

1939.
NEW ZEALAND.

FIRE BRIGADES OF THE DOMINION

(REPORT ON THE) FOR THE YEAR ENDED 31ST MARCH, 1939, BY THE
INSPECTOR OF FIRE BRIGADES.

Presented to both Houses of the General Assembly by Command of His Excellency.

THE INSPECTOR OF FIRE BRIGADES to the HON. THE MINISTER OF INTERNAL AFFAIRS.
Office of the Inspector of Fire Brigades,
Wellington, 11th September, 1939.

SIR,—
I have the honour to submit the thirty-first annual report for the year ended 31st March, 1939, on the working of the Fire Brigades Act, 1926.

FIRE DISTRICTS.

No new fire districts were created during the year, and the number in operation at the end of the year was fifty-five.

DOMINION FIRE WASTE.

The loss by fire in New Zealand during 1938, estimated on the same basis as in previous years—i.e., the amount paid out by insurance companies plus 12½ per cent. estimated uninsured loss—was £670,675, being an increase of £149,781 on the figures for the previous year. This increase is almost entirely accounted for by the large number and exceptional severity of serious fires occurring in fire districts shown in detail below. It would appear that the Dominion is experiencing a cycle of high-loss fires, since it will be noted that the sequence of these fires extends into 1939, the actual losses being £156,488 for the last nine months of 1938 and £145,662 for the first three months of 1939. For the purposes of comparative record the following table shows the fire losses in New Zealand, Great Britain, Canada, and the United States of America. An additional column has also been included to show the corresponding losses in fire districts which are recorded over a different annual period.

| — | Fire Loss in New Zealand. | | Fire Loss per Head. | | | |
|-------------------|---------------------------------|----------------------------|---------------------|----------------|---------|---------------------------|
| | Fire Districts, March, 1938–39. | Whole Dominion, Year 1938. | New Zealand. | Great Britain. | Canada. | United States of America. |
| | £ | £ | s. d. | s. d. | s. d. | s. d. |
| Average (1927–31) | 508,406 | 1,332,032 | 18 1 | 5 0 | 17 5 | 16 0 |
| 1932 | 201,736 | 867,714 | 11 5 | 3 9 | 16 8 | 13 2 |
| 1933 | 245,195 | 644,781 | 8 4 | 4 7 | 12 11 | 8 10 |
| 1934 | 173,172 | 566,112 | 7 3 | 4 1 | 10 0 | 8 7 |
| 1935 | 181,296 | 607,410 | 7 9 | 4 0 | 8 9 | 8 1 |
| 1936 | 199,592 | 524,029 | 6 8 | 4 5 | 8 0 | 8 5 |
| 1937 | 170,167 | 520,894 | 6 6 | 4 9 | 8 4 | 8 1 |
| 1938 | 441,489 | 670,675 | 8 3 | 4 3 | 9 3 | 8 3 |

In view of the unusual number of large fires, no special significance can be attached to the increase in the fire loss for 1938. It is probable that, excluding this factor, the increase in the loss is proportionately less than the increase in replacement values of both buildings and contents. On the other hand, the unusually high loss in urban districts due to large fires, and the circumstances attending these fires, makes it desirable to call public attention firstly to the very unsatisfactory fire-exposure conditions existing in most blocks in the high-fire-risk areas in the cities, and secondly to the desirability of protecting high-value buildings by sprinkler or automatic alarm systems.

FIRE LOSS IN FIRE DISTRICTS.

It will be seen from tables II and IV attached that the loss in fire districts during the year ending 31st March, 1939, was £441,489 and in areas protected by Fire Boards £9,453, as compared with £170,167 and £24,011 respectively for the previous year. As indicated above, this increase is accounted for by the exceptional number and severity of major fires in the cities. Details of fires in fire districts with loss exceeding £5,000 are as follows :—

Fires with Loss exceeding £5,000, Year ending 31st March, 1939.

| Locality. | Day and Date. | Time. | Occupation of Premises in which Fire occurred. | Cause of Fire. | Loss. |
|----------------------|-----------------------|------------|--|---|----------|
| | | | | | £ |
| Auckland .. | Sunday (15/5/38) .. | 10.26 p.m. | Motor-body builders | Unknown .. | 30,898 |
| Auckland .. | Friday (8/7/38) .. | 8.40 p.m. | Joinery-factory .. | Unknown .. | 20,885 |
| Auckland .. | Thursday (2/3/39) .. | 1.50 a.m. | Theatre and shops .. | Unknown .. | 5,300 |
| Auckland .. | Sunday (5/3/39) .. | 7.33 p.m. | Timber-mill .. | Unknown .. | 8,929 |
| Dunedin .. | Friday (28/10/38) .. | 2.32 a.m. | Confectionery-factory | Unknown .. | 12,296 |
| Christchurch .. | Saturday (14/5/38) .. | 9.11 p.m. | Shop and factory .. | Unknown .. | 14,030 |
| Christchurch .. | Monday (23/5/38) .. | 2.47 a.m. | Departmental store .. | Unknown .. | 47,283 |
| New Plymouth .. | Thursday (7/7/38) .. | 7.10 p.m. | Departmental store .. | Unknown .. | 11,304 |
| Wellington .. | Wednesday (22/6/38) | 7.20 p.m. | Hosiery-mills .. | Unknown .. | 10,600 |
| Wellington .. | Thursday (10/11/38) | 12.30 a.m. | Confectionery-factory | Unknown .. | 9,192 |
| Wellington .. | Thursday (2/2/39) .. | 2.44 a.m. | Government offices (wooden building in course of erection) | Unknown .. | 46,468 |
| Wellington .. | Tuesday (28/3/39) .. | 6.59 p.m. | General warehouse, offices, &c. | Light thrown into packing-material in lift-well | 77,826 |
| Palmerston North* .. | Friday (17/2/39) .. | 9.24 p.m. | Aero-club "hangar" and club-rooms | Unknown .. | 7,139 |
| | | | | | £302,150 |

* Outside fire district, but within area protected by the Fire Board.

