

SECTION XXVI. LOCAL GOVERNMENT.

§ 1. Introduction.

1. **Early History of Local Government.**—In the previous issues of this book, a description was given of the systems of Local Government and their development in the several States of the Commonwealth, and at the same time a comparison was made between the Australian and Continental systems. The early history of Local Government in Australia was also dealt with. Owing, however, to considerations of space, these matters have been omitted from the present volume, and the reader is referred to Year Book No. 5, pages 972 to 975.

§ 2. Local Government Systems.

1. **New South Wales.**—(i.) *Development of Local Government.* The history of Local Government in New South Wales has been given in previous issues of this book (see No. 6, page 966). It is not intended to repeat the information in this issue.

(ii.) *Present System of Local Government.* The law relating to local government in New South Wales is now contained in the Acts of 1906, 1907, and 1908. Practically the whole of the State, with the exception of the Western Division, has been brought under the operation of these Acts.

(a) *Areas Incorporated.* Prior to the year 1907 the total area incorporated formed a very small part of the whole area of the State, as may be seen in the following statement:—

AREAS INCORPORATED IN NEW SOUTH WALES, 1860 to 1906.

Year	...	...	1860.	1870.	1880.	1890.	1900.	1906.
Area incorporated—sq. miles	...	...	409	649	1,482	2,387	2,763	2,830

Total area of State (exclusive of Lord Howe Island), 310,367 square miles.

The areas incorporated in 1906 in each of the three territorial divisions of the State were as follows:—

DISTRIBUTION OF INCORPORATED AREAS, 1906.

Division.	Incorporated Area.	Unincorporated Area.	Total Area.
Eastern Sq. miles	1,977	93,742	95,719
Central "	571	88,579	89,150
Western "	282	125,216	125,498
Total	2,830	307,537	*310,367

* Total area of State, exclusive of Lord Howe Island, the area of which is 5 square miles.

The total area incorporated under the Local Government Act 1906, to the end of the year 1912, was 183,569 square miles, of which 180,567 square miles were comprised within shires and 3002 within municipalities. The areas incorporated comprise the whole of the eastern and central divisions of the State, with the exception of Lord Howe Island, the islands in Port Jackson, and the quarantine station at Port Jackson.

(b) *General.* The above Act came into operation on the 1st January, 1907; it provided for the continuation of existing shires and municipalities, for the creation of new ones, and for their reconstitution by uniting, dividing, altering, or converting areas. Each shire is divided into three ridings, and each municipality may be divided into wards by petition of the council or a majority of the ratepayers to the Governor. The coun

consist, in the case of shires, of either six or nine councillors, and in the case of municipalities, of from six to twelve aldermen. A summary of the functions of councils, their powers and duties, together with a detailed statement of rates and ratable property, will be found in previous issues of the Year Book. (See Year Book No. 5, pages 977 to 979.)

(c) *Endowment.* Government endowments to shires are fixed every third year, and the amount is determined according to the extent of the shire, the probable revenue from a rate of 1d. in the £, the necessary expenditure, the extent of roads and other public works to be constructed and maintained, and other matters. The endowment in any year is paid on the basis of the amount of general rates collected in the preceding year. At the end of 1911 the endowments to be paid during the triennium 1912-15 were fixed. The classification for the period mentioned is as follows:—

NEW SOUTH WALES.—ENDOWMENT OF SHIRES, CLASSIFICATION, 1912-15.

Class.	1st.	1st.	2nd.	3rd.	4th.	5th.	6th.
No. of Shires	54	59	7	5	3	5	1
Endowment received in the £ on general rate Up to	*	10s.	15s.	20s.	25s.	30s.	†

* No endowment. † Not less than 40s. in the £ on the general rate.

It is also provided that all municipalities not receiving statutory endowment under any Act repealed by the Act of 1906 shall, upon the result of investigations made into their administration and financial necessities, be entitled to a sum not exceeding three shillings and fourpence in the pound on the general rate collected; but if the revenues are sufficient to meet the reasonable requirements of the corporation under proper management no endowment will be paid.

(iii.) *Shires, 1912.*—The total area of the 134 shires constituted under the new system is 180,567 square miles, and the population on the 31st December, 1912, was 632,570.

The shires vary in area from 36 square miles in the case of Ku-ring-gai, immediately north of the metropolis, to 5730 square miles in the case of Lachlan in the Condobolin district.

(a) *Valuation and Rates Levied.* The unimproved capital value of the shires in 1912 was £97,461,454, as against £94,189,939 in the preceding year. It is not possible to give the improved capital value or the assessed annual value, as the shires are not compelled to make these valuations, and in many cases do not make them. The total amount of all rates levied was £524,485.

(b) *Revenue.* The principal heads of revenue for the five years since the new Act came into force are shewn in the following table:—

NEW SOUTH WALES.—INCOME OF SHIRES, 1908 to 1912.

Particulars.*	1908.	1909.	1910.	1911.	1912.
	£	£	£	£	£
<i>General Fund—</i>					
General rates	382,336	374,540	421,596	463,501	517,025
Government endowment...	162,859	261,029	277,731	319,593	372,952
Public works	65,781	57,017	59,527	45,331	45,152
Health administration ...	2,979	3,033	3,746	3,998	4,886
Public services	7,038	6,691	7,441	8,769	9,232
Shire property	517	1,721	4,229	6,731	8,768
Miscellaneous	4,198	5,651	5,008	8,594	5,648
<i>Special and Local Funds</i> ...	1,160	7,462	15,095	24,516	35,835
Total revenue... ...	626,868	717,144	794,373	881,033	999,498

* The receipts for Public Works, Health Administration, Public Service, etc., include Government grants, the total endowments and special grants during 1912 amounting to £402,820.

(c) *Expenditure.* The following statement shews the expenditure of shires during the years 1908 to 1912 inclusive:—

NEW SOUTH WALES.—EXPENDITURE OF SHIRES, 1908 to 1912.

Particulars.	1908.	1909.	1910.	1911.	1912.
<i>General Fund—</i>	£	£	£	£	£
Administrative expenses ...	116,932	117,696	125,669	128,126	*83,721
Public works ...	516,072	529,954	599,945	647,220	773,479
Health administration ...	4,604	4,573	4,840	5,724	7,199
Public services ...	11,702	10,290	13,012	15,410	15,809
Shire property ...	397	1,911	4,561	7,657	10,419
Miscellaneous ...	6,453	5,886	5,129	7,120	8,430
<i>Special and Local Funds</i> ...	58	6,474	11,976	20,949	34,268
Total expenditure...	656,218	676,784	765,132	832,206	933,325

* Exclusive of proportion of Administrative expenses payable from Special and Local Funds, previously included under General Fund.

(d) *Assets and Liabilities.* The financial position of the shires at the end of the year 1912 was strong, as there was an excess of assets of £377,926. The following table gives particulars of assets and liabilities as at the 31st December, 1912:—

NEW SOUTH WALES.—ASSETS AND LIABILITIES OF SHIRES, 1912.

Assets.		Liabilities.	
<i>General Fund—</i>		<i>General Fund—</i>	
Outstanding rates ...	£31,814	Temporary loans ...	£17,212
Stores and materials ...	10,740	Sundry creditors ...	45,121
Bank balance ...	149,378	Due on contracts ...	829
Sundry debtors ...	6,435	Due to trust fund ...	56
Land ...	11,107	Other ...	176
Buildings ...	55,529	<i>Special and Local Funds</i> ...	14,100
Plant and property*	150,663		
Furniture ...	14,823	Total ...	£77,494
Other ...	930	Excess of assets ...	377,926
<i>Special and Local Funds</i> ...	24,001		
Total ...	£455,420	Total ...	£455,420

* Including saleyards, pounds, baths, public watering-places, ferries, wharves, etc.

(iv.) *Municipalities.* Including the City of Sydney there are 190 municipalities in New South Wales; of these forty are in the suburbs of Sydney and twelve in the district of Newcastle and suburbs. Since the 1st January, 1908, under the Local Government Act 1906, municipalities must levy a general rate on the unimproved capital value of all ratable land, and may levy additional general, special, local, or loan rates on either the unimproved or improved capital value. Municipal rates are therefore no longer charged on the annual value; the only rates based on that value are those charged by the Metropolitan and Hunter River Water Supply and Sewerage Boards.

(a) *Capital Value, Area, Population, and Rates Levied.* The following table shews the improved capital value, the area, population, number of buildings, and amount of rates levied in municipalities for the years 1901 and 1908 to 1912:—

NEW SOUTH WALES.—MUNICIPALITIES, IMPROVED CAPITAL VALUE, AREA, POPULATION, NUMBER OF BUILDINGS, AND TOTAL RATES LEVIED, 1901 and 1908-12.

Year ended 31st Dec.*	Sydney and Suburbs.					Country.				
	Improved Capital Value.	Area.	Population.	Number of Dwellings.	Total Rates Levied.	Improved Capital Value.	Area.	Population.	Number of Dwellings.	Total Rates Levied.
	£	Acres.	No.	No.	£	£	Acres.	No.	No.	£
1901 ...	88,118,600	91,220	1,457,900	94,907	277,457	36,429,600	1,732,302	371,330	73,862	127,564
1908†	105,641,359	95,259	592,100	120,655	527,926	44,659,776	1,822,821	444,800	84,150	286,329
1909 ...	108,120,427	95,319	605,900	123,860	631,689	44,716,888	1,822,821	456,200	85,341	299,306
1910 ...	111,318,074	95,259	1,629,503	126,476	647,762	45,924,999	1,822,821	1,421,714	89,107	310,849
1911 ...	119,375,694	95,259	641,960	§	726,712	47,484,486	1,822,821	431,500	§	340,075
1912 ...	124,875,964	95,259	683,780	§	770,879	48,814,203	1,826,795	444,190	§	373,765

* Prior to 1908 the municipal year ended on the first Monday in February, since when the municipal year closes on 31st December. † Census, March, 1901. ‡ Census, April, 1911.
§ Not available. || For eleven months ending 31st December.

The following table gives a comparison of the unimproved and improved values for the years 1908 to 1912 inclusive :—

NEW SOUTH WALES.—MUNICIPALITIES, UNIMPROVED AND IMPROVED CAPITAL VALUES, 1908 to 1912.

Year.	Sydney.	Suburbs.	Metropolis.	Country.	Total.
UNIMPROVED VALUE.					
	£	£	£	£	£
1908 ...	20,207,812	23,799,856	44,007,668	20,104,983	64,112,651
1909 ...	19,970,365	23,486,535	43,456,900	19,798,286	63,255,186
1910 ...	19,952,793	23,823,398	43,776,191	19,753,131	63,529,322
1911 ...	23,940,030	25,942,704	49,882,734	19,961,743	69,844,477
1912 ...	23,988,480	27,935,494	51,923,974	20,352,473	72,276,447
IMPROVED VALUE.					
1908 ...	49,060,600	56,441,828	105,502,428	44,784,238	150,286,666
1909 ...	50,948,240	57,172,187	108,120,427	44,716,888	152,837,315
1910 ...	52,142,200	59,175,874	111,318,074	45,824,999	157,143,073
1911 ...	55,520,640	63,855,054	119,375,694	47,484,486	166,860,180
1912 ...	57,395,288	67,480,676	124,875,964	48,814,203	173,690,167

(b) *Revenue.* The Local Government Act 1906 prescribed that there should be a general fund in each local government area (municipality and shire), and also special funds for specified purposes. The regulations under the Act prescribed the system of accounts to be kept. This system differs materially from the old "cash" system of receipts (cash actually received) and disbursements (cash actually expended).

Prior to 1908 the municipal year ended on the first Monday in February; now it ends on the 31st December. In all statements of municipal accounts for the year 1908, therefore, the period referred to is from the 4th February to the 31st December, except in the City of Sydney, which does not come under the provisions of the Act of 1906 and where the accounts are kept for the calendar year. The first complete year for which financial particulars are available for the municipalities is the year 1909. Particulars of revenue for the year 1912 are given in the following table :—

NEW SOUTH WALES.—MUNICIPALITIES, REVENUE, 1912.

Particulars.	Sydney.	Suburbs.	Country.	Total.
	£	£	£	£
General fund	718,018†	537,244	383,497	920,741†
Trading accounts		8,027	94,804	102,831†
Special and local funds		40,523	249,259	289,782†
Loan funds		42,408	48,057	90,465†
Reserve and Renewals Account		3,810	4,191	8,001†
Gross revenue	718,018†	632,012	779,808	2,129,838
Deduct transfers* ... ..	...	37,258	28,309	65,567
Net revenue	718,018†	594,754	751,499	2,064,271

* Transfers from various funds to loan funds for principal, interest, and capital expenditure. † The city of Sydney accounts are kept on a cash basis, *i.e.*, they show actual receipts and disbursements; the accounts of municipalities operating under the Local Government Act show total revenue and expenditure for the year. Items of receipts and disbursements for the city of Sydney cannot be allocated to the different headings shown for municipalities. † Exclusive of Sydney.

(c) *Expenditure.* Reference has already been made to the system of accounts prescribed by the Local Government Act 1906 (see paragraph (b) hereof). The following table gives particulars of expenditure of municipalities for the year 1912:—

NEW SOUTH WALES.—MUNICIPALITIES, EXPENDITURE, 1912.

