	17.93	100.00	19.89	42.25	23.98	49.44	43.39	7.92	8.97	0.39	5.73	100.00	.....	100.00	.....	100.00	.....
Totals, 1930	112,310	390,978	25,216	506,380	147,641	763,438	289,100	137,393	37,715	972	15,909	602,675	100.00	390,978	100.00	1,408,183	100.00
Per cent	18.64	100.00	6.44	35.96	24.50	54.23	47.96	9.75	6.26	0.06	2.64	100.00	.....	100.00	.....	100.00	.....

Causes, Cost, and Damage, 1932.

Causes.	Number.	Per Cent.	Cost.	Per Cent.	Damage.	Per Cent.
Lightning	336	26.54	$3,178	31.82	$96,777	16.88
Campers	230	18.17	1,072	10.73	239,516	41.90
Railways operating	156	12.32	607	6.07	9,260	1.62
Smokers	197	15.56	799	8.00	32,723	5.72
Brush-burning (not railway-clearing)	108	8.53	1,333	13.35	91,494	16.06
Road, power, telephone, and telegraph	18	1.42	65	0.66	182	0.03
Industrial operations, logging, etc.	17	1.34	.....	.....	58,600	10.25
Incendiarism	127	10.03	2,663	26.66	36,770	6.43
Miscellaneous (known causes)	64	5.06	270	2.71	2,507	0.44
Unknown causes	13	1.03	.....	.....	3,868	0.67
Totals	1,266	100.00	$9,987	100.00	$571,697	100.00

Number and Causes of Forest Fires for Last Ten Years.

Causes.	1932.	1931.	1930.	1929.	1928.	1927.	1926.	1925.	1924.	1923.
Lightning	336	475	892	638	322	512	557	632	307	274
Campers	230	470	344	358	274	182	351	426	382	262
Railways operating	156	295	149	267	282	185	376	337	328	199
Railways under construction	....	....	....	9	....	....	....	....	....	....
Smokers	197	435	294	387	294	163	238	286	302	180
Brush-burning (not railway-clearing)	108	243	171	167	149	78	157	202	243	154
Road and power- and telephone-line construction	18	44	29	22	13	7	14	14	19	12
Industrial operations	17	57	39	65	80	50	104	137	134	170
Incendiarism	127	355	262	139	103	36	68	103	115	35
Miscellaneous (known causes)	64	96	68	100	84	52	126	150	107	71
Unknown causes	13	48	23	36	41	19	156	234	237	173
Totals	1,266	2,518	2,271	2,188	1,642	1,284	2,147	2,521	2,174	1,530

Comparison of Damage caused by Forest Fires in the Last Ten Years.

	1932.	1931.	1930.	1929.	1928.	1927.	1926.	1925.	1924.	1923.
Total number of fires	1,266	2,518	2,271	2,188	1,642	1,284	2,147	2,521	2,174	1,530
Area burned (acres)	421,297	994,979	602,675	909,620	106,977	101,944	659,871	1,023,789	402,214	157,601
Standing timber destroyed or damaged (M. ft. B.M.)	269,317	210,173	390,978	272,024	24,069	86,176	398,694	1,024,508	207,651	87,371
Amount salvable (M. ft. B.M.)	15,057	41,808	25,216	107,049	9,060	44,834	109,385	350,770	102,832	37,891
Damage to forests	$514,664	$1,477,181	$1,408,183	$941,738	$103,001	$141,102	$930,373	$2,121,672	$665,078	$74,238
Damage to other forms of property	$57,030	$326,305	$337,909	$226,919	$95,534	$74,606	$749,891	$625,518	$540,291	$617,649
Total damage	$571,694	$1,803,486	$1,746,092	$1,168,657	$198,535	$215,708	$1,680,264	$2,747,190	$1,205,369	$691,887

Prosecutions for Fire Trespass, 1932.

Forest District.	Information laid.	Contravention of Section 96 of "Forest Act."	Contravention of Section 112 of "Forest Act."	Contravention of Section 114 of "Forest Act."	Burning without a Permit.	Failure to report Fire.	Incendiarism and Section 415-B of Criminal Code of Canada.	Contravention of Section 117 of "Forest Act."	Refusing to fight Fire.	Contravention of Section 98 of "Forest Act."	Fines.		Served Sentence in Gaol.	Suspended Sentence.	Cases dismissed.	Cases pending.	Cases withdrawn.
											No.	Amount.					
Kamloops	4	1	..	..	1	..	..	..	2	..	4	$100 00	..	..	..	..	..
Fort George	5	1	1	..	3	..	..	..	..	..	2	50 00	..	..	3	..	..
Prince Rupert	5	..	..	1	2	..	2	..	..	..	4	100 00	..	..	1	..	..
Southern Interior	1	..	..	..	1	..	..	..	..	..	1	25 00	..	..	..	..	..
Vancouver	1	1	..	..	..	..	..	..	..	..	1	25 00	..	..	..	..	..
Totals	16	3	1	1	7	..	2	..	2	..	12	$300 00	..	..	4	..	..
Totals, 1931	39	..	10	2	12	3	6	1	2	3	18	$475 00	13	4	4	..	..

Burning Permits, 1932.