LOSS OF LIFE IN FIRES.

It is to be regretted that during the year under review an unusually large number of fatalities again occurred at or in connection with fires, there being twenty-one deaths, as compared with twenty-two last year. Of these deaths, ten were caused through persons being trapped in burning buildings and five were due to the victims' clothes catching fire. In three of the latter cases the ignition was caused by ordinary electric radiators. Of the remainder, one death was due to the use of petrol for dry-cleaning, one to the explosion of a petrol lamp, one to a child lighting a fire with kerosene, and one to a person being trapped in a scrub fire. Another death was caused by the ignition of clothing impregnated with potassium chlorate; and in one case a fireman was electrocuted while engaged in operations at a fire.

FIRE-BRIGADE ADMINISTRATION.

The proposals for fire-brigade administration set out in my last annual report were adopted by the Government as a basis for discussion with the local authorities and other interests concerned. During the year under review a number of conferences have taken place with representatives of the Fire Underwriters' Association, the Municipal Association, and the United Fire Brigades' Association. As a result of these conferences the general principle involved has been approved, subject to certain modifications which were adopted as a result of representations made by interested parties. It had been intended to prepare legislation for submission to Parliament during the current session, but owing to the existing war emergency this will have to be deferred.

CAUSES OF FIRE.

The causes of fire in fire districts are set out in Table I attached. No unusual information is disclosed by the figures for the current year, and, as in previous years, the great bulk of fire loss is due to fires which are returned as of "unknown" origin. It has been explained in previous reports that this is due to the fact that serious fires in most cases destroy all evidence of the cause of the fire. It will be noted, for instance, that in the table of serious fires given in this report in all but one instance the cause is not known, and even in this case the immediate cause, whether a match or cigarette, was not actually determined, but as persons were in the building at the time of the fire it was quite evident that the fire was due to the ignition of packing-material either by a match or cigarette-butt. There is little reason to doubt that practically all of these serious fires are due to one or other of the causes enumerated in Table I.

INSPECTION.

The inspection work was considerably reduced owing to my prolonged absence due to ill-health. Only about one-third of the brigades were inspected during the year, but close touch was kept with the activities of all districts through newspaper-cuttings, and, where necessary, several visits were made to individual fire districts. The conditions found were in every case satisfactory; and it is pleasing to report that the investigations made showed that in no case were the high-loss fires referred to previously in this report due to any default by the brigade. As a matter of fact, in most instances one could have nothing but the highest praise for the effectiveness of the work carried out under difficult conditions.

A number of reports were made during the year with regard to the fire protection of Government buildings and to the Local Government Loans Board on loan proposals for fire protection, water-supply and water-reticulation services.

Attached are statistical tables covering both the year under review and also averages taken over a period of years.

I have, &c.,

R. GIRLING-BUTCHER,
Inspector of Fire Brigades.

TABLE I.—CAUSES OF FIRE.