Particulars.	Sydney.	Suburbs.	Country.	Total.
	£	£	£	£
General fund	706,256†	535,953	384,400	920,353†
Trading accounts		8,078	106,035	114,113†
Special and local funds		46,434	228,129	274,563†
Loan funds		34,581	29,709	64,290†
Reserve and Renewals Account ... ..		...	1,859	1,859†
Gross expenditure	706,256†	625,046	750,132	2,081,434
Deduct transfers* ... ..	...	37,258	28,309	65,567
Net expenditure	706,256†	587,788	721,823	2,015,867

* Transfers from various funds for principal and interest on loans. † See note † to preceding table. † See note † to preceding table.

(d) *Assets and Liabilities.* The financial position of the municipalities as at the 31st December, 1912, is shown by the following statement of assets and liabilities of the various funds:—

NEW SOUTH WALES.—MUNICIPALITIES, ASSETS, AND LIABILITIES, 1912.

Particulars.	Sydney.	Suburbs.	Country.	Total.
	£	£	£	£
<i>Assets—</i>				
General fund	6,030,411†	268,902	446,889	715,791†
Trading accounts		2,480	76,164	78,644†
Special and local funds... ..		35,892	1,176,033	1,211,925†
Loan funds		158,201	513,883	672,084†
Reserves and renewals account		4,759	13,081	17,840†
Total	6,030,411†	470,234	2,226,050	8,726,695
<i>Liabilities—</i>				
General fund	5,654,811†	70,474	61,531	132,005†
Trading accounts		2,763	35,787	38,550†
Special and local funds... ..		26,346	1,084,325	1,110,671†
Loan funds		760,033	634,100	1,394,133†
Reserves and renewals account		4,759	13,081	17,840†
Total	5,654,811†	864,375	1,828,824	8,348,010

† See note † to first table on this page. † See note † to first table on this page.

2. **Victoria.**—(i.) *Development of Local Government.* In Victoria there are now two types of municipal institutions, (a) boroughs, including cities and towns, and (b) shires, and although they are now dealt with by the same Act, their origin was distinct, and in the early days of their development they were provided for by independent enactments. Melbourne and Geelong, the latter of which was for many years the second largest town in the State, having been incorporated under special statutes prior to the establishment of a general system of local government, are not subject to the provisions of the Local Government Acts except in a few comparatively unimportant details. Melbourne was incorporated as a town in 1842, and as a city in 1947; Geelong was incorporated as a town in 1849, and proclaimed a city on 14th December, 1910.

The earlier history of legislation in Victoria relative to Local Government, more especially with reference to the institution of Road Districts, their displacement by Shires, and the constitution of Urban Municipal Districts and Boroughs, has been fully dealt with in previous issues. (See Year Book No. 5, p. 992.)

(ii.) *Present System of Local Government.* Local government is now administered under the Act of 1903 throughout the whole of the State, with the exception of about 6000 square miles in the mountainous parts of the county of Wonnangatta, and the whole of French Island.

(a) *Constitution of Municipalities.* Provision is made for the continuation of municipalities established under previous Acts and for the constitution of new ones.

Definitions of shires, boroughs, and townships have been given in previous issues of this book (see Year Book No. 6, page 978), together with the conditions necessary for their constitution.

(b) *Municipal Councils, etc.* Considerations of space prevent more than a passing reference to the following subjects, which were dealt with in previous issues of this book:—The constitution of municipal councils, their functions and powers, including the power of raising loans, the qualifications necessary for the exercise of the municipal franchise, and the definition of ratable and unratable property. (See Year Book No. 5, pp. 994 to 996.)

(c) *Endowment.* The legislation dealing with municipal endowment prior to 1907 is referred to in previous issues. (See Year Book No. 5, p. 996.) In 1907, under the Municipal Endowment and Reclassification of Shires Act of that year, a new classification was adopted under which the amount of the endowment is to be allocated. In addition to the endowment of £75,000 (increased to £100,000 from the 1st July, 1907), the municipalities received from the Government during the financial year 1912-13 a sum of £80,996 out of the Licensing Act Fund as the equivalent for (a) fees for licenses, (b) fees for the registration of brewers and spirit merchants, and (c) fines, penalties, and forfeitures incurred under the Licensing Act 1876. Under the Act of 1907 the endowment of £100,000 is payable in equal moieties in March and September of each year. No city or town is entitled to receive any part of the endowment. The distribution amongst the boroughs and shires is based on the amount of general and extra rates received in the twelve months ending on the preceding 30th September according to the following scale:—

VICTORIA.—ENDOWMENT OF BOROUGHS AND SHIRES, 1912-13.

To every Borough or 1st Class Shire, 3s. in the £	To every 4th Class Shire, 8s. in the £
“ “ 2nd Class Shire 5s. “ “	“ 5th “ 10s. “ “
“ “ 3rd “ “ 6s. “ “	“ 6th “ 12s. “ “

For the three financial years commencing the 1st July, 1907, however, the amounts were definitely fixed by Act No. 2129, and for the financial years 1910-11, 1911-12, and 1912-13 by Acts No. 2267, 2334, and 2404 respectively.

(iii.) *Boroughs and Shires.*—*Number, Population, and Value of Ratable Property.*—The following table shews the number of cities, towns, and shires, their estimated

population, the number of ratepayers and dwellings, and the value of ratable property for the years 1901 and 1909-13 inclusive :—

VICTORIA.—PARTICULARS OF MUNICIPALITIES, 1901 and 1909-13.

Financial Year.	Number of Municipalities.	Estimated Population.	Number of Ratepayers (both sexes).	Estimated Number of Dwellings.	Estimated Value of Real Property.	
					Total.	Annual.
CITIES, TOWNS, AND BOROUGHES.						
1901	58	627,237	153,783	130,358	£ 67,302,423	£ 4,765,632
1909	60	717,600	178,928	156,099	106,149,960	6,080,447
1910	60	728,500	183,419	159,478	108,863,963	6,232,091
1911	60	*742,070	187,562	162,489	114,113,507	6,508,544
1912	61	*742,070	194,391	†	119,400,893	6,804,697
1913	61	777,696	200,679	†	127,743,501	7,270,972
SHIRES.						
1901	150	571,683	159,128	122,645	£ 106,839,331	£ 5,771,865
1909	146	558,400	155,492	123,459	136,538,811	7,043,511
1910	146	563,500	159,410	124,739	143,142,655	7,332,397
1911	146	*568,494	163,916	126,951	150,970,220	7,716,815
1912	146	*568,494	168,229	†	155,677,624	7,969,963
1913	147	583,909	173,271	†	160,128,933	8,152,473

* Census figures. † Not available.

(iv.) *Municipal Assets and Liabilities.*—The assets of municipalities may be classified under three heads—(a) the municipal fund, (b) the loan fund, and (c) property; the liabilities under two heads—(a) the municipal fund, and (b) the loan fund. The following table shows the amount of municipal assets and liabilities for the years 1901 and 1908 to 1912 :—

VICTORIA.—MUNICIPAL ASSETS AND LIABILITIES, 1901 and 1908-12.

Items.	1901.	1908.	1909.	1910.	1911.	1912.
ASSETS.						
	£	£	£	£	£	£
MUNICIPAL FUND—						
Uncollected rates	187,205	116,223	114,598	110,676	105,241	111,405
Other assets	122,581	182,790	287,944	350,092	473,054	522,911
LOAN FUND—						
(a) Sinking funds—						
Amount at credit	675,310	796,272	812,920	834,295	893,528	896,185
Arrears due	1,391	2,806	2,827	3,286	1,182	1,759
(b) Unexpended balances	394,136	220,674	106,852	345,287	264,048	237,202
PROPERTY—						
Buildings, markets, etc.	2,507,441	2,826,394	2,992,809	3,149,476	3,246,854	3,365,638
Waterworks	197,675	220,669	207,451	202,210	207,865	182,835
Gasworks	63,732	66,638	57,399	70,687	72,274	86,872
Total	4,149,471	4,432,466	4,562,800	5,066,009	5,263,546	5,404,807
LIABILITIES.						
	£	£	£	£	£	£
MUNICIPAL FUND—						
Arrears due sinking funds	1,021	2,806	2,827	3,286	1,182	1,759
Overdue interest	9,413	18,535	15,639	15,750	11,997	15,619
Bank overdrafts	157,046	122,453	120,705	133,237	165,275	234,154
Temporary Government advances	20,301	...	...	...	...	...
Other liabilities	142,530	194,283	233,359	293,089	*357,722	*362,136
LOAN FUNDS—						
Loans outstanding	4,253,304	4,437,673	4,416,103	4,767,138	4,831,984	5,011,950
Due on loan contracts	52,826	88,086	49,452	45,089	92,363	102,135
Total	4,637,041	4,863,836	4,838,085	5,257,589	5,460,523	5,727,753

* Including £100,351 due on current contracts.

(v.) *Revenue and Expenditure of Municipalities.*—The following table shows the revenue from various sources, and the expenditure under various heads, of municipalities during the years 1901 and 1908 to 1912:—

VICTORIA.—REVENUE AND EXPENDITURE OF MUNICIPALITIES, 1901 and 1908-12.

Items.	1901	1908.	1909.	1910.	1911.	1912.
SOURCES OF REVENUE.						
	£	£	£	£	£	£
Taxation ...	722,346	902,741	946,956	999,799	1,046,943	1,103,210
{ Rates	104,499	106,758	101,682	102,066	100,845	102,297
{ Licenses	14,965	17,628	18,751	19,296	19,833	20,438
{ Dog fees	49,623	57,386	68,014	65,739	63,071	74,029
{ Market and weighbridge dues	175,972	172,648	175,601	187,323	157,141	161,513
Government endowments and grants...	24,999	34,246	35,173	47,532	47,342	64,646
Contributions for streets, etc.	48,253	58,072	59,966	62,720	66,389	74,058
Sanitary charges	54,117	67,387	69,842	77,958	79,263	81,725
Rents	89,210	208,403	195,831	207,181	237,601	263,600
Other sources						
Total	1,283,984	1,625,269	1,671,816	1,769,614	1,818,428	1,945,516

HEADS OF EXPENDITURE.

Salaries, etc.	139,270	152,302	158,436	163,435	168,303	176,489
Sanitary work, street cleaning, etc. ...	132,542	142,769	150,964	159,571	178,623	198,006
Lighting	86,059	79,832	82,354	83,972	87,341	84,410
Fire brigades' contributions	16,769	20,724	22,051	23,223	23,120	25,946
Public works { Construction	244,315	313,607	288,869	335,446	311,065	335,717
{ Maintenance	345,334	474,188	490,341	548,583	571,254	736,457
Formation of private streets, etc. ...	23,350	32,718	37,888	32,163	46,849	66,735
Redemption of loans	27,745	60,568	58,263	46,439	66,860	61,782
Interest on loans	197,810	198,632	201,199	206,355	213,752	217,933
Charities	13,407	14,666	15,241	15,589	15,785	18,441
Other expenditure	103,403	187,830	173,154	170,840	187,514	129,190
Total	1,330,004	1,677,836	1,678,760	1,785,616	1,870,466	2,051,106

3. *Queensland.*—(i.) *Development of Local Government.* The existing scheme of local government in the State of Queensland is regulated by the provisions of the *Local Authorities Act 1902*, with its amendments in 1903, 1905 and 1910. A summary of these Acts and of the earlier legislation under which the system of local government in Queensland was inaugurated and developed, will be found in previous issues of this book (see *Year Book No. 5*, p. 1013).

(ii.) *Present System of Local Government*—The principal features of previous enactments as to the division of the State into local areas are retained in the Acts of 1902 and 1910, but such areas are in future to be of two classes—(a) towns and (b) shires. All municipalities formerly constituted as boroughs become towns, except Brisbane, Rockhampton, and Townsville, which are declared to be cities, and all shires and divisions become shires. The Governor-in-Council may, after giving notice in the *Gazette*, constitute, unite, divide, or abolish areas for the purpose of forming new areas, and may by proclamation constitute a town or city.

(a) *The Municipal Council.* All local areas are governed by councils, the members of which are called aldermen in the case of cities and towns, and councillors in the case of shires. *City and town councils* are composed of either seven, nine, or eleven members, as declared by Order-in-Council, but if the local authority has wards, three members are assigned to each ward. *Shire councils* are composed of five, seven, or nine members, as declared by Order-in-Council, but if the shire is divided the number cannot be more than three for each division, and need not be the same for every division.

In previous Year Books allusion has been made at some length to the powers and duties of municipal councils, as well as to loans, valuation, rates and tramway areas. It is not proposed to repeat this information in the present issue.

(b) *Qualification of Voters.* Generally, every person of either sex of the age of twenty-one, who is a natural-born or naturalised subject, and is rated as an occupier or owner of ratable land, is entitled to vote. The number of votes depends upon the value of the land in the following scale:—

QUEENSLAND MUNICIPALITIES.—PLURALITY OF VOTES.

Value of land	... Less than £500.	From £500 to £1000.	£1000 and upwards.
Number of votes	... 1	2	3

In the case of joint owners or occupiers, each is to be considered the owner or occupier of land of a value equal to that of the whole divided by the number of owners or occupiers not exceeding three. If more than three persons are joint owners or occupiers, those whose names stand first on the rate book or valuation or return are to be taken. Companies may nominate their secretaries, managers, or directors for the purpose of voting.