Forest District.	Clearing Agricultural Land.				Clearing Logging-slash.				Clearing Railway Right-of-way.				Clearing Public Roads.				Grand Totals.			
	Permits issued.	Area burned over.	Fires escaped Control.	Fires set without Permit.	Permits issued.	Area burned over.	Fires escaped Control.	Fires set without Permit.	Permits issued.	Area burned over.	Fires escaped Control.	Fires set without Permit.	Permits issued.	Area burned over.	Fires escaped Control.	Fires set without Permit.	Permits issued.	Area burned over.	Fires escaped Control.	Fires set without Permit.
	No.	Acres.	No.	No.	No.	Acres.	No.	No.	No.	Acres.	No.	No.	No.	Acres.	No.	No.	No.	Acres.	No.	No.
Kamloops	1,599	5,277	14	10	8	339	....	....	2	50	....	....	49	657	3	1	1,658	6,323	17	11
Fort George	2,354	5,061	11	5	13	62	....	....	3	....	....	....	67	113	4	....	2,437	5,236	15	5
Prince Rupert	1,024	3,470	9	2	22	30	....	....	7	40	....	....	19	88	....	....	1,072	3,628	9	2
Southern Interior	1,824	2,889	8	1	13	142	....	....	65	58	....	....	13	78	1	....	1,915	3,167	9	1
Vancouver	4,446	6,177	11	2	27	134,01	2	....	13	1	..	....	75	1,097	5	....	4,561	20,676	18	2
Totals	11,247	22,874	53	20	83	13,974	2	....	90	149	....	....	223	2,033	13	1	11,643	39,030	68	21
Per cent	96.59	58.61	77.93	95.24	0.72	35.80	2.95	....	0.77	0.38	....	....	1.92	5.21	19.12	4.76	100.00	100.00	100.0	100.0
Totals, 1931	9,906	26,503	69	48	1,404	6,315	1	1	77	337	15	1	210	1,592	16	1	11,597	34,747	101	51
Per cent	85.42	76.28	68.32	94.12	12.11	18.17	0.99	1.96	0.66	0.97	14.85	1.96	1.81	4.58	15.84	1.96	100.00	100.00	100.0	100.0

EQUIPMENT, IMPROVEMENTS, AND MAINTENANCE.

Under the conditions no programme of extending trails, telephones, and lookouts could be undertaken and only the most vital maintenance-work could be done. This also particularly relates to maintenance of cars, boats, and fire-fighting tools.

Kamloops.

Equipment—	
Two fire-fighting pumps	$1,300.00
Fire-fighting hose and equipment	376.00
Tools and equipment	24.00
	$1,700.00

Fort George.

Equipment—	
One fire-fighting pump	$650.00
Fire-fighting hose and equipment	188.00
	$838.00
Maintenance—	
Miscellaneous	$189.00

Prince Rupert.

Equipment—	
One fire-fighting pump	$650.00
Fire-fighting hose and equipment	193.00
	$843.00
Maintenance—	
Miscellaneous	$36.00

Southern Interior.

Equipment—	
Two fire-fighting pumps	$1,300.00
Fire-fighting hose and equipment	376.00
Tools and equipment	127.00
	$1,803.00
Maintenance—	
Miscellaneous	$13.00

Vancouver.

Equipment—	
Five fire-fighting pumps	$3,250.00
Fire-fighting hose and equipment	1,088.00
	$4,338.00

GRAZING.

A departmental reorganization during the past year to effect economy in operation has resulted in placing all matters of grazing directly under the Chief Forester, and the centralization of most of the work at Kamloops under the District Forester. This, combined with certain changes in the Grazing Regulations, has improved, it is felt, the service rendered to the stockmen by the Department.

The live-stock industry has passed through its pioneer stage in this Province, and is now encountering changed conditions which make necessary greater attention to the fine points of stock-raising, range-management, and marketing. No longer may live stock be turned out year after year on the open range and left to rustle for itself. The results of this lack of attention have already become apparent to the progressive members of the industry, in the form of impoverished ranges, unsatisfactory calf-crops, and lack of finished product for the market.

To secure for the industry and the Province the maximum benefit from the use of Crown ranges, a knowledge of the extent and condition of the various ranges is required, and the Forest Service has during the past year for this purpose made reconnaissances of fourteen ranges.

This work, continued and combined with detailed observations of the effects of various systems of grazing on range capacity, condition, and plant succession, will lead to improved range control and management.

The importance of close co-operation between the stockmen and the Department is very apparent, and every effort is being exerted to encourage the formation and incorporation of live-stock associations. To assist in the management and control of local range units, departmental officials held numerous meetings with these associations during the year.

Range and Market Conditions.

In general, the ranges were in better condition for grazing than for several years past. The heavy snowfall of the preceding winter, followed by well-distributed rainfall during the summer, resulted in good forage-growth and prevented early maturing of the grasses and weeds. Consequently, live stock entered the winter in good condition. Improvement in the range watering-places for live stock is also noticeable, although a number of years of heavy precipitation will likely be needed before the water in many lakes and ponds will be brought back to normal level.

The stockman, in common with every one else, is feeling the effects of the present depression, and prices for his products have been unsatisfactory. Starting with the low price of 4 cents per pound in June, the price for top steers slipped to 3 cents and lower by the end of the season. Lamb prices were much lower than in 1931, running from 4 to 5½ cents per pound. The market for wool has likewise been unsatisfactory.

Live Stock on Crown Ranges.

The number of live stock grazing under permit on Crown ranges in 1932 as compared with 1931 was as follows:—

	Cattle and Horses.	Sheep.
1931	48,025	38,409
1932	56,674	41,150

Range Improvement and Wild Horses.

Expenditures from the Range Improvement Fund during the present fiscal year to the end of December, 1932, amounted to approximately $2,000. Of this sum, $500 was spent on the disposal of wild horses, $1,200 on improvements contracted for during previous years, and $300 on new improvements, which included work on three stock-trails, one water-development, one drift-fence, two mud-holes, and one disinfecting-trough.

Wild horses have in the past caused severe damage to Crown ranges in several parts of the Province. Clearing the ranges of these useless animals is still continuing, several live-stock associations being active in this work this winter. During the year 1932, 347 horses were destroyed or sold. Every effort is being made to avoid interference with the live stock of local residents.

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