| | Cities over 20,000 Population: Eight-year Average, 1/4/31—31/3/39. | | | | | | All Fire Districts: Year ended 31st March, 1939. | | | | | |
|---|---|------------|--------------------|------------|------------------|------------|---|------------|--------------------|------------|------------------|------------|
| | Dwellings. | | Business Premises. | | Total. | | Dwellings. | | Business Premises. | | Total. | |
| | Number of Fires. | Fire Loss. | Number of Fires. | Fire Loss. | Number of Fires. | Fire Loss. | Number of Fires. | Fire Loss. | Number of Fires. | Fire Loss. | Number of Fires. | Fire Loss. |
| Defective electrical installations .. | 1-2 | £ 58 | 2-2 | £ 300 | 3-5 | £ 358 | 2 | £ 114 | 8 | £ 2,039 | 10 | £ 2,153 |
| Electric irons and radiators left on .. | 17-4 | 3,095 | 7-1 | 2,579 | 24-5 | 5,674 | 31 | 6,394 | 10 | 5,025 | 41 | 11,419 |
| Short circuits and overheating .. | 7-6 | 589 | 16-7 | 1,774 | 24-4 | 2,363 | 19 | 2,723 | 28 | 1,172 | 47 | 3,895 |
| Other electrical faults .. | 1-9 | 167 | 4-4 | 336 | 6-2 | 504 | .. | .. | 2 | 3 | 2 | 3 |
| Gas explosions .. | 0-9 | 54 | 0-4 | 2 | 1-2 | 55 | .. | .. | .. | .. | .. | .. |
| Gas-rings, &c., left on or in contact with curtains, &c. .. | 6-7 | 552 | 4-4 | 265 | 11-1 | 818 | 9 | 138 | 7 | 34 | 16 | 172 |
| Defective gas installations .. | 3-1 | 101 | 0-9 | 93 | 4-0 | 194 | 3 | 19 | 1 | 70 | 4 | 89 |
| Candles in contact with curtains, &c. .. | 5-5 | 479 | 0-5 | 2 | 6-0 | 480 | 3 | 11 | 2 | 11 | 5 | 22 |
| Lamps, stoves—overturned or exploded .. | 2-1 | 78 | 1-1 | 28 | 3-2 | 106 | 1 | 17 | 1 | 33 | 2 | 50 |
| Miscellaneous, due to naked lights .. | 5-1 | 779 | 4-2 | 550 | 9-4 | 1,329 | 13 | 2,090 | 14 | 3,921 | 27 | 6,011 |
| Defective chimneys and flues .. | 18-5 | 1,521 | 5-1 | 233 | 23-6 | 1,754 | 30 | 3,234 | 12 | 325 | 42 | 3,559 |
| Defective hearths, fireplaces, and furnaces .. | 19-4 | 786 | 3-0 | 282 | 22-4 | 1,068 | 25 | 281 | 6 | 237 | 31 | 518 |
| Defective hot-water systems .. | 1-5 | 234 | 0-6 | 69 | 2-1 | 324 | .. | .. | .. | .. | .. | .. |
| Lighted match dropped .. | 14-9 | 2,263 | 8-9 | 3,675 | 23-7 | 5,938 | 9 | 568 | 4 | 228 | 13 | 796 |
| Children playing with matches .. | 9-2 | 261 | 2-5 | 112 | 11-7 | 373 | 15 | 651 | 3 | 5 | 18 | 656 |
| Smoking in bed .. | 4-7 | 173 | .. | .. | 4-7 | 173 | 10 | 212 | .. | .. | 10 | 212 |
| Cigarette or cigar butts dropped .. | 11-9 | 1,143 | 11-7 | 3,430 | 23-6 | 4,573 | 21 | 1,880 | 19 | 1,368 | 40 | 3,248 |
| Ashes from pipes, sparks from cigarettes .. | 2-4 | 282 | 0-6 | 46 | 3-0 | 327 | 2 | 5 | 1 | 1 | 3 | 6 |
| Rats chewing matches .. | 0-7 | 11 | 0-6 | 138 | 1-4 | 149 | 2 | 17 | 1 | 10 | 3 | 27 |
| Miscellaneous causes: Smoking and matches .. | 4-5 | 312 | 2-2 | 8,778 | 6-7 | 9,090 | 5 | 398 | 4 | 63,910 | 9 | 64,308 |
| Sparks from fireplaces, furnaces, &c. .. | 36-4 | 3,448 | 12-5 | 1,031 | 48-9 | 4,479 | 70 | 8,172 | 27 | 963 | 97 | 9,135 |
| Airing clothes before a fire .. | 4-2 | 851 | 1-9 | 144 | 6-1 | 995 | 9 | 553 | 1 | 116 | 10 | 669 |
| Ashes placed in wooden boxes, &c. .. | 10-1 | 419 | 4-1 | 156 | 14-2 | 575 | 16 | 724 | 6 | 354 | 22 | 1,078 |
| Heating tar, polishes, &c. .. | 6-7 | 291 | 9-1 | 1,764 | 15-9 | 2,055 | 14 | 701 | 8 | 534 | 22 | 1,235 |
| Spontaneous combustion .. | 2-2 | 387 | 5-5 | 3,321 | 7-7 | 3,708 | 4 | 755 | 4 | 200 | 8 | 955 |
| Allowing benzine, &c., near naked lights .. | 6-1 | 304 | 4-7 | 563 | 10-9 | 867 | 5 | 125 | 7 | 1,515 | 12 | 1,640 |
| Arson .. | 3-4 | 395 | 1-7 | 642 | 5-1 | 957 | 3 | 400 | 3 | 38 | 6 | 438 |
| Suspicious origin .. | 8-2 | 2,640 | 5-1 | 6,440 | 13-4 | 9,080 | 8 | 1,208 | 3 | 170 | 11 | 1,378 |
| Overheating of and sparks from machinery .. | .. | .. | 5-6 | 1,255 | 5-6 | 1,255 | .. | .. | 8 | 650 | 8 | 650 |
| Sparks from bush and gorse fires .. | 3-4 | 114 | 0-9 | 28 | 4-2 | 142 | 2 | 7 | .. | .. | 2 | 7 |
| Sparks from rubbish fires .. | 7-9 | 307 | 4-5 | 246 | 12-4 | 553 | 22 | 663 | 21 | 1,888 | 43 | 2,551 |
| Sparks from chimneys, locomotives, &c. .. | 9-4 | 226 | 8-7 | 915 | 18-1 | 1,141 | 15 | 632 | 12 | 855 | 27 | 1,487 |
| Blow-lamps used for burning off paint .. | 15-6 | 695 | 1-4 | 23 | 17-0 | 718 | 20 | 1,666 | 2 | 24 | 22 | 1,690 |
| Fires spread from other buildings .. | 11-7 | 2,909 | 6-6 | 2,126 | 18-4 | 5,035 | 43 | 11,432 | 31 | 16,627 | 74 | 28,039 |
| Miscellaneous known causes .. | 13-4 | 629 | 18-4 | 2,231 | 31-7 | 2,861 | 22 | 1,072 | 23 | 4,661 | 45 | 5,733 |
| Unknown causes .. | 72-2 | 22,938 | 59-5 | 83,340 | 131-7 | 106,278 | 134 | 45,732 | 109 | 241,908 | 243 | 287,640 |
| Total .. | 350-1 | 49,511 | 227-3 | 126,838 | 577-7 | 176,349 | 587 | 92,594 | 388 | 348,895 | 975 | 441,489 |
| Loss per fire— | | | | | | | | | | | | |
| Known causes .. | .. | 96 | .. | 259 | .. | 157 | .. | 103 | .. | 384 | .. | 210 |
| Unknown causes .. | .. | 317 | .. | 1,401 | .. | 807 | .. | 341 | .. | 2,219 | .. | 1,184 |
| All causes .. | .. | 141 | .. | 557 | .. | 305 | .. | 158 | .. | 899 | .. | 453 |