(iii.) *Area, Population, Number of Dwellings, Rates, Assets and Liabilities of Cities, Towns and Shires.*—The following table gives particulars of the area, population, number of inhabited tenements, assets and liabilities of cities and towns, and of shires, for each year from 1908 to 1912:—

QUEENSLAND.—PARTICULARS OF CITIES AND TOWNS AND SHIRES, 1908 to 1912.

Year.	Municipality.	Area.	Population.	Number of Inhabited Dwellings.	Capital Value.	Assets.	Liabilities.		
							Government Loans.	Other.	Total.
1908	Cities and Towns	354	236,388	45,430	13,745,293	1,372,525	279,194	745,300	1,024,494
	Shires ...	669,901	333,619	70,294	31,279,792	277,086	111,754	52,908	164,662
	Total	670,255	570,007	115,724	45,025,085	1,649,611	390,948	798,208	1,189,156
1909	Cities and Towns	384½	241,795	45,365	13,637,273	1,366,435	253,391	815,540	1,068,931
	Shires ...	669,870½	344,752	73,480	33,677,538	301,976	111,740	53,543	165,383
	Total	670,255	586,547	118,845	47,314,811	1,668,411	365,131	869,183	1,234,314
1910	Cities and Towns	364½	247,435	44,804	13,774,440	1,406,521	242,924	767,481	1,010,405
	Shires ...	669,890	358,085	76,803	36,023,390	331,382	116,456	50,882	167,338
	Total	670,254½	605,520	121,607	49,797,830	1,737,903	359,380	818,363	1,177,743
1911	Cities and Towns	364½	232,083	46,310	14,305,268	1,425,403	214,903	794,733	1,009,636
	Shires ...	669,890½	368,202	77,731	39,482,811	367,078	127,079	58,741	185,820
	Total	670,255	600,375	124,041	52,788,079	1,792,481	341,982	853,474	1,195,456
1912	Cities and Towns	366	250,743	48,932	14,626,306	1,439,226	218,948	850,031	1,068,979
	Shires ...	669,528	393,172	83,021	40,365,614	426,694	141,288	84,894	226,182
	Total	669,894	643,915	131,953	54,991,920	1,865,920	360,236	934,925	1,295,161

(iv.) *Receipts and Expenditure of Cities, Towns, and Shires.*—The following table shows the receipts and expenditure (including loan moneys) of cities and towns and of shires, as well as the total receipts and expenditure of all municipalities, for each year from 1908 to 1912:—

QUEENSLAND.—REVENUE AND EXPENDITURE OF CITIES, TOWNS, AND SHIRES,
1908 to 1912.

Year.	Municipality.	Receipts.				Expenditure.				
		From Govern- ment.	From Rates.	From other Sources.	Total.	On Public Works.	Loan Redemp- tion.	Office Expenses and Salaries.	Other Ex- penses.*	Total.*
		£	£	£	£	£	£	£	£	£
1908	Cities and Towns	11,352	233,622	57,550	302,524	196,754	17,596	25,014	71,788	311,152
	Shires ...	23,646	202,722	30,146	256,514	187,346	12,281	33,810	37,251	270,688
	Total ...	34,998	436,344	87,696	559,038	384,100	29,877	58,824	109,039	581,840
1909	Cities and Towns	6,891	247,433	66,138	320,462	146,721	17,459	24,668	142,249	331,097
	Shires ...	16,648	222,536	32,235	271,419	152,700	13,332	37,585	51,194	254,811
	Total ...	23,539	469,969	98,373	591,881	299,421	30,791	62,253	193,443	585,908
1910	Cities and Towns	16,775	278,300	68,296	363,371	222,203	18,581	25,891	92,188	358,863
	Shires ...	23,285	253,398	37,295	313,978	209,466	12,147	39,092	44,405	305,110
	Total ...	40,060	531,698	105,591	677,349	431,669	30,728	64,983	136,593	663,973
1911	Cities and Towns	27,051	311,022	91,767	429,840	285,096	20,922	31,824	92,808	430,650
	Shires ...	31,138	296,222	64,532	391,892	273,472	11,721	42,561	50,195	377,949
	Total ...	58,189	607,244	156,299	821,732	558,568	32,643	74,385	143,003	808,599
1912	Cities and Towns	32,891	341,469	83,827	458,187	365,439	22,388	30,542	74,447	492,816
	Shires ...	30,969	322,049	54,201	407,219	311,580	12,020	51,612	56,771	431,983
	Total ...	63,860	663,518	138,028	865,406	677,019	34,408	82,154	131,218	924,799

* Including interest on loans.

4. *South Australia.*—(i.) *Development of Local Government.* In the latter part of 1839 the first municipal law was passed in South Australia, which was thus the birthplace of municipal government in the Commonwealth. On the 31st October, 1840, the principles of self-government were practically adopted in Adelaide by the election of a mayor and council, consisting of nineteen members, and the system has since been extended throughout the settled parts of the State by the formation of district councils and municipal corporations, which are the two types of local authorities now in existence.

(ii.) *District Councils.* The first District Councils Act was passed in 1858, was amended in 1862, and was further amended and consolidated by the District Councils Act of 1876, which provided for the continuation of existing districts and for the establishment of new ones by proclamation on the petition of the ratepayers. The revenue of the councils consisted of rents, profits, and income from lands vested in the councils or over which the council had the control and management; fines and penalties enforced under the Act; fees for licenses; and general and special rates and loans. Provision was made for the election of councillors, their number, qualification, and retirement; for the election of auditors; the meetings, powers and functions of councils; the appointment of constables; revenue and expenditure; assessment of rates; and for making by-laws for various purposes. The Act of 1876 was amended from time to time, and was finally amended and consolidated by the Act which is now in force, namely, the District Councils Act 1887, which has in turn been amended in the years 1889, 1890, 1897, 1904, and 1905. These Acts were again amended by the Local Government Act 1910.

The powers and duties of district councils, together with the qualification necessary for councillors and electors, have been given *in extenso* in previous issues.

(iii.) *Municipalities.* Municipalities were first established under the Municipal Corporations Act of 1861, which, after providing for the extension of the powers and duties of the Corporation of the City of Adelaide, authorised the Governor, on petition of a majority of not less than two-thirds of the property-owners, to constitute any town, district, or place within the province, into a municipality. This Act and its amendments were consolidated in the Municipal Corporations Act 1880, which was amended from time to time until the year 1890, when it was repealed and its provisions consolidated by the existing Act, the Municipal Corporations Acts of 1890, which was in turn amended in 1893, 1896, and 1903. These Acts were again amended by the Local Government Act 1910.

A brief description of the Municipal Corporations Act of 1890, as well as the functions of municipal councils will be found in previous issues of this book.

(iv.) *Finances of District Councils and Corporations.* The subjoined tables show the amounts of assessments and the revenue and expenditure of district councils and of corporations for the financial years 1901 and 1908 to 1912; the figures given are exclusive of the Main Roads Funds, particulars as to which may be found in the section of this book on "Roads and Bridges."

SOUTH AUSTRALIA.—ASSESSMENT, REVENUE, AND EXPENDITURE OF LOCAL AUTHORITIES, 1901 and 1908-12 (EXCLUSIVE OF MAIN ROADS FUNDS).

Year.*	Amount of Assessment (Annual Value).	Revenue.				Expenditure.	
		From Rates.	From Subsidies.	Other Sources.	Total.	On Public Works.	Total.
DISTRICT COUNCILS.							
	£	£	£	£	£	£	£
1901	1,412,507	63,321	15,225	51,919	130,465	65,406	128,499
1908	1,801,370	84,036	23,051	27,079	134,169	89,665	128,072
1909	1,849,286	89,051	20,718	30,783	140,552	104,834	146,468
1910	2,098,282	96,550	25,483	30,058	152,091	101,979	146,593
1911	2,146,530	106,963	28,017	29,195	164,175	120,369	161,125
1912	2,145,091	115,427	28,848	34,974	179,249	140,225	182,610
CORPORATIONS.							
1901	1,177,850	87,289	9,733	49,342	146,364	55,533	146,091
1908	1,286,696	103,109	15,479	50,470	169,058	86,889	167,797
1909	1,340,755	108,480	15,828	57,837	182,145	97,118	177,897
1910	1,385,752	112,896	16,589	57,494	186,979	104,586	198,875
1911	1,499,012	133,550	16,420	62,536	212,506	105,738	217,313
1912	1,605,095	142,032	18,544	73,604	234,180	140,059	233,720

* Up to and including the year 1903, the financial year for Corporations ended on the 31st December, but after that date ends on the 30th November. The financial year for district councils ends on the 30th June.

5. *Western Australia.*—(i.) *Types of Local Authorities.* In this State there are three forms of local authorities, namely :—(i.) Municipalities, (ii.) Road Districts, and (iii.) Local Boards of Health. The first Municipalities Act was passed in 1871, but only a few districts were incorporated under it. In 1895 a more comprehensive measure, the Municipal Institutions Act, was passed, and after being amended from time to time was consolidated by the Municipal Institutions Acts 1902 and 1904. In 1906 the most recent enactment, the Municipal Corporations Act, was passed, repealing and consolidating previous enactments. The whole area of the State outside incorporated municipalities is divided into road districts, which are administered under the Roads Act 1902 and 1904. In municipalities the councils act as Health Boards for the purpose of administering the Public Health Act, while outside municipalities local Boards of Health may

be formed. In 1904, another local government measure, the Water Boards Act, was passed, under which Boards may be appointed for the control of waterworks, and rates may be levied for the purpose, the maximum being fixed at two shillings in the pound of ratable value.

(ii.) *Municipalities.* These are now regulated by the Municipal Corporations Act, which came into force on the 1st January, 1907. Provision is made for the continuation of existing municipalities, and the Governor is authorised to constitute new municipalities on petition signed by at least fifty property-holders of the district proposed to be incorporated; to unite adjoining municipalities on petition under their common seals; to sever any portion from a municipality on petition signed by a majority of the ratepayers, and to annex such portion to a contiguous municipality or road district.

(a) *Municipal Councils* consist of a mayor and councillors, the number of which depends upon the population of the municipality; if the population is less than 1000 there are six councillors, if from 1000 to 5000 there are nine councillors, and if the population is over 5000 there are twelve councillors, or three for each ward. Any male ratepayer of the age of twenty-one years, if a natural born or naturalised subject, is eligible for election as mayor or councillor, except ministers of religion, uncertificated bankrupts, prisoners, and certain other persons who may be disqualified on the ground of interest.

The duties and powers of municipal councils, the levying of rates, the qualification of voters and the classification of municipalities in Western Australia are fully referred to in previous issues. (Year Book No. 5, p. 1025.) Consideration of space prevents their inclusion in this edition.

(b) *Government Subsidies.* Grants are made annually to municipalities by way of subsidies on the amounts of rates collected. To entitle any council to participate in the allocation of the annual Parliamentary vote the council must have levied a minimum general rate of one shilling in the pound, and must have collected not less than £300 from such rate. Newly-constituted municipalities are, during the first year of existence, dealt with apart from the provisions of the general scheme, and are allowed a subsidy of £2 for every £1 of general rate collected; in subsequent years they participate according to the general provisions. No subsidy is paid on income from general rates exceeding £3000.

(iii.) *Area, Population, etc. of Municipalities.* Returns regarding the area, population, and valuation of municipalities are defective. They are shewn in the table hereunder:—

**WESTERN AUSTRALIA.—NUMBER, AREA, POPULATION, NUMBER OF DWELLINGS,
AND VALUATION OF MUNICIPALITIES, 1901 and 1908-12.**

Year ended the 31st October.	Number of Munic- ipalities.	Area	Population.	Dwellings.			Amount Payable in respect of Rates.
				Occupied.	Unoc- cupied	Total.	
				No.	No.	No.	
1901	42	71,721	*96,807†	†20,989	†967	†21,956	‡
1908	47	90,078	135,525	29,208	2,112	31,320	144,344
1909	46	88,833	141,543	30,535	1,263	31,798	138,869
1910	42	75,716	\$143,808	\$31,064	\$1,652	\$32,716	139,835
1911	42	75,430	\$143,808	\$31,064	\$1,652	\$32,716	144,745
1912	38	71,203	154,005	32,727	1,613	34,340	152,143

* Census figures, 1901. † Returns for thirty-nine municipalities only. ‡ Not available.
‡ Census figures, 1911.

Complete particulars of improved or unimproved capital values are not available. In the year 1911 the capital value of ratable property in municipalities was £20,362,374.

(iv.) *Revenue and Expenditure of Municipalities.* The following table gives particulars as to the revenue and expenditure of municipalities during the years 1901 and 1908 to 1912:—

**WESTERN AUSTRALIA.—REVENUE AND EXPENDITURE OF MUNICIPALITIES,
1901 and 1908-12.**

Year ended the 31st October	Revenue.				Expenditure.			
	From Rates.	From Govt. Grants.	From other Sources.	Total.	Works and Improvements.	Disbursements in respect of Loans.	Other Expenses.	Total.
	£	£	£	£	£	£	£	£
1901*	78,021	66,860	82,228	227,109	111,241	23,809	79,365	214,415
1908 ...	139,228	67,315	176,040	382,583	103,943	59,037	239,882	402,862
1909 ...	138,445	37,301	207,982	383,728	83,283	61,137	225,645	370,065
1910 ...	138,719	13,337	230,407	382,463	87,998	67,168	244,650	399,816
1911 ...	144,993	27,944	252,743	425,680	75,697	69,896	283,402	428,995
1912 ...	148,538	25,902	†834,991	1,009,431	73,576	104,475	735,907	913,958

* Incomplete. † Including £525,000 loan, raised for purchase of electric light and gasworks.

(v.) *Assets and Liabilities of Municipalities.* The following table gives particulars respecting the assets and liabilities of municipalities at the end of each financial year 1901 and 1908 to 1912:—

**WESTERN AUSTRALIA.—ASSETS AND LIABILITIES OF MUNICIPALITIES,
1901 and 1908-12.**

Year ended the 31st October	Assets.					Liabilities.		
	Balance in Hand.*	Value of Property Owned by Municipalities.	Accrued Sinking Funds for Redemption of Loans.	Other Assets.	Total.	Outstanding Debts and Bonds.	Other Liabilities.	Total.
	£	£	£	£	£	£	£	£
1901† ...	37,259	214,984	42,311	13,432	307,986	321,000	19,762	340,762
1908 ...	27,291	605,165	143,434	58,985	834,878	757,494	42,321	799,815
1909 ...	41,216	628,205	152,416	56,705	876,542	795,108	36,352	831,460
1910 ...	24,603	669,499	174,119	58,548	926,769	844,844	53,304	898,148
1911 ...	19,570	703,044	195,892	48,884	967,390	893,064	55,615	948,679
1912 ...	103,162	1,154,568	281,477	53,032	1,597,239	1,459,282	50,814	1,510,096

* Including bank balance, cash in hand, and fixed deposit. † Incomplete.

(vi.) *Road Districts.* The whole area of the State, outside incorporated municipalities, is divided into districts, the executive powers being vested in elective boards. These districts were originally formed solely for the purpose of controlling roads and bridges, but their powers and duties have been extended, so that at the present time they correspond closely to the shires of the other States of the Commonwealth. The enactments at present governing the administration of the Road Boards are the Roads Act 1911, the Parks and Reserves Act, the Cattle Trespassing Act, the Width of Tyres Act, the Cart and Carriage Licenses Act, and the Dog Act. The general powers and duties of the Boards are described in previous issues of this book.

(vii.) *Boards of Health.* These may be established under the Public Health Act 1911, which came into force on the 1st June, 1911, either within or outside of municipal boundaries. In the former case the Act is administered by the municipal councils, while in the latter case districts whose borders are conterminous with road districts are administered by the local authorities. Those not conterminous with road districts are administered by special Boards. The revenue of these Boards consists chiefly of moneys received

from health rates and sanitary fees, and the largest item of expenditure is directly connected with the sanitary service. The following table shews particulars of the receipts and expenditure of the various Boards—both municipal and extra-municipal—during the years 1901 and 1908 to 1912 :—

**WESTERN AUSTRALIA.—RECEIPTS AND EXPENDITURE OF LOCAL HEALTH
BOARDS, 1901 and 1908-12.**

Year ended the 31st October.	Revenue.			Expenditure.		
	From Public Health Rate.	From other Sources.	Total.	On Sanitary Services.	Other Expenses.	Total.
	£	£	£	£	£	£
1901	15,230	17,477	32,707	18,787	12,992	31,779
1908	436,304	41,674	77,978	¹ 243,830	² 34,981	¹² 78,811
1909	539,447	50,688	90,135	¹ 249,502	² 38,465	¹² 87,967
1910 ¹	638,741	52,095	90,836	56,278	34,144	90,442
1911 ²	738,398	¹ 056,807	95,205	59,639	32,919	92,558
1912 ³	847,354	¹ 160,525	107,879	69,703	40,552	110,255

1. Exclusive of 10 boards which did not furnish returns, and 14 boards which were non-active.
 2. Exclusive of 1 board which furnished no returns and 22 boards which were inactive. 3. Exclusive of 15 non-active boards and 1 that sent in no return. 4. Including sanitary rates, £17,707.
 5. Including sanitary rates, £16,801. 6. Including sanitary rates, £17,986. 7. Including sanitary rates, £17,427. 8. Including sanitary rates, £18,342. 9. Including sanitary fees and charges, £13,341. 10. Including sanitary fees and charges, £50,617. 11. Including sanitary fees and charges, £53,790. 12. Exclusive of expenditure of one extra-municipal board.

On the 31st October, 1912, there were thirty-eight Local Boards of Health within municipalities, and on the 30th June, 1912, eighty-seven extra-municipal Boards. In and after 1911, the financial year of Municipal Local Health Boards ended 31st October, and that of extra-municipal Boards, 30th June.

6. *Tasmania.*—(i.) *Development of Local Areas.* In this State the city of Hobart was incorporated by special Act in the year 1852, but it was not until 1858, when the Rural Municipalities Act was passed, that a general scheme for the establishment of municipalities was extended throughout the State. This Act was amended from time to time without, however, altering its chief characteristics. In 1869 a Roads Act was passed, and after being amended at various times was consolidated in 1884. Under the provisions of these Acts parts of the State were placed under the control of Town Boards and Road Trusts. The general rate under the Municipalities Act was limited to one shilling and sixpence in the pound of annual value, while special rates could be levied in rural districts, provided that the general and special rates together did not exceed one shilling and sixpence in the pound.

(ii.) *Acts now in Force.* In 1906 the whole of the Acts dealing with local authorities were amended and consolidated by the Local Government Act of that year. The whole State, with the exception of the urban municipalities of Hobart and Launceston, is divided into municipal districts, and every Rural Municipality, Town Board, Main Road District, Road District, Local Health District, Fruit District, Rabbit District, School District, and Public Recreation Ground District included in any municipality established by the Act is abolished. Each district is incorporated and is under the control of a warden and councillors, who, in addition to the specific duties and powers imposed and conferred by the Act of 1906, are vested with powers and authorities under the following Acts :—The Codlin Moth Act 1888, the Rabbits Destruction Act 1889, the Public Health Act 1903, the Education Act 1885, the Roads Act 1884, the Rural Municipalities Act 1865, the Police Act 1905, the Town Boards Act 1896, the Public Recreation Grounds Act 1888, the Cemeteries Act 1865, and the Californian Thistle Act 1883. The Governor is authorised to unite, subdivide, or abolish municipalities or wards on petition, and may

do so without petition if in any municipality there is at any time no council or an insufficient number of councillors to form a quorum. The Act of 1906 was amended in 1908, and again in 1911.

(a) *Formation of Councils.* In the case of municipalities not divided into wards the council is to consist of the number of members, being a multiple of three, assigned to it by the Governor, while the councils of municipalities which are subdivided consist of three councillors for each ward. Any resident elector is eligible to act as a councillor unless he is disqualified as being an interested person, a bankrupt or convict, or as undergoing a sentence of imprisonment, or as insane. The warden is elected by the councillors from their own body.

The functions of councils, their borrowing powers, the levying of rates, and the constitution of local and water districts have been referred to in detail in previous issues.

(b) *Qualification of Electors.* Both owners and occupiers of property within a municipality are allowed plurality of votes according to the following scale:—

Annual Value of Property	Under £30.	£30 to £80.	£80 to £160.	£160 to £240.	£240 to £360.	£360 and upwards.
Number of Votes	1	2	3	4	5	6

In the case of joint owners or occupiers the number of votes according to the above scale is equally divided as far as possible, and the vote or votes which cannot be so divided may be given by such one of the joint owners or occupiers as may be appointed by the others. The provisions of the Acts relating to voting by post at parliamentary elections may be made applicable to any municipal election on the petition of the council to the Governor.

(iii.) *Annual Value, Revenue, and Expenditure of Municipalities.*—The following table shews the annual value, total receipts, and expenditure of municipalities for the years 1908 to 1912 inclusive:—

**TASMANIA.—ANNUAL VALUE, REVENUE, AND EXPENDITURE OF MUNICIPALITIES,
1908 to 1912.**

Year.	Number of Municipalities.	Annual Value of Ratable Property.	Revenue				Expenditure.†
			From Rates.	From Govt.	From other Sources.*	Total.	
		£	£	£	£	£	£
1908 ...	51	1,340,243	142,466	40,254	186,466	369,186	353,699
1909 ...	51	1,404,328	173,453	44,293	92,244	309,990	318,501
1910 ...	51	1,459,917	147,750	35,616	87,994	271,360	266,108
1911 ...	51	1,492,533	150,233	35,215	98,365	280,165	307,334
1912 ...	51	1,524,789	159,290	26,051	107,935	293,276	276,794

* Including sums derived from loans. † Including repayments of loans.

According to the latest estimate made by the Commissioner of Taxes the capital value of ratable property in 1911 was £30,924,993.

(iv.) *Total Revenue and Expenditure of Local Bodies.*—Particulars as to Road Boards and Road Trusts are given in the chapter of this book on "Roads and Bridges." In addition to the local authorities already mentioned, Marine Boards have been established at seven ports in Tasmania for the purposes of constructing and maintaining wharves and jetties and of controlling all matters relating to the shipping in the respective ports. Twenty water trusts and forty cemetery trusts have also been established in connection with municipal bodies. The subjoined statement shews the total revenue and expenditure for all local bodies, exclusive of all amounts contributed by the General Government, during each financial year from 1910 to 1913 inclusive:—

TASMANIA.—REVENUE AND EXPENDITURE OF ALL LOCAL BODIES, EXCLUSIVE OF AMOUNTS CONTRIBUTED BY THE GENERAL GOVERNMENT, 1910 to 1913.

Particulars.	1909-10.	1910-11.	1911-12.	1912-13.
*REVENUE.				
	£	£	£	£
Marine Boards and Lighthouses	74,723	72,507	72,676	72,671
Municipalities	309,990	271,360	280,165	267,225
Road and Bridge Trusts	†	†	†	†
Cemetery Trusts	†	\$894	918	1,147
Town Boards	†	†	†	†
Water Trusts	2,325	2,267	2,272	2,805
Total	387,038	347,028	356,031	343,848
†EXPENDITURE.				
	£	£	£	£
Marine Boards and Lighthouses	82,627	68,894	68,529	78,322
Municipalities	318,501	266,108	307,334	270,743
Road and Bridge Trusts	†	†	†	†
Cemetery Trusts	†	\$769	902	856
Town Boards	†	†	†	†
Water Trusts	1,923	4,138	1,834	2,065
Total	403,051	339,909	378,599	351,986

* Exclusive of amounts contributed by the general Government † Exclusive of expenditure from Government contributions. ‡ Included in municipalities under the new Local Government Act. § Exclusive of a number of cemetery trusts incorporated in the newly organised municipalities.

§ 3. Water Supply, Sewerage and Drainage.

1. **New South Wales.**—(i.) *Sydney Metropolitan Board of Water Supply and Sewerage.* Prior to the year 1888 the main water supply and sewerage systems of Sydney and suburbs were under the control of the City Corporation, while several of the suburban councils had constructed local systems, but in that year the Government, with the object of placing the administration of both water supply and sewerage systems throughout the County of Cumberland under the control of an independent body, passed an Act authorising the establishment of the Metropolitan Board of Water Supply and Sewerage. This Board consists of seven members, three of whom are appointed by the Government, two by the City Council, and two by the suburban and country municipalities in the County of Cumberland. The Board is under the general supervision of the Minister for Works—a provision considered necessary since the loan expenditure of the Board forms part of the public debt of the State.

(a) *Present System.* In the year 1850 authority was given by the Legislative Council to the City Corporation to construct water and sewerage works. Under this authority a water supply scheme was adopted and carried out, at a cost of nearly £1,750,000, by which the waters of the streams draining into Botany Bay were intercepted and pumped into three reservoirs. This system has now been superseded, the metropolitan water supply being at present obtained from the watersheds of the Nepean, Cataract, and Cordeaux Rivers. The principal reservoirs in connection with the scheme are the "Cataract" and "Prospect" dams. A fuller description of these dams will be found in previous issues of this book (see Year Book No. 5, p. 984), but their dimensions are here given :—

SYDNEY WATER SUPPLY.—CATARACT AND PROSPECT DAMS.

Dam.	Height above Foundation.	Width at Top.	Thickness at Bottom.	Length.	Area of Reservoir.	Capacity of Reservoir.
	Feet.	Feet.	Feet.	Feet.	Acres.	Gallons.
Cataract ...	192	16½	150	811	2,104	20,743,200,000
Prospect ...	85½	30	523	7,300	1,266½	11,029,200,000*

* Of which 5,527,000,000 gallons are available by gravitation.

(b) *Aqueducts and Mains.* The water is drawn off from the Prospect reservoir by a canal, five miles in length, to the Pipe Head Basin, situated 16½ miles from Sydney. It is then conveyed for a further distance of five miles to Potts' Hill reservoir, which has a capacity of 100,000,000 gallons, covers twenty-four and a half acres, and is designed to tide the city over any interruption of supply from Prospect, and to prevent fluctuation of pressure. Thence the water passes through a screening tank, and proceeds towards the city in two 48-inch cast-iron mains. A fuller description of the system of reticulation adopted will be found in previous issues.

(c) *Storage Reservoirs.* In connection with the water supply there are in all thirty-five service reservoirs, with a total maximum capacity of 55,693,000 gallons.

(d) *Revenue, Expenditure, and Capital Cost of Sydney Waterworks.* The following table gives particulars as to the revenue, expenditure, and capital cost of the metropolitan waterworks for 1901 and 1909-13.