TABLE II.—MISCELLANEOUS STATISTICS FOR FIRE DISTRICTS.

| District. | Popula- tion. | Rateable Capital Value. | Insurance Companies Premium Income. | Number of Fire Calls. | Fires involv- ing Loss of Pro- perty. | Insurances on Property Involved in Fires. | Insured Fire Loss, Buildings and Contents. | Uninsured Fire Loss, Buildings and Contents. | Total Fire Loss. | Authorized Expenditure for Year ending March, 1940. |
|----------------------------|------------------|----------------------------|--|--------------------------------|--|---|--|--|---------------------|--|
| | | £ | £ | | | £ | £ | £ | £ | £ |
| Auckland Metro- politan | 181,800 | 67,946,317 | 201,925 | 1,114 | 232 | 3,090,968 | 80,149 | 21,238 | 101,387 | 42,000 |
| Balclutha | 1,730 | 322,547 | 1,683 | 9 | 1 | .. | .. | 30 | 30 | 434 |
| Birkenhead | 3,470 | 779,131 | 3,639 | 13 | 3 | 1,250 | 825 | 207 | 1,032 | 590 |
| Cambridge | 2,330 | 652,320 | 3,070 | 5 | 2 | 6,450 | 27 | .. | 27 | 390 |
| Christchurch | 94,300 | 27,790,977 | 96,704 | 431 | 101 | 540,034 | 76,018 | 1,526 | 77,544 | 20,600 |
| Dannevirke | 4,470 | 1,411,665 | 5,446 | 9 | 2 | 2,025 | 1,925 | 5 | 1,930 | 602 |
| Dargaville | 2,290 | 516,632 | 2,899 | 12 | 7 | 7,175 | 1,193 | 265 | 1,458 | 615 |
| Dunedin | 77,780 | 20,830,895 | 78,394 | 598 | 96 | 242,585 | 17,375 | 674 | 18,049 | 20,350 |
| Eltham | 1,910 | 376,895 | 1,853 | 4 | 1 | 450 | 25 | .. | 25 | 630 |
| Feilding | 4,740 | 1,477,609 | 4,916 | 14 | 3 | 6,670 | 811 | .. | 811 | 760 |
| Foxton | 1,580 | 247,336 | 1,324 | 8 | 5 | 5,385 | 1,084 | 342 | 1,426 | 420 |
| Gisborne | 13,950 | 4,043,037 | 19,257 | 26 | 12 | 24,987 | 3,823 | 700 | 4,523 | 2,599 |
| Greymouth | 8,490 | 1,463,010 | 7,963 | 18 | 5 | 4,200 | 164 | .. | 164 | 1,310 |
| Hamilton | 17,850 | 5,486,242 | 17,541 | 101 | 23 | 22,925 | 3,199 | 113 | 3,312 | 5,700 |
| Hastings | 13,550 | 3,825,516 | 15,143 | 43 | 19 | 52,570 | 969 | 115 | 1,084 | 2,575 |
| Hawera | 4,790 | 1,388,362 | 6,580 | 34 | 6 | 8,100 | 1,139 | 67 | 1,206 | 2,019 |
| Hikurangi | 1,020 | 123,100 | 824 | 6 | .. | .. | .. | .. | .. | 208 |
| Hokitika | 2,770 | 409,162 | 3,422 | 2 | 2 | 400 | 250 | 20 | 270 | 647 |
| Invercargill | 22,600 | 5,930,868 | 23,672 | 111 | 37 | 46,242 | 4,898 | 797 | 5,695 | 6,810 |
| Kaiapoi | 1,630 | 302,590 | 1,935 | 6 | 1 | 2,000 | 2,000 | 700 | 2,700 | 530 |
| Kaitangata | 1,330 | 102,192 | * | * | * | * | * | * | * | 201 |
| Lawrence | 660 | 57,830 | 590 | .. | .. | .. | .. | .. | .. | 100 |
| Levin | 2,770 | 764,209 | 3,241 | 7 | 1 | 100 | 10 | .. | 10 | 683 |
| Masterton | 9,500 | 2,670,104 | 11,082 | 80 | 16 | 47,890 | 2,610 | 133 | 2,743 | 3,891 |