SYDNEY WATERWORKS.—REVENUE, EXPENDITURE, AND CAPITAL COST, 1901 and 1909-13.

Year Ended 30th June.	Revenue.	Working Expenses.	Capital Cost exclusive of Items on which Interest is not charged.	Percentage of Working Expenses to Revenue.	Percentage of Revenue to Capital Cost.	Interest Payable on Capital Cost.	Net Profit after paying Working Expenses and Interest.
	£	£	£	%	%	£	£
1901 ...	203,348	49,270	4,300,552	24.22	4.72	152,333	1,745
1909 ...	267,519*	80,282	5,146,303	30.01	5.19	185,591	1,646
1910 ...	284,943†	93,027	5,286,917	32.64	5.38	184,486	7,430
1911 ...	299,442	99,355	5,420,813	33.18	5.52	192,486	7,601
1912 ...	329,605	112,958	5,606,268	34.27	5.87	198,443	18,204
1913 ...	361,187	126,795	5,907,125	35.11	6.11	200,918	33,474

* Rate reduced from 7d. to 6d. from 1st July, 1903, and water-meter rents abolished. † Meter rentals reimposed from 1st July, 1909, and meterage charge reduced from 1s. to 11d. per 1000 gallons.

(e) *Quantity of Water, Number of Houses, and Population Supplied.* The following table gives various particulars for the years 1901 and 1909-13, shewing the increase in the supply of water in Sydney and suburbs:—

SYDNEY WATERWORKS.—NUMBER OF GALLONS, HOUSES, AND POPULATION SUPPLIED, 1901 and 1909-13.

Year Ended 30th June.	Number of Houses Supplied.	Estimated Population Supplied.	Average Daily Supply.	Total Supply for the Year.	Aver. Daily Supply.		Mains Laid.
					Per House.	Per Head of Estimated Population	
	No.	No.	1000 Gallons.	1000 Gallons.	Gallons.	Gallons.	Miles.
1901	98,298	491,000	21,583	7,877,677	219	43.95	40
1909	128,444	642,220	25,911	9,457,660	201	40.34	71
1910	133,788	668,940	26,903	9,819,657	201	40.21	100
1911	139,237	696,185	29,006	10,587,433	208	41.55	102
1912	146,236	731,180	30,522	11,141,700	208	41.74	74
1913	155,213	776,065	32,594	11,896,810	210	41.99	100

(f) *Other Water Supply Systems under the Metropolitan Board.* In addition to the main metropolitan water supply system there are certain other systems within the County of Cumberland managed by the Metropolitan Board. (a) The Richmond waterworks are entirely unconnected with the Sydney supply. Water is supplied to the town by a small pumping station on the left bank of the Hawkesbury River, just below the confluence of the Grose and Nepean. (b) The Wollongong waterworks are also unconnected with the Sydney supply. The source of supply is the Cordeaux River and the catchment area is 2400 acres in extent. The total capacity of the reservoir is 173,000,000 gallons and the total length of the main about nineteen miles, exclusive of the extension to Port Kembla and Unanderra. (c) The Manly waterworks are supplied by a special catchment area of about 1300 acres, and are also connected with the metropolitan system by a 10-inch main from Mosman. (d) The water-supply for the districts of Campbelltown, Camden and Narellan, and Liverpool is not drawn from the main Sydney supply through Potts' Hill, but is received by gravitation from the upper canal at Prospect. For further details of these water-supply systems see previous issues.

(ii.) *Metropolitan Sewerage System.* The system which is now under the control of the Metropolitan Board of Water Supply and Sewerage will be found fully described in previous issues. (See Year Book No. 5, p. 986).

(a) *Revenue, Expenditure, and Capital Cost of Sydney Sewerage Systems.* The following table gives particulars as to the revenue, expenditure, and capital cost of the metropolitan sewerage systems for 1901 and 1909-13:—

**SYDNEY SEWERAGE SYSTEMS.—REVENUE, EXPENDITURE, AND CAPITAL COST,
1901 and 1909-13.**

Year ended the 30th June.	Revenue.	Working Expenses.	Capital Cost, exclusive of Items on which Interest is not Charged.	Percentage of Expenditure to Revenue.	Percentage of Revenue on Capital Cost.	Interest Payable on Capital Cost.	Profit or Loss after Payment of Working Expenses and Interest.
	£	£	£	%	%	£	£
1901 ...	125,290	45,395	3,066,147	36.23	4.05	106,475	* —26,580
1909 ...	214,212†	68,575	4,225,239	32.01	5.06	151,317	— 5,680
1910 ...	223,131	70,851	4,351,381	31.75	5.12	151,943	337
1911 ...	234,208	79,636	4,496,290	34.00	5.20	159,070	— 4,498
1912 ...	250,826	82,246	4,769,449	32.78	5.25	166,771	1,809
1913 ...	266,292	91,094	5,083,263	33.95	5.27	171,957	3,241

* Represents a loss. † Rate reduced from 10d. to 9½d. from 1st July, 1908.

(b) *Number of Houses Drained, Population, and Length of Sewers in Sydney Metropolitan Sewerage Systems.* The following table gives particulars as to the number of houses drained, the population, and the length of sewers within the Sydney metropolitan area for 1901 and 1909 to 1913:—

**SYDNEY SEWERAGE SYSTEMS.—NUMBER OF HOUSES DRAINED, POPULATION,
AND LENGTH OF SEWERS, 1901 and 1909-13.**

Year ended the 30th June.	Number of Houses Drained.	Estimated Population Served.	Total Length of Sewers.	Total Length of Storm-water Drains.	Ventilating Shafts Erected.	Sewers Ventilated.
	No.	No.	Miles.	Miles.	Feet.	Miles.
1901 ...	75,416	370,000	515.62	25.91	194,667	450
1909 ...	99,442	497,210	760.16	47.30	299,910	714
1910 ...	102,896	514,480	793.55	47.82	344,820	756
1911 ...	108,012	540,060	825.20	48.85	376,900	795
1912 ...	110,737	553,685	863.29	49.63	382,654	809
1913 ...	114,690	573,450	890.53	52.24	401,344	853

(iii.) *The Hunter District Water Supply and Sewerage Board.* The waterworks of the Lower Hunter were constructed by the Government under the provisions of the Country Towns Water Supply and Sewerage Act of 1880. In 1892 a special Act was passed establishing an independent Board to control the water-supply works. Fuller reference is made to the constitution of this Board and to the municipalities and incorporated areas under its jurisdiction in previous issues of the Year Book. (See Year Book No. 5, p. 988.)

(a) *Description of Waterworks.* The water supply is pumped from the Hunter River about a mile and a half up stream from West Maitland into a settling-tank of 1,390,500 gallons capacity, thence through filter beds into a clear water tank holding 589,500 gallons. It is then pumped from the clear water tank into two summit reservoirs, one of which supplies East and West Maitland, Morpeth, and Maitland, while the other supplies the other districts under the control of the Board. There is also a storage reservoir of 172,408,100 gallons capacity, which is resorted to when the river water is too turbid. In these districts there are nine service reservoirs, having a total capacity of nearly 4,000,000 gallons supplied by gravitation. On the hill at Newcastle there is also a high-level iron tank with a capacity of 20,000 gallons, which is supplied by a small pumping engine on the roof of the Newcastle reservoir. The total length of water mains is 354 miles.

(b) *Water Supply, Capital Cost, Revenue, and Expenditure.* By the Act of 1892 referred to above and an Amending Act of 1894 the capital debt of the Board was to be liquidated by annual instalments distributed over 100 years with interest at 3½ per cent. By a further amending Act of 1897 the repayment of expenditure on permanent works was abrogated, and the annual instalments were to be paid in liquidation of the cost of renewable works to be fixed by the Government from year to year. The capital debt of the Board to the Government at 30th June, 1913, was in respect of water supply £512,862, and £292,390 in respect of sewerage. In the subjoined table particulars are given as to the revenue and expenditure, and also as to the number of houses and population supplied in 1901 and 1909 to 1913:—

PARTICULARS OF THE HUNTER DISTRICT WATER SUPPLY, 1901 and 1909 to 1913.

Year ended 30th June.	Revenue.	Working Expenses (including Interest).	Houses Supplied.	Estimated Population Served.	Supply.	
					Daily Average.	Total.
	£	£	No.	No.	1000 Gallons.	1000 Gallons.
1901	27,405	30,948	9,086	45,400	1,005	366,889
1909	43,395	41,184	15,679	78,395	1,766	644,689
1910	46,767	43,126	16,446	82,230	1,650	602,497
1911	45,711	45,420	17,164	85,820	1,850	675,214
1912	47,788	47,920*	17,796	88,980	2,026	739,539
1913	53,673	49,043	18,405	92,025	2,366	863,692

* Inclusive of an instalment of £10,574 to the sinking fund for reconstruction of renewable works.

The average daily consumption of water for all purposes per inhabitant was 25.71 gallons during the year 1913, as against 22.77 gallons during the previous year.

(c) *Sewerage Works.*—Considerable progress has been made by the Department of Public Works with the construction of the sewerage works for Newcastle and suburbs. The scheme is designed on the separate system, and will deal with the sewage partly by gravitation and partly by pumping. Up to the 30th June, 1913, about 51 miles of sewers, connecting with 3457 separate properties, were under the control of the Board. For the financial year 1912-13 the revenue was £12,472 and the expenditure £16,960, the latter amount including a £2231 instalment to the Sinking Fund for the reconstruction of renewable works.

(iv.) *Water Supply and Sewerage in Country Towns.* With the object of assisting municipalities to construct systems of water supply and sewerage, the Country Towns Water Supply and Sewerage Act of 1880 was passed, but has since been amended by the

Acts of 1887, 1894 and 1905. The principal provisions of these Acts are more fully dealt with in previous issues of this book. (See Year Book No. 5, p. 989.)

(a) *Waterworks*. Up to the 30th June, 1913, forty-nine country municipalities had availed themselves of the privileges of the Acts as regards waterworks, all of which at that date had been completed and handed over by the Government. The total amount expended on these works was £900,454, and the total of the sums payable annually for a period of 100 years was £34,351, including interest at the rate of 3½ per cent., the first repayments having become due at various dates, starting from the end of the year 1893. In the calculation of these repayments the interest on the expenditure has been added, and any payments by the councils, as well as sums remitted under the authority of the Act, have been deducted. Other schemes of water supply and extensions of existing works are in course of construction. A number of other municipalities have constructed works out of their own resources.

(b) *Sewerage Works*. Only eleven municipal councils have taken advantage of the Act providing for the construction of sewerage works in country towns. On the 30th June, 1913, the capital debt of these systems was £169,393, the amount payable annually to the Government being £6479. Other sewerage systems, as well as extensions to existing systems, are in course of construction.

2. *Victoria*.—(i.) *The Melbourne and Metropolitan Board of Works*. This Board was established by an Act of 1890, and entered upon its duties in March, 1891. The Board consists of forty members, one of whom is a chairman elected every four years by the other members. Nine members are elected by the Melbourne City Council, four by the South Melbourne Council, three by the Prahran, two each by the Fitzroy, Richmond, St. Kilda, and Collingwood, and one each by the other suburban municipal councils returning a representative. The district over which the Board exercises control consists of fifteen cities, five towns, two shires, and parts of three others, or twenty-five municipalities in all, comprising a total area of 109,009 acres, and containing an estimated population on the 31st December, 1913, of 639,700 (including those supplied with water outside the Board's area). The waterworks for the supply of Melbourne and suburbs were originally carried out by the Government, which had for that purpose contracted loans amounting to £2,389,934; these works were vested in the Board in 1891. The primary object of the creation of the Board was not, however, to take over these works, but was to supply the long called for and pressing want of a sewerage system for the metropolis. To carry out its work the Board is authorised to borrow £9,750,000, exclusive of the loans contracted by the Government for the purpose of waterworks and taken over by the Board. The liability on Government loans on the 30th June, 1913, was £1,559,786, and for loans raised by the Board was £9,603,500. The Board is still empowered to borrow £976,648 before reaching the limit of its borrowing powers.

(a) *Total Cost of Water Supply and Sewerage*. The subjoined table shews the total cost of construction and maintenance of water supply and sewerage from 1853 to 1913.

MELBOURNE AND METROPOLITAN BOARD OF WORKS.—TOTAL COST OF CONSTRUCTION AND MAINTENANCE OF WATER SUPPLY AND SEWERAGE, 1853 to 1913.

Period.	Water Supply.		Sewerage.			Total.
	Con- struction.	Main- tenance.	Con- struction.	Main- tenance.	Working Expenses.	
	£	£	£	£	£	
1853 to 1890-1 ...	3,378,246	149,622	...	...	...	3,527,868
1891-2 to 1900-1 ...	336,957	165,124	3,307,764	33,698*	32,525*	3,876,068
1901-2 to 1910-11	299,045	204,045	2,959,997	68,025	246,483	3,777,595
1911-12 to 1912-13	449,409	57,182	400,511	14,222	84,963	1,006,287
Total ...	4,463,657	575,973	6,668,272	115,945	363,971	12,187,818

* From the 30th June, 1897, to the 30th June, 1901.

(b) *Revenue and Expenditure of Melbourne and Metropolitan Board of Works.* The following table shews the actual receipts and expenditure, and also the loan receipts and expenditure of the Board during 1901-2 and 1908 to 1913 :—

MELBOURNE AND METROPOLITAN BOARD OF WORKS.—REVENUE AND EXPENDITURE DURING EACH YEAR, 1901-2 and 1908 to 1913.

Particulars.	1901-2.	1908-9.	1909-10.	1910-11.	1911-12.	1912-13.
ORDINARY RECEIPTS.						
	£	£	£	£	£	£
Water supply	171,956	241,790	248,356	253,002	267,917	295,963
Sewerage, etc.	124,696	242,296	253,756	267,444	272,365	287,507
Live stock—Metropolitan farm	19,929	22,153	31,289	35,016	63,225	57,787
Interest { Water supply ... ..	...	15	138	830	953	2,277
{ Sewerage	17,448	15,929	10,229	8,995	8,885	8,695
Total	334,029	522,183	543,768	565,287	613,345	652,229
ORDINARY EXPENDITURE.						
	£	£	£	£	£	£
General management	33,621	33,984	34,863	35,779	40,104	41,007
Live stock, etc.—Metropolitan farm	16,702	20,316	17,900	19,336	46,283	44,130
Maintenance { Water supply	22,205	24,643	24,944	25,016	30,234	34,508
{ Sewerage	24,396	38,016	42,921	45,665	47,797	50,433
Interest { Water supply	102,670	102,297	101,578	105,760	112,886	116,716
{ Sewerage	192,952	280,647	286,655	293,608	297,982	307,630
Total	392,546	499,903	508,861	525,164	575,266	594,424
LOAN RECEIPTS.						
	£	£	£	£	£	£
Water supply	1,636	2,435	5,272	4,788	5,982	12,315
Sewerage	88,425	67,771	61,509	56,313	59,907	61,315
Proceeds of loans	396,238	429,595	257,853	291,310	322,223	307,952
Miscellaneous ... ..	...	15,246	9,104	9,238	12,399	28,355
Total	486,299	515,047	333,738	361,649	400,511	409,937
LOAN EXPENDITURE.						
	£	£	£	£	£	£
Water supply construction	17,058	67,271	35,984	98,145	133,149	339,753
Sewerage construction	410,760	272,508	331,214	286,035	245,911	259,461
Expenses in floating and redemption of loans	5,200	229,189	2,677	2,936	5,393	130,159
Miscellaneous	*4,293	24,961	18,002	26,288	35,638	47,474
Total	428,725	593,929	387,877	413,404	420,091	776,847

* Excess of stock distribution (£7020) over purchases (£2727).

(ii.) *Melbourne Metropolitan Water Supply.*—In December, 1857, the construction of the Yan Yan Reservoir system was completed. A description of the conditions that prevailed in Melbourne prior to that date is given in previous issues of the Year Book.

(a) *Development of System.* The following statement shews the development which has taken place in the water supply system of Melbourne during the fifty-six years since its inception :—

MELBOURNE WATER SUPPLY SYSTEM, 1857 to 1913.

Year.	Population* Served.	Capital Cost.	Charge per 1000 Gallons.	Rate in £	Reticulation, Mains, &c., Mileage.	Supply in Gallons, Average daily.
1857 ...	95,442	£ 748,974	10/- and 6/-	1/-	104	3,250,000
1913 ...	639,700	4,463,657	1/-	7d.	1,509	39,380,167

* On the 31st December.

(b) *Description of Water Supply Systems.* The water supply of Melbourne consists of two main systems—the Yan Yean and the Maroondah, together with the high level system.

A full description of these systems has been given in previous issues of this book (see No. 6, p. 983).

The three reservoirs at Preston, which are the main distributors of the central city supply, contain 13,500,000, 24,500,000, and 26,300,000 gallons respectively, the third and last being built during 1912-13.

The work is approaching completion of diverting the waters of the O'Shanassy River, a tributary of the Yarra, by an open aqueduct and pipe line of an aggregate length of about 49½ miles, delivering water to the eastern portion of the metropolis by way of Mitcham and Surrey Hills. The total capacity of the scheme is to be 20,000,000 gallons per day, but capable of enlargement to 60,000,000 gallons. The scheme is estimated to cost £450,000. The watershed of the O'Shanassy River, containing 33,000 acres, has been excised from the permanent forests area, and a Crown grant was issued to the Board on the 28th January, 1910.

(c) *Catchment Areas, Reservoirs, and Aqueducts.* (i.) *Drainage Areas.* The whole of the catchment areas are absolutely free from population, cultivation, or stock grazing, and are under the complete control of the Metropolitan Board of Works. The present drainage areas from which the water is delivered are as follows:—

MELBOURNE WATER SUPPLY.—CATCHMENT AREA IN ACRES, 1913.

Silver and Wallaby Creeks.	Plenty River and Jack's Ck.	Yan Yean Reservoir Catchment.	Maroondah Catchment.	O'Shanassy Catchment.	Total.
12,000	12,000	5,000	40,000	33,000	102,000

All the water is delivered by gravitation, no pumping being required in any portion of the area supplied.

(ii.) *Storage Reservoirs.* In connection with distribution there are twelve service reservoirs having a total capacity of 120,300,000 gallons. The total daily quantity of water which can be sent into Melbourne is as follows:—

System	Yan Yean.	Maroondah.	High Level Main.	Total Supply.
Gallons per day	33,000,000	28,000,000	9,000,000	70,000,000

(d) *Quantity of Water, Number of Houses, and Population Supplied.* The following table gives various particulars for the years 1901 and 1909-13, shewing the increase in the supply of water in Melbourne and suburbs:—

MELBOURNE WATERWORKS.—NUMBER OF HOUSES, POPULATION, AND WATER SUPPLIED, 1901 and 1909-13.

Year Ended 30th June.	Number of Houses Supplied.	Estimated Population Supplied.	Average Daily Supply.	Total Supply for the Year ended 30th June.	Average Daily Supply.		Rate Levied.	Assessments of Tenements Served by Metropolitan Water Supply.	
					Per House.	Per Head of Estimated Population.			
	No.	No.	,000 Gallons.	,000 Gallons.	Gallons.	Gallons.		£	
1901	104,548	491,780	28,732	10,487,007	274.8	58.4	6d. in the £	3,479,721	
1909	119,650	549,690	31,828	11,617,355	266.0	57.9		7d. in the £	4,672,324
1910	123,227	565,010	34,508	12,595,501	280.0	61.1	£		4,789,265
1911	128,036	581,500	32,840	11,986,503	256.5	56.5			5,045,848
1912	133,122	594,250	38,507	14,093,509	289.3	64.8			5,382,101
1913	140,351	614,300	39,380	14,373,761	280.6	64.1	5,670,801		

(e) *Total Cost of Construction, Revenue, Expenditure and Net Profits, 1854 to 1913.* The following table shows the total cost of construction, the revenue, expenditure, and net profits for various periods up to 30th June, 1911, and for the financial years 1911-12 and 1912-13:—

**MELBOURNE WATERWORKS.—CONSTRUCTION, COST, REVENUE, EXPENDITURE,
AND NET PROFITS, 1854 to 1913.**

Period.	Capital Cost.*	Annual Revenue.†	Cost of Maintenance and Management.‡	Percentage of Working Expenses to Revenue.	Interest.§	Surplus.
	£	£	£	%	£	£
Total to 1890-1	3,378,246	3,150,055	420,833	...	1,021,676	1,707,546
1891-2 to 1900-1	336,957	1,686,025	367,506	21.80	1,021,181	297,338
1901-2 to 1910-11	299,045	2,054,355	384,871	18.73	1,026,362	643,122
1911-12 to 1912-13	449,409	564,647	103,030	18.25	226,373	235,244
Total ...	4,463,657	7,455,082	1,276,240	...	3,295,592	2,883,250

* Works commenced in 1853. † Revenue commenced in 1854. ‡ Returns for expenditure commenced in 1859. § First interest paid in 1856.

(iii.) *Melbourne Sewerage.*—As stated above, the chief object of the creation of the Melbourne and Metropolitan Board was to carry out an efficient system of sewerage. Old Melbourne used to be a city of cesspits, and it was not until the latter sixties that these were abolished, filled up, and the movable pan system gradually adopted throughout the whole metropolitan area, with night removal. The cost of removal in 1894 was about £90,000, equal to a capital expenditure of £1,750,000. This objectionable system has been displaced by the water carriage system throughout the greater portion of the metropolis, and in other parts the work of reticulation is now proceeding.

(a) *Description of Sewerage Systems.* The whole of the sewage of the metropolis is being gradually collected by means of two principal main sewers and a subsidiary main leading to the pumping station at Spotswood. A description of the scheme may be found in previous issues. (See Year Book No. 5, p. 1007.) On the 30th June, 1913, the sewerage system had been practically completed in the following districts:—Port Melbourne, South Melbourne, Melbourne (except very small portions of Flemington and Kensington), Richmond, Prahran, Collingwood, Fitzroy, St. Kilda, Essendon, and nearly the whole of Brighton, Malvern, and Williamstown. The greater part of Caulfield, Footscray, Kew, Brunswick, and Hawthorn had also been dealt with, together with the thickly populated portions of Camberwell, Northcote, Coburg, Preston, and Moorabbin, besides small portions of Nunawading and Heidelberg.

(b) *Metropolitan Sewage Farm.* The farm originally contained 8847 acres, situated on the western side of the Werribee River. The price paid for the land was £17 10s. per acre (including compensation for severance), which in its virgin unimproved state cost the Board in 1892, £159,573. This sum included the purchase of a strip of land $11\frac{1}{2}$ miles long ($168\frac{1}{2}$ acres) on which the greater portion of the outfall sewer is constructed. Since 1911, 1370 acres have been purchased, making the total area of the farm 10,217 acres at 30th June, 1913, its total cost to that date being £489,740. About 31,770,274 gallons of sewage had to be disposed of every twenty-four hours during the year in irrigating the fields. It is spread over properly-prepared and sown blocks of land by a series of mains and lateral carriers. The blocks are laid down with grass and lucerne, on which sheep and cattle are depastured. During the financial year 1912-13, 32,395 sheep were bought, the profit from that source being £10,893. Cattle to the number of 2846 were purchased, the profit for the year on cattle being £4539.

(c) *House Connections.* The work of house connections with the sewerage system is carried out under a carefully prepared by-law. Under the Amending Act of 1897, after a property has been declared to be a sewered property, the owner has several options. (a) He may submit a plan of his house connections for approval, and on approval being given, may agree to carry out the work within one month. (b) He may submit a plan, for which, if approved of, he may ask for an estimate of the cost of carrying out. This the

Board is bound to supply, and then the owner may either carry out the work himself or ask the Board to carry out the work, which it must do for the estimated price, whether the work costs less or more. (c) On default of the owner the Board may carry out the work, and at the request of the owner accept payment by forty quarterly instalments, bearing interest on such portion as from time to time remains unpaid at the rate of 5 per cent.

(a) *Number of Houses Connected, Capital Cost, Revenue and Expenditure.* The following table gives particulars as to the number of houses connected to the sewerage system, the total capital cost, and the receipts and disbursements during 1901 and 1908-13:—

MELBOURNE SEWERAGE WORKS.—TENEMENTS CONNECTED, CAPITAL COST, REVENUE, MAINTENANCE AND WORKING EXPENSES, 1901-2 and 1908-13.

Year.	Number of Houses Connected.	Capital Cost.	Revenue.			Maintenance, Repairs and Renewals.
			From Rates.	From other Sources.	Total.	
	No.	£	£	£	£	£
1901-2 ...	47,172	3,610,225	126,725	10,968	137,693	24,336
1908-9 ...	99,955	5,741,203	234,229	9,850	244,079	35,769
1909-10 ...	105,993	6,025,030	247,632	12,843	260,475	38,085
1910-11 ...	112,293	6,267,761	260,528	15,200	275,728	46,904
1911-12 ...	118,350	6,463,062	271,682	18,042	289,724	47,381
1912-13 ...	125,103	6,668,272	285,721	17,655	303,376	51,804

(iv.) *Water Supply in Country Towns and Districts.* By the Water Act 1905, which came into operation on the 1st May, 1906, the control and management of all Irrigation Trusts, with one exception, and of a number of waterworks and water supply districts were centralised, and their works and property vested in the State Rivers and Water Supply Commission. The powers and duties of this Commission were extended by the Water Act 1909, the whole of the Water Supply Department being now merged in the Commission. Further information with regard to this Commission and to the works and districts under its control are given in the section in this book dealing with Water Conservation and Irrigation. There are, however, in different parts of Victoria a number of other waterworks which are concerned chiefly with domestic supply, and which are controlled by local authorities, i.e., by Waterworks Trusts or by municipal corporations. These works are constructed out of moneys either granted or lent by the State Government. The following table gives particulars as to the waterworks under the control of Trusts and municipal corporations for the years 1901 and 1909-13:—

VICTORIA.—COUNTRY WATERWORKS UNDER TRUSTS AND MUNICIPAL CORPORATIONS, 1901 and 1909-13.