| Milton | 1,390 | 241,638 | 2,024 | 5 | 3 | 2,825 | 1,145 | 617 | 1,762 | 210 |
| Morrinsville | 2,000 | 506,998 | 2,602 | 9 | 1 | 380 | 50 | .. | 50 | 516 |
| Napier | 15,950 | 4,384,138 | 22,956 | 54 | 14 | 17,805 | 1,390 | 132 | 1,522 | 5,190 |
| Nelson | 11,550 | 3,143,142 | 15,065 | 57 | 15 | 46,960 | 5,447 | 1,530 | 6,977 | 2,760 |
| New Plymouth | 17,400 | 5,005,821 | 15,874 | 53 | 10 | 23,435 | 13,303 | 628 | 13,931 | 3,638 |
| Oamaru | 7,610 | 1,567,738 | 7,165 | 8 | 3 | 975 | 846 | 200 | 1,046 | 975 |
| Ohakune | 1,390 | 100,641 | 901 | 10 | 3 | 940 | 2 | 25 | 27 | 350 |
| Opotiki | 1,510 | 363,111 | 1,825 | 4 | .. | .. | .. | .. | .. | 369 |
| Otaki | 1,820 | 305,170 | 1,503 | 4 | 2 | 6,000 | 2 | 20 | 22 | 471 |
| Pahiatua | 1,760 | 399,526 | 3,124 | 1 | 1 | 725 | 6 | .. | 6 | 541 |
| Palmerston North | 23,400 | 6,715,596 | 26,919 | 147 | 26 | 123,746 | 3,967 | 1,036 | 5,003 | 9,200 |
| Petone | 11,150 | 3,144,670 | 12,999 | 37 | 6 | 2,600 | 945 | 70 | 1,015 | 2,335 |
| Port Chalmers | 2,080 | 304,411 | 1,683 | 2 | 1 | 1,500 | 10 | .. | 10 | 223 |
| Pukekohe | 2,690 | 855,524 | 2,709 | 10 | 3 | 2,125 | 290 | 10 | 300 | 790 |
| Rotorua | 6,610 | 1,504,212 | 7,289 | 41 | 11 | 6,105 | 649 | 336 | 985 | 1,253 |
| Taihape | 2,210 | 415,788 | 3,229 | 7 | 4 | 9,590 | 389 | 10 | 399 | 527 |
| Taumarunui | 2,770 | 597,167 | 2,735 | 10 | 1 | 750 | 5 | .. | 5 | 541 |
| Tauranga | 3,860 | 1,068,337 | 4,655 | 23 | 21 | 8,325 | 200 | .. | 200 | 691 |
| Te Aroha | 2,470 | 778,845 | 4,141 | 8 | 3 | 1,090 | 860 | 1 | 861 | 422 |
| Te Awamutu | 2,560 | 787,733 | 3,359 | 10 | 2 | .. | 108 | .. | 108 | 567 |
| Timaru | 17,850 | 5,023,339 | 15,673 | 53 | 7 | 45,115 | 2,071 | 12 | 2,083 | 4,034 |
| Waihi | 4,010 | 309,615 | 2,578 | 28 | 6 | 5,655 | 4,677 | .. | 4,677 | 690 |
| Waipukurau | 2,120 | 477,711 | 2,549 | 14 | 5 | 1,710 | 511 | 83 | 594 | 450 |
| Wairoa | 2,600 | 570,657 | 3,476 | 9 | 4 | 9,840 | 3,019 | 113 | 3,132 | 656 |
| Waitara | 2,040 | 334,522 | 2,215 | 2 | 1 | .. | .. | 2 | 2 | 303 |
| Wanganui | 23,500 | 6,062,279 | 26,669 | 147 | 29 | 27,330 | 6,179 | 1,041 | 7,220 | 8,561 |
| Wellington | 119,700 | 45,077,480 | 161,953 | 947 | 137 | 1,881,132 | 124,464 | 38,391 | 162,855 | 42,400 |
| Westport | 4,310 | 573,730 | 4,381 | 13 | 6 | 1,845 | 1,213 | 12 | 1,225 | 700 |
| Whakatane | 1,920 | 459,197 | 2,594 | 18 | .. | .. | .. | .. | .. | 550 |
| Whangarei | 7,550 | 2,437,713 | 8,534 | 17 | 5 | 2,650 | 46 | .. | 46 | 892 |
| Woodville | 1,060 | 175,317 | 1,177 | 1 | .. | .. | .. | .. | .. | 342 |
| | 786,150 | 242,610,302 | 887,659 | 4,400 | 905 | 6,343,559 | 370,288 | 71,201 | 441,489 | 205,811 |