Year.	Waterworks Trusts.					Municipal Corporations.*				
	Number of Trusts.	Capital Cost.	Capital Indebtedness.	Interest Outstanding.	Receipts.	Expenditure.	Number of Corporations.	Capital Cost.	Capital Indebtedness.	Interest Outstanding.
	No.	£	£	£	£	£	No.	£	£	£
1901...	76	823,418	749,089	†	†	†	24	†	470,041	†
1909...	83	952,456	731,276	16,190	85,054	88,190	23	676,358	461,881	9,834
1910...	86	960,719	769,442	14,727	†	†	25	686,356	457,951	10,718
1911...	87	1,017,396	819,693	15,047	†	†	21	651,489	421,273	2,662
1912...	88	1,046,394	843,806	15,970	†	†	22	653,510	418,673	9,349
1913...	89	1,083,390	866,594	12,461	†	†	22	655,702	415,678	6,635

* Particulars as to the receipts and expenditure in respect of waterworks under the control of municipal corporations are not available. † Returns not available.

Under the provisions of the Local Government Act 1903, municipal councils are authorised to construct and maintain tanks, dams, and reservoirs, and must maintain existing works for the gratuitous supply of water. They are also empowered to accept the management and control of new waterworks within their respective localities, and may, with the consent of the Governor, construct or purchase new works within or without their locality. Councils are also authorised to enter into contracts for the supply of water for any period not exceeding ten years with the owner of any waterworks. Every municipality may levy a special water rate for water supplied, or for the purpose of constructing waterworks or paying the interest on any loan contracted by the council for such purpose, but the amount of the rate must not exceed in any year the sum of two shillings in the pound, provided that a minimum sum of ten shillings may be fixed by the council to be paid in respect of any property at which water is supplied.

(v.) *Geelong Waterworks Trust.* This trust was constituted under The Geelong Municipal Waterworks Act 1907, with borrowing power up to £300,000, afterwards increased by Act No. 2322, 1911, to £350,000. It was reconstituted under Geelong Waterworks and Sewerage Act 1910, with power to borrow an additional £250,000 for the purpose of installing a sewerage system for Geelong and suburbs. The available storage capacity of the reservoirs is 1468 million gallons, and the Trust is authorised to supply water to (a) City of Geelong; (b) the suburbs thereof, and all places within a radius of five miles of the Geelong Post Office; and (c) any place within ten miles on either side of the main pipe from Stoney Creek to Geelong. The sewerage scheme provides for a main outfall sewer 4 ft. 3 in. x 3 ft. 3 in. to the ocean at Black Rock—a distance of about nine miles. The scheme will embrace an area of 8081 acres, including the City of Geelong, Boroughs of Newton and Chilwell, and Geelong West, and the suburban areas situated in Corio and South Barwon Shires.

3. **Queensland.**—(i.) *The Metropolitan Water and Sewerage Board.* This Board was constituted by the Metropolitan Water and Sewerage Act 1909, which divested the then existing Water Board of its powers and duties and vested them in an extended form in the new Board. The Act further empowers the Board to carry out a sewerage and drainage system, and relieves the Local Authorities of their responsibilities in that matter. The district of the new Board comprises the cities of Brisbane and South Brisbane, the towns of Hamilton, Ithaca, Toowong, and Windsor, and the shires of Balmoral (except division 3), Coorparoo, Enoggera (except division 3), Sherwood (except division 1), Stephens, Taringa, Toombul, and a portion of Kedron.

The Board consists of nine members, viz., the president and eight elected colleagues.

(a) *Brisbane Water Supply.* The supply is derived from the upper reaches of the Brisbane River, and from two storage reservoirs, known respectively as the Enoggera and the Gold Creek reservoirs.

(1) *The Brisbane River Supply.* Of these the principal source of supply is the Brisbane River, about 75 per cent. of the water used being taken from it. The catchment area above the pumping station is about 4000 square miles. The Mount Crosby service reservoir, into which the water is pumped from the river, is built in cement concrete, and is 267 feet long, 100 feet wide, and 15 feet deep from high-water line, which is 455 feet above high-water mark at Brisbane. The capacity is about 2,500,000 gallons. The existing pumping plant is being considerably augmented, and new reservoirs and sedimentation basins are in course of construction.

(2) *The Enoggera Reservoir.* The Enoggera works are distant from Brisbane about eight miles by road. The catchment area is nearly thirteen square miles in extent, and the reservoir, which is formed by an earthen dam,

holds 1,000,000,000 gallons, of which 600,000,000 are available by gravitation. The greatest length of the reservoir is 2600 yards, and its greatest breadth 700 yards. The supply from Enoggera is filtered through an intermittent sand filtration plant, comprising half an acre of sand beds, and a pure water reservoir with a capacity of 750,000 gallons.

- (3) *The Gold Creek Reservoir.* This reservoir is situated in the upper waters of Gold Creek, a branch of Moggil Creek, distant from Brisbane by road about thirteen miles. The supply is drawn from a catchment area adjoining that of Enoggera, and comprising an area of nearly four square miles. The total capacity is about 406,000,000 gallons, of which 400,000,000 gallons are available.
- (4) *Service Reservoirs.* Certain portions of the metropolitan area are supplied with water from service reservoirs, which are connected with one or other of the main reservoirs alluded to above. These service reservoirs are constructed at Highgate Hill, Wickham Terrace, and Bartley's Hill, and have a total capacity of over 4,000,000 gallons. A fuller description of the Brisbane water supply scheme may be found in previous issues.

(b) *Brisbane Waterworks: Cost, Revenue, Expenditure, and Interest.* The sub-joined table gives particulars as to the cost, the revenue and expenditure, and the amount of interest and loan redemption during 1901 and each of the years 1909 to 1913:—

BRISBANE WATERWORKS.—COST, REVENUE, EXPENDITURE, INTEREST, AND REDEMPTION OF LOANS, 1901 and 1909-13.

Year.	Capital Cost.	Revenue	Working	New Work	Interest and
		from Rates and Sales of Water.	Expenses.	Construction.	Redemption of Loans.
	£	£	£	£	£
1901	694,973	60,120	17,462	7,535	42,426
1909	825,812	69,736	25,246	14,756	26,716
1910	867,837	72,006	26,097	42,025	27,754
1911	1,015,276	67,730	30,105	147,438	20,670
1912	1,134,815	64,367	39,124	119,539	26,780
1913	1,255,898	76,922	43,135	121,083	31,498

(c) *Brisbane Waterworks: Length of Mains, Tenements and Population Served, and Water Consumption.* The following table shews the length of mains, the number of tenements connected, the population supplied, the total quantity of water supplied, the average daily supply, and the average daily supply per head of population supplied during 1901 and each year from 1909 to 1913:—

BRISBANE WATERWORKS.—PARTICULARS, 1901 and 1909-13.

Year.	Length of	Number of	Estimated	Quantity	Average	Average
	Reticulation Mains.	Tenements Connected.	Population Supplied.	Supplied.	Daily Supply.	Daily Sup- ply per Head of Estimat'd Population.
	Miles.	No.	No.	,000 Gallons.	Gallons.	Gallons.
1901	198	15,652	78,260	1,536,260	4,208,931	55
1909	308½	21,560	107,800	1,673,287	4,584,351	42½
1910	317	22,830	114,150	1,776,734	4,867,766	42½
1911	333¾	24,153	120,765	1,870,767	5,125,390	42.44
1912	347	27,678	129,575	2,020,404	5,520,231	42.60
1913	370½	28,301	139,925	2,099,590	5,752,302	41.05

The total length of the trunk mains is 69½ miles.

A scheme of sewerage has been devised for Brisbane and its suburbs. It is intended to construct works for the provision of a population of 275,000, and tenders have been invited for the construction of the first three sections of the main sewer.

(ii.) *Country Towns Water Supply.*—In addition to the city of Brisbane there were at the end of the year 1912 twenty-eight towns in Queensland provided with water supply systems, constructed by municipalities chiefly from Government loans. The sub-joined statement gives particulars of all the water supply systems—exclusive of Brisbane—for the year 1912 :—

QUEENSLAND.—PARTICULARS OF COUNTRY WATER SUPPLY SYSTEMS, 1912.

			£				£
Receipts	Cost of construction to 31/12/11 ...		738,186	Expenditure	Office and salaries ...		10,323
	Rates and sales of water ...		83,334		Construction ...		9,971
	Other ...		7,597*		Maintenance ...		26,527
		Total Receipts ...	90,931			Total ...	86,930
Assets ...			607,697	Liabilities ...			443,825

* Including £42,534 from Government loans.

4. *South Australia.*—(i.) *Adelaide Water Supply System.* The water supply system of Adelaide is under the control of the Public Works Department. The supply is obtained partly from the catchment areas of the rivers Onkaparinga, Torrens, and Sixth Creek, and partly from springs and pumping stations. There are three storage reservoirs, situated at Happy Valley, Hope Valley, and Thorndon Park, having an aggregate capacity of 3,895,000,000 gallons, while the tanks used in connection with the springs and pumping stations have a further capacity of 4,824,000 gallons. The total capital cost up to the 30th June, 1913, was £1,883,450, the total revenue being £2,712,750 and the area served approximately 106,000 acres.

The following table gives various particulars relating to the water supply of Adelaide for the years 1908 to 1913 inclusive:—

ADELAIDE WATER SUPPLY.—LENGTH OF MAINS, REVENUE, EXPENDITURE, AND CONSUMPTION OF WATER, 1908 to 1913.

Year Ended 30th June.	Length of Mains.	Gross Revenue.	Working Expenses.	Net Revenue.	Percentage of Net Revenue on Capital Cost.	Total Consumption of Water.*
	Miles.	£	£	£	%	Million of Gals.
1908 ...	673	76,707	21,233	55,474	3.26	4,000
1909 ...	684	81,412	20,762	60,650	3.53	4,000
1910 ...	704	82,290	22,709	59,581	3.31	4,000
1911 ...	732	89,902	28,032	61,870	3.40	4,000
1912 ...	763½	94,280	26,384	67,896	3.68	4,600
1913 ...	802½	105,590	27,982	77,608	4.12	4,700

* In the Adelaide Water District there are no governing meters. The quantities shown above are as recorded by gaugings taken at the reservoirs, and include evaporation and absorption.

(ii.) *Adelaide Sewerage System.* In connection with the sewerage system of Adelaide, which is also under the control of the Public Works Department, about 322 miles of sewers had been laid in the city and suburbs up to the 30th June, 1913. The sewage is disposed of on a farm and filter-beds, the latter being used only during the winter months. A scheme of sewerage extension is now nearing completion, which includes a pumping station, to deliver the sewage to the existing sewage farm.

The following table gives particulars relating to the Adelaide sewerage system for the years 1908 to 1913 inclusive:—

ADELAIDE SEWERAGE SYSTEM.—REVENUE AND EXPENDITURE, 1908 to 1913.

Year Ended the 30th June.	Revenue.			Expenditure.			Net Revenue.	
	Rates and Interest.	Sewage Farm. Sales of Produce, etc.	Total.	Mainten-ance.	Sewage Farm. Working Expenses.	Total.	Total.	Per-centage on Capital Cost.
	£	£	£	£	£	£	£	%
1908 ...	32,678	7,436	40,114	6,294	5,081	11,375	28,739	4.49
1909 ...	34,701	8,284	42,985	7,161	5,917	13,078	29,907	4.56
1910 ...	36,322	7,213	43,535	7,184	6,088	13,272	30,263	4.41
1911 ...	37,938	7,189	45,127	8,462	7,681	16,143	28,984	4.26
1912 ...	41,449	6,934	48,383	9,376	5,039	14,415	33,968	4.88
1913 ...	45,373	8,392	53,765	9,803	6,392	16,195	37,570	5.01

The seaside town of Glenelg is served by a separate sewerage disposal works, including a pumping station, septic tank, lucerne plots, and filter beds. The net revenue for the year ended 30th June, 1913, was £1475, being 3.61 per cent. on the capital cost. Up to the same date 13½ miles of sewers had been laid.

(iii.) *Water Supply in Country Towns.* In South Australia there is a number of country waterworks under the control of the Public Works Department. There are three large reservoirs at Barossa, Beetaloo, and Bundaleer, which supply fifty-three townships with water for domestic and stock purposes. The principal towns thus supplied are Gawler, Wallaroo, Moonta, Kadina, Port Pirie, Port Wakefield, and Balaklava. The following table shews the capacity of these reservoirs, together with particulars as to the townships supplied and the country lands reticulated:—

PRINCIPAL COUNTRY WATERWORKS, SOUTH AUSTRALIA, 1913.

Reservoirs.	Townships Supplied.			Country Lands Reticulated.		Capacity in Million Gallons.	
	Number.	Square Miles.	Miles of Main.	Square Miles.	Miles of Main.	Head-works.	Service Reserv'rs.
Barossa ...	23	40	64	1,001	505	993½	10
Beetaloo ...	19	43	138	1,648	790	800	68
Bundaleer ...	13	8	31	1,040	453	1,319	16

Fifteen township districts are supplied from smaller local reservoirs, the most important town served being Port Augusta. New water supply schemes are in course of construction for the supply of townships and farming lands on Eyre Peninsula, near Cowell, Arno Bay, and Cleve.

5. *Western Australia.*—(i.) *Water Supply, Sewerage and Drainage Department.*—Prior to 1912, water supply, sewerage and drainage, in Western Australia, although under Governmental control, were nevertheless under the management of several distinct departments. In that year, however, the Government decided that this divided control should

be concentrated in one department with the Minister of Works as administrator, and on the 1st August, 1912, a new department with the above title assumed the management of the undermentioned water supplies:—(a) The Metropolitan Water Supply Sewerage and Drainage Department. (b) The Goldfields Water Supply Administration. (c) The branch of the Mines Department dealing with the Mines Water Supply, boring and well-sinking in mining districts, the North-west, etc. (d) The branch of the Public Works Department dealing with water supply, sewerage, drainage, well-sinking, boring, etc., in agricultural districts, the North-west, etc.