* Figures not available.

TABLE IIIA.—AVERAGE STATISTICS FOR ALL FIRE DISTRICTS WHICH HAVE BEEN IN OPERATION FOR THE SIXTEEN YEARS 1924-39.

| District. | Population. | Municipal Rates. | Rates per Head. | Insurance Premiums. | Per Head Insurance Premiums. | Number of Fires. | Fires per 1,000 of Population. | Highest Fire Loss in any Individual Year. | Fire Loss. | Fire Loss per Head. | Loss per Fire. | Fire Brigade Expenditure. | Expenditure per Head. | District. |
|--|-------------|------------------|-----------------|---------------------|------------------------------|------------------|--------------------------------|---|------------|---------------------|----------------|---------------------------|-----------------------|---|
| | | £ | £ s. d. | £ | £ s. d. | | | £ | £ | £ s. d. | £ | £ | s. d. | |
| Auckland Metropolitan* | 136,515 | 680,801 | 4 19 9 | 181,921 | 1 6 8 | 194 | 1.42 | 114,709 | 63,755 | 0 9 4 | 329 | 26,060 | 3 10 | Auckland Mtrpn.* |
| Balclutha | 1,588 | 3,781 | 2 7 7 | 1,982 | 1 5 0 | 2 | 1.34 | 7,090 | 777 | 0 9 9 | 365 | 325 | 4 1 | Balclutha. |
| Christchurch | 89,096 | 235,832 | 2 12 11 | 109,936 | 1 4 8 | 127 | 1.42 | 95,575 | 35,965 | 0 8 1 | 283 | 13,457 | 3 0 | Christchurch. |
| Dannevirke | 4,412 | 11,520 | 2 12 2 | 7,264 | 1 12 11 | 3 | 0.68 | 8,680 | 1,093 | 0 5 0 | 367 | 702 | 3 2 | Dannevirke. |
| Dargaville | 2,086 | 12,433 | 5 19 2 | 3,492 | 1 13 6 | 5 | 2.33 | 5,993 | 2,309 | 0 5 0 | 474 | 560 | 5 4 | Dargaville. |
| Dunedin Metropolitan | 70,103 | 201,774 | 2 17 7 | 80,073 | 1 2 10 | 104 | 1.49 | 59,793 | 17,590 | 0 5 0 | 169 | 14,753 | 4 2 | Dunedin Mtrpn. |
| Fellding | 4,512 | 16,333 | 3 12 5 | 6,422 | 1 8 5 | 5 | 1.19 | 5,044 | 1,586 | 0 7 0 | 277 | 720 | 3 2 | Fellding. |
| Foxton | 1,711 | 4,895 | 2 17 2 | 1,760 | 1 0 7 | 4 | 2.26 | 6,830 | 2,507 | 1 9 3 | 648 | 450 | 5 3 | Foxton. |
| Gisborne | 13,861 | 62,734 | 4 10 6 | 22,559 | 1 12 7 | 21 | 1.48 | 24,240 | 10,358 | 0 14 11 | 505 | 2,470 | 3 7 | Gisborne. |
| Greytown | 6,597 | 18,431 | 2 15 11 | 7,542 | 1 2 10 | 9 | 1.30 | 32,174 | 7,571 | 1 3 0 | 881 | 1,027 | 3 1 | Greytown. |
| Hamilton | 15,678 | 59,898 | 3 16 5 | 20,298 | 1 5 11 | 19 | 1.24 | 25,746 | 4,356 | 0 5 7 | 223 | 3,009 | 3 10 | Hamilton. |
| Hastings | 11,721 | 37,114 | 3 3 4 | 15,907 | 1 7 1 | 18 | 1.50 | 24,504 | 6,507 | 0 11 1 | 371 | 1,889 | 3 3 | Hastings. |
| Hawera | 4,689 | 15,973 | 3 10 1 | 7,629 | 1 12 6 | 8 | 1.67 | 11,876 | 1,683 | 0 7 2 | 215 | 1,278 | 5 6 | Hawera. |
| Hokitika | 2,552 | 4,083 | 1 12 0 | 2,965 | 1 3 3 | 5 | 1.77 | 8,591 | 2,175 | 0 17 0 | 481 | 593 | 4 8 | Hokitika. |
| Invercargill | 19,997 | 73,344 | 3 13 4 | 23,443 | 1 3 5 | 36 | 1.78 | 47,221 | 12,968 | 0 13 0 | 363 | 5,304 | 5 4 | Invercargill. |
| Kaipoi | 1,697 | 2,339 | 1 7 7 | 2,331 | 1 7 6 | 4 | 2.13 | 25,984 | 3,295 | 1 18 10 | 910 | 634 | 7 6 | Kaipoi. |
| Kaitangata | 1,451 | 1,721 | 1 3 9 | † | † | † | † | 4,343 | † | † | † | 155 | 2 2 | Kaitangata. |
| Lawrence | 663 | 1,314 | 1 19 8 | 701 | 1 1 1 | 1 | 1.69 | 3,770 | 368 | 0 11 1 | 329 | 93 | 2 10 | Lawrence. |
| Levin | 2,617 | 6,554 | 2 10 1 | 3,708 | 1 8 4 | 4 | 1.72 | 9,745 | 1,823 | 0 13 11 | 405 | 609 | 4 8 | Levin. |
| Masterton | 8,729 | 27,976 | 3 4 1 | 12,481 | 1 8 7 | 13 | 1.52 | 18,539 | 5,672 | 0 13 0 | 426 | 2,247 | 5 2 | Masterton. |
| Milton | 1,502 | 4,125 | 2 14 11 | 2,168 | 1 8 10 | 2 | 1.08 | 1,762 | 253 | 0 3 4 | 156 | 187 | 2 6 | Milton. |
| Napier | 15,863 | 59,253 | 3 14 8 | 26,451† | 1 13 4† | 20 | 1.24 | 32,161 | 10,048 | 0 12 8 | 511 | 4,113 | 5 2 | Napier. |
| New Plymouth | 15,675 | 58,150 | 3 14 2 | 18,362 | 1 3 5 | 15 | 0.98 | 9,593 | 5,277 | 0 6 9 | 344 | 2,111 | 2 8 | New Plymouth. |
| Oamaru | 7,460 | 26,845 | 3 12 0 | 7,867 | 1 1 1 | 6 | 0.86 | 23,878 | 3,898 | 0 10 6 | 606 | 1,097 | 2 11 | Oamaru. |
| Ohakune | 1,460 | 2,376 | 1 12 6 | 1,314 | 0 18 0 | 5 | 3.29 | 11,825 | 2,794 | 0 11 3 | 581 | 407 | 5 9 | Ohakune. |
| Palmerston North | 20,628 | 75,271 | 3 11 0 | 30,126 | 1 9 2 | 35 | 1.68 | 31,637 | 12,166 | 0 11 10 | 350 | 4,611 | 4 6 | Palmerston North. |
| Petone | 10,578 | 27,657 | 2 12 3 | 13,387 | 1 5 4 | 9 | 0.87 | 5,070 | 1,736 | 0 3 3 | 190 | 1,752 | 3 4 | Petone. |
| Port Chalmers | 2,463 | 4,698 | 1 18 1 | 2,159 | 0 17 6 | 2 | 0.63 | 2,135 | 642 | 0 5 3 | 417 | 245 | 2 0 | Port Chalmers. |
| Rotorua | 5,315 | 10,064 | 1 17 11 | 7,020 | 1 6 5 | 8 | 1.56 | 7,416 | 2,351 | 0 8 10 | 285 | 1,080 | 4 1 | Rotorua. |
| Taumarunui | 2,526 | 8,573 | 3 7 11 | 3,162 | 1 5 0 | 6 | 2.30 | 7,942 | 1,984 | 0 15 8 | 581 | 522 | 4 2 | Taumarunui. |
| Tauranga | 3,021 | 8,284 | 2 14 10 | 4,261¶ | 1 8 2¶ | 5 | 1.73 | 11,457 | 2,258 | 0 14 11 | 431 | 522 | 4 3 | Tauranga. |
| Te Aroha | 2,430 | 6,416 | 2 12 10 | 3,849 | 1 11 8 | 4 | 1.68 | 4,426 | 1,664 | 0 13 8 | 408 | 580 | 4 9 | Te Aroha. |
| Timaru | 16,702 | 55,065 | 3 5 11 | 17,538 | 1 1 0 | 16 | 0.97 | 19,457 | 4,443 | 0 5 4 | 276 | 2,620 | 3 9 | Timaru. |
| Waihi | 3,541 | 5,003 | 1 8 3 | 2,755 | 0 15 7 | 9 | 2.68 | 5,909 | 2,971 | 0 16 9 | 313 | 678 | 3 10 | Waihi. |
| Waitara | 1,862 | 4,330 | 2 6 6 | 2,456 | 1 6 4 | 1 | 0.79 | 5,044 | 1,378 | 0 14 10 | 931 | 237 | 2 6 | Waitara. |
| Wanganui | 24,198 | 98,409 | 4 1 4 | 33,604 | 1 7 9 | 37 | 1.53 | 14,074 | 7,738 | 0 6 5 | 209 | 7,193 | 5 6 | Wanganui. |
| Whangarei | 7,045 | 26,162 | 3 14 3 | 8,068 | 1 2 11 | 8 | 1.12 | 36,569 | 5,159 | 0 14 8 | 655 | 988 | 2 10 | Whangarei. |
| | 542,544 | 1,957,532 | 3 12 2 | 696,941 | 1 5 8 | 770 | 1.42 | .. | 249,118 | 0 9 2 | 324 | 105,404 | 3 11 | |
| Fifteen years' average, whole Dominion | 1,508,185 | 5,498,516 | 3 12 11 | 1,810,604 | 1 4 0 | † | † | 1,636,119 | 960,078 | 0 12 9 | † | .. | .. | Fifteen years' average, whole Dominion. |

* Includes statistics for Onehunga, Mount Roskill, and Newmarket Fire Boards from date of inception to date of incorporation in Auckland Metropolitan Fire Board. † Figures not available. ‡ Twelve-year average. || Fifteen-year average. ¶ Thirteen-year average.

TABLE III.B.—AVERAGE STATISTICS FOR OTHER FIRE DISTRICTS.

| District. | Period of Average. (Years.) | Population. | Municipal Rates. | Rates per Head. | Insurance Premiums. | Insurance Premiums per Head. | Number of Fires. | Fires per 1,000 of Population. | Highest Fire Loss in any Individual Year. | Fire Loss. | Fire Loss per Head. | Loss per Fire. | Fire Brigade Expenditure. | Expenditure per Head. | District. |
|--------------|-----------------------------|-------------|------------------|-------------------|---------------------|------------------------------|------------------|--------------------------------|---|------------|---------------------|----------------|---------------------------|-----------------------|---------------|
| Birkenhead | 7 | 3,437 | £ 12,805 | £ s. d. 3 14 6 | £ 3,936 | £ s. d. 1 2 11 | 2 | 0.54 | £ 1,032 | £ 322 | £ s. d. 0 1 11 | £ 174 | £ 536 | s. d. 3 1 | Birkenhead. |
| Cambridge | 8 | 2,221 | 7,932 | 3 11 5 | 3,104 | 1 8 0 | 3 | 1.14 | 3,175 | 1,003 | 0 9 0 | 396 | 480 | 4 4 | Cambridge. |
| Eltham | 15 | 2,002 | 6,582 | 3 5 9 | 2,411 | 1 4 1 | 3 | 1.50 | 2,672 | 861 | 0 5 4 | 281 | 458 | 4 7 | Eltham. |
| Hikurangi | 11 | 1,159 | 2,279 | 1 19 4 | 1,060 | 0 18 3 | 1 | 1.09 | 1,204 | 309 | 0 5 4 | 245 | 208 | 3 7 | Hikurangi. |
| Morrinsville | 3 | 1,923 | 8,858 | 4 12 1 | 2,408 | 1 5 0 | 1 | 0.35 | 1,149 | 67 | 0 0 8 | 100 | 598 | 6 3 | Morrinsville. |
| Nelson | 6 | 11,327 | 37,847 | 3 6 10 | 15,898 | 1 8 1 | 11 | 1.00 | 6,977 | 2,743 | 0 4 10 | 242 | 2,295 | 4 1 | Nelson. |
| Opotiki | 10 | 1,377 | 3,958 | 2 17 6 | 1,408 | 1 0 6 | 3 | 2.03 | 3,609 | 659 | 0 9 7 | 235 | 522 | 7 7 | Opotiki. |
| Otaki | 14 | 1,657 | 4,638 | 2 16 0 | 1,803* | 1 1 9* | 3 | 1.77 | 6,659 | 1,155 | 0 13 11 | 394 | 350 | 4 3 | Otaki. |
| Pahiatua | 13 | 1,580 | 4,149 | 2 12 6 | 3,322 | 2 2 1 | 3 | 1.74 | 11,755 | 2,262 | 1 8 8 | 823 | 441 | 6 9 | Pahiatua. |
| Pukekohe | 13 | 2,540 | 12,412 | 4 17 9 | 3,051 | 1 4 0 | 3 | 1.13 | 5,680 | 714 | 0 5 7 | 249 | 701 | 5 6 | Pukekohe. |
| Taihape | 9 | 2,329 | 8,975 | 3 17 1 | 3,560 | 1 10 7 | 2 | 0.67 | 856 | 199 | 0 1 8 | 128 | 516 | 4 5 | Taihape. |
| Te Awamutu | 12 | 2,021 | 10,257 | 5 1 6 | 3,291 | 1 12 7 | 3 | 1.44 | 4,510 | 907 | 0 9 0 | 311 | 508 | 5 0 | Te Awamutu. |
| Waipukurau | 13 | 1,995 | 6,570 | 3 5 11 | 2,987 | 1 9 11 | 4 | 1.85 | 7,167 | 1,462 | 0 14 8 | 395 | 354 | 3 6 | Waipukurau. |
| Wairoa | 13 | 2,490 | 10,554 | 4 4 9 | 3,992 | 1 12 1 | 5 | 1.88 | 101,707† | 10,278† | 4 2 7 | 2,191 | 575 | 4 7 | Wairoa. |
| Wellington | 13 | 111,930 | 489,360 | 4 7 5 | 182,591 | 1 12 7 | 173 | 1.54 | 294,070 | 84,503 | 0 15 1 | 489 | 29,759 | 5 4 | Wellington. |
| Westport | 15 | 4,034 | 9,428 | 2 6 9 | 4,256 | 1 1 1 | 5 | 1.36 | 11,989 | 2,836 | 0 14 7 | 537 | 651 | 3 3 | Westport. |
| Whakatane | 2 | 1,890 | 8,571‡ | 4 10 8 | 2,402 | 1 5 5 | 1 | 0.53 | 49 | 25 | 0 0 3 | 25 | .. | .. | Whakatane. |
| Woodville | 8 | 1,082 | 2,999 | 2 15 5 | 1,342 | 1 4 10 | 2 | 1.97 | 4,116 | 921 | 0 17 0 | 432 | 369 | 6 10 | Woodville. |

† One year only.

‡ Fire-loss figures corrected in accordance with returns supplied subsequently.

* Nine-year average.

TABLE IV.—AREAS PROTECTED BY FIRE BOARDS.

| District. | Population. | Rateable Capital Value. | Number of Fire Calls. | Fires Involving Loss of Property. | Insured Fire Loss, Buildings and Contents. | Uninsured Fire Loss, Buildings and Contents. | Total Fire Loss. | Protected by | Remarks. |
|---|-------------|-------------------------|-----------------------|-----------------------------------|--|--|------------------|----------------------------------|---|
| Belfast (works only) | .. | £ .. | .. | .. | £ .. | £ .. | £ .. | Christchurch Fire Board | Payment for attendances. |
| Fairfield | .. | .. | .. | .. | .. | .. | .. | Hamilton Fire Board | County pays £25 p.a. plus £5 for every call in excess of five. |
| Feilding (works only) | .. | .. | .. | .. | .. | .. | .. | Feilding Fire Board | Payment for attendances. |
| Hamilton (hospital only) | .. | .. | .. | .. | .. | .. | .. | Hamilton Fire Board | Nominal payment. |
| Hawera | 620* | 210,000 | .. | .. | .. | .. | .. | Hawera Fire Board | County pays £75 p.a. to Fire Board. |
| Mangere | 785* | 522,000 | .. | .. | .. | .. | .. | Auckland Metropolitan Fire Board | County pays £75 p.a. plus £5 for every call in excess of ten. |
| New Lynn | 3,680 | 534,581 | .. | .. | .. | .. | .. | Auckland Metropolitan Fire Board | Borough pays £100 p.a. plus £5 for every call in excess of ten. |
| Palmerston North (abattoirs and aero club only) | .. | .. | 1 | 1 | 6,155 | 984 | 7,139 | Palmerston North Fire Board | Retaining fee of £5 5s. p.a. plus payment for attendances. |
| Cashmere | .. | .. | 52 | 10 | 533 | 1,781 | 2,314 | Christchurch Fire Board | County pays £300 p.a. to Fire Board. |
| Pendleton | 12,300* | .. | .. | .. | .. | .. | .. | Christchurch Fire Board | County pays £450 p.a. to Fire Board. |
| Riccarton | .. | .. | .. | .. | .. | .. | .. | Dunedin Metropolitan Fire Board | Borough pays £450 p.a. to Fire Board. |
| West harbour (works only) | .. | .. | .. | .. | .. | .. | .. | Dunedin Metropolitan Fire Board | Payment for attendances. |
| | 17,385 | 1,266,581 | 53 | 11 | 6,688 | 2,765 | 9,453 | | |

* Estimated.