The Acts of Parliament administered by the new department are:—“The Metropolitan Water Supply, Sewerage and Drainage Act 1909;” “The Goldfields Water Supply Act 1902” and amendment; “The Water Boards Act 1904;” “The Lands Drainage Act 1900” and amendment, and “The Water Supply Act 1893.” The number of water areas, apart from the metropolitan and Mundaring undertakings, existing when the Department took over this branch of work was 12, of which 11 were controlled by Boards and one by the Minister. Since that date four new areas have been declared, while two Boards have been dissolved. Of the 16 water areas, nine are now controlled by local Boards and seven by the Department.

(ii.) *The Perth Metropolitan Water Supply, Sewerage, and Drainage.* The Perth Metropolitan Water Supply Works were first opened by a private company in October, 1890. Under the provisions of the Metropolitan Waterworks Act 1896, however, the works were purchased by the Government at a cost of £220,000, and were placed under the control of a Board, the functions of which have been exercised since the year 1904 by the Minister for Works. By the Metropolitan Water Supply, Sewerage, and Drainage Act 1909, all water and sewerage works formerly vested in the Metropolitan Board were transferred to a Minister of Water Supply, Sewerage, and Drainage. In August 1912 the administration was transferred to the new Water Supply Department (see preceding paragraph).

(a) *Water Supply.* The supply of water is derived from four sources—(i.) the Victoria reservoir, (ii.) Bickley Brook reservoir, (iii.) the Mundaring reservoir, and (iv.) from six artesian bores.

(a) *The Victoria Reservoir.* This is the main source of supply. The reservoir has a capacity of 220,000,000 gallons, and has a catchment area of 10,000 acres on the Darling Ranges. During the year 1912-13, 327 million gallons were obtained from this reservoir.

(b) *Bickley Brook Reservoir.* This is supplementary to the Victoria reservoir, being connected to it by an eight-inch pipe. It has a catchment of 1780 acres, and a supply of 136 million gallons was drawn from this source during the year ending 30th June, 1913.

(c) *The Mundaring Reservoir.* This reservoir is used as an emergency supply. It has a capacity of 4,650,000,000 gallons, but is only connected by an eight-inch main. This reservoir has a catchment area of 569 square miles, and was constructed in connection with the goldfields water supply. Nearly 6 million gallons were drawn from this source during the year for metropolitan use, the goldfields consumption for the same period being 1,205 million gallons.

(d) *Artesian Bores.* There are in all six artesian bores, the flow from which augments the main supply from the Victoria reservoir. The total bore water pumped during 1912-13 was 484,796,000 gallons.

(b) *Financial Operations of Water Supply Department.* The following table gives particulars of the financial operations of the Metropolitan Water Supply Branch for each year ending the 30th June from 1909 to 1913 inclusive:—

**PERTH METROPOLITAN WATER SUPPLY BRANCH.—PARTICULARS OF FINANCIAL
OPERATIONS, 1909 to 1913.**

Year ended the 30th June.	Capital Cost of Works.	Depreciation.	Net Capital Cost.	Gross Revenue.	Cost of Maintenance and Management.	Interest Earned on Gross Capital Cost.	Ratio of Working Expenses to Revenue.
	£	£	£	£	£	Per cent.	Per cent.
1909 ...	524,022	34,468	489,554	45,711	14,162	6.02	30.98
1910* ...	628,757	44,415	584,342	60,249	20,862	6.26	34.62
1911* ...	645,023	92,351†	552,672	61,723	22,081	6.15	35.77
1912* ...	701,852	107,388	594,464	66,892	25,082	5.95	37.49
1913* ...	768,068	135,912	632,156	74,600	25,479	6.39	34.14

* Perth, Fremantle, and Claremont combined. † £39,724 transferred from reserve account to depreciation to provide for estimated overvaluation made at time of purchase of Perth Water Supply.

(c) *Consumption of Water.* The following table shews the total annual supply, the average daily supply, and the average daily supply per house and per head of population during each financial year from 1909 to 1913 inclusive:—

**PERTH METROPOLITAN WATER SUPPLY BRANCH.—CONSUMPTION OF WATER,
1909 to 1913.**

Year ended the 30th June.	Total Annual Supply in ,000 Gallons.			Average Daily Supply in Gals.	Number of Houses Supplied.	Estimated Population Supplied.	Average Daily Supply in Gals.	
	From Reservoir.	From Bores.	Total.				Per House.	Per Head of Population.
PERTH DISTRICT.								
1909 ...	349,467	281,585	631,052	1,731,000	14,012	54,000	123	32.0
1910 ...	392,715	281,104	673,819	1,846,000	14,512	56,000	127	33.0
1911 ...	414,512	355,810	770,322	2,110,000	15,075	59,000	131	35.7
1912 ...	364,428	420,914	785,342	2,441,000	16,055	62,250	152	39.4
1913 ...	424,682	484,796	909,478	2,491,700	17,000	68,000	146	36.6
FREMANTLE DISTRICT.								
1909 ...	...	282,785	282,785	774,753	3,971	19,000	195	40.7
1910 ...	...	278,179	278,179	762,133	4,042	19,500	188	39.0
1911 ...	...	286,461	286,461	782,085	4,150	20,000	188	39.1
1912 ...	...	313,405	313,405	856,300	4,280	20,500	200	41.7
1913 ...	44,529	295,993	340,522	932,937	4,500	22,000	207	42.4
CLAREMONT DISTRICT.								
1909 ...	...	105,584	105,584	289,271	1,670	7,000	173	41.3
1910 ...	...	101,240	101,240	277,370	1,783	7,500	156	37.0
1911 ...	...	110,275	110,275	302,123	2,042	8,000	148	37.7
1912 ...	...	118,399	118,399	328,800	2,320	8,750	141	37.6
1913 ...	...	125,171	125,171	342,931	2,650	10,000	139	34.3

(d) *Sewerage and Drainage in Perth and Fremantle.* The work of providing a sewerage system for Perth and Fremantle was commenced in 1906, and has proceeded without interruption up to the present time. House connections in Perth are making rapid progress, there being upwards of 2800 premises connected to the sewers, while in Fremantle 309 houses had been connected up to 30th June, 1913. The net financial

result of operations of the Metropolitan Water Supply, Sewerage and Drainage Department for 1912-13 is a deficit of £4438, as against a surplus of £17,964 for the preceding year, the difference being accounted for by the fact that in 1912-13, capital charges on the sewerage account were for the first time charges against revenue. A description of the method of sewage disposal adopted may be found in previous issues. (See Year Book No. 5, p. 1031.)

(iii.) *The Goldfields Water Supply Branch.*—This scheme by which the Government of Western Australia undertook to provide a permanent supply of water for the population of the eastern goldfields of that State has already been described in previous issues of the Year Book (see No. 5, page 582). The main source of supply is the Helena River in the Darling Ranges, whence by a system of reservoirs, the water is conveyed to Kalgoorlie and the surrounding district. Up to the 30th June, 1912, the total cost of construction was £3,373,168. The total consumption for the financial year 1912-13 was 1,204,757,000 gallons, an increase on the previous year of 69,957,000 gallons. The gross revenue for the year was £254,920, and the working expenses £89,388, leaving a surplus available towards interest and sinking fund of £165,532. The outlay for interest and sinking fund charges in respect of supplementary capital borrowed on debentures absorbed £28,671, leaving £136,861 payable to the State Treasury. During the financial year the State Treasury paid £168,813 interest and sinking fund on State loans in respect of these works, leaving a net deficiency of £31,952.

(iv.) *Mines Water Supply Branch.*—On the 1st of August, 1912, the administration of this branch was transferred to the new Water Supply, Sewerage and Drainage Department. While the statistics of this branch of the Department do not properly belong to the section dealing with "Local Government," nevertheless, as the functions exercised by the Department are similar to those delegated to local authorities in most of the other States of the Commonwealth, it is considered advisable to include them in the section under review.

At the present time the water stations under the control of the engineer number about 1400, and are spread over an area of nearly 500,000 square miles, extending from the Phillips River in the south to the Kimberley district in the far north. The principal works carried out by the branch are as follows:—(a) Domestic supplies for mining towns and the supply of water for battery and general mining purposes. (b) Opening up the very remote portions of the State by means of tracks, of which there are nearly 4000 miles. (c) The sinking of wells and bore-wells, also testing the country by means of boring to locate water, and thus enabling the mineral resources of the State to be systematically prospected. (d) Diamond drilling has also been carried out for the purpose of testing the country for minerals at depths unattainable with the ordinary boring plants. (e) Nearly 2000 miles of stock routes have been opened up, and wells have been sunk at easy stages, capable of watering mobs of 400 head of cattle. In addition to these works the Wiluna-East Kimberley route (890 miles) has been constructed. Tanks, dams, and reservoirs have been made on the goldfields for the conservation of surface water, their total storage capacity being 200,000,000 gallons, and their cost over £400,000.

Boring to locate water for domestic, stock, battery and other purposes has been carried out, the total depth being nearly 120,000 feet, and where good water has been found, a bore has been equipped with casing and pump, or a well sunk, according to requirements. The water shafts, of which there are about 300, are equipped according to the supply and demand, in some cases with only windlass and bucket, in others with a pump, storage tank, etc., while some which supply towns and batteries are equipped with powerful pumps and engines.

A very important adjunct of the Branch is the camel farm established at Coolgardie, where the breeding of camels is undertaken, the number at present being about 350. These camels are used by parties from the Water Supply Branch in the arid regions of

the interior, where water is scarce and the stages are long, and occasionally they are used by the other Government Departments engaged on such works as the Rabbit-Proof Fence and Transcontinental Railway Survey.

(v.) *Water Supplies in Agricultural Areas.*—When, in 1910, the Government decided to open up the unexplored agricultural districts, it was recognised that, to ensure the success of the undertaking, water supplies and access thereto were necessary. At first it was decided to rely wholly on conservation by dams. The system of zonation was inaugurated, that is, dams were constructed at a distance of about eight miles apart. At the end of 1911, however, it was decided to further exploit the country by boring for well water in conjunction with further dam construction, and up to the close of 1913, 256 tanks have been constructed and 225 wells have been sunk. The former have a total holding capacity of 86,000,000 gallons, and the water conserved approximates 40,000,000 gallons. The capital expenditure on this branch of water supply for the year ending 30th June, 1913, was £74,300.

6. *Tasmania.*—(i.) *Hobart Water Supply.*—The original water supply of Hobart was obtained from a stream known as the Hobart Rivulet, flowing from Mount Wellington, the works being carried out in 1831 by the Imperial Government. These works consisted of an aqueduct and a line of cast-iron pipes, the water being distributed to several points known as “wells.” By an Act of the State Parliament passed in 1860 the works were transferred to the municipality. Under this Act certain additional streams flowing from Mount Wellington were acquired as sources of supply, and a storage reservoir containing 45,000,000 gallons was constructed. The catchment area on Mount Wellington at present comprises an area of 4200 acres, the sources of supply having been extended at various times as far as the North West Bay River, fifteen miles from Hobart.

(a) *Storage Reservoirs.* There are two storage reservoirs about $2\frac{1}{2}$ miles from the city. One contains 68,000,000 gallons and is 502 feet above sea-level, while the other contains 45,000,000 gallons and is 447 feet above sea-level. The whole of the supply is by gravitation. The water is brought from the various streams by means of stone aqueducts and cast-iron pipes to the reservoirs, and thence by four 10-inch cast-iron mains, of which three lead to the distributing reservoirs and one direct to the shipping and southern portion of the city.

(b) *Capital Cost, Tenements Connected, Length of Mains, Revenue and Expenditure.* The total capital cost to the end of 1913 was £235,450, but a considerable amount of reticulation work has been done out of revenue and not charged to capital account. The outstanding loans at the end of 1913 amounted to £188,175. At the same date the number of tenements supplied in the city and suburbs was 8200, the population 39,107, and the length of reticulation mains $86\frac{1}{2}$ miles. The revenue and expenditure for the last six years were as follows:—

HOBART WATERWORKS.—REVENUE AND EXPENDITURE, 1908 to 1913.

Particulars.	1908.	1909.	1910.	1911.	1912.	1913.
	£	£	£	£	£	£
Revenue	19,719	20,091	20,643	31,207	23,858	21,982
Expenditure	22,901	23,729	22,238	20,381	20,584	21,336

(c) *Proposed Extensions.* Parliamentary sanction to borrow £93,000 has been obtained for the purpose of improving the water supply of the city and suburbs of Hobart; £75,000 of this amount is to be spent on a new storage reservoir, and a contract for the construction of the dam for £56,500 has been let, the balance being retained for expenditure on other works connected with the scheme.

(ii.) *Hobart Sewerage System*.—A scheme for the construction of a sewerage system in Hobart was adopted in 1903. The sewage is discharged into the estuary of the River Derwent. Up to the end of the year 1913 about 70½ miles of sewers had been laid at a cost of about £188,235, and 6751 tenements (out of a total of 6845) had been connected. The revenue for the year was £12,662. The scheme, which is intended to sewer over 2000 acres so as to serve an estimated population of about 30,000 people, is almost completed. The suburb of Queenborough has recently become incorporated with the city, and arrangements are now being made to extend the system to this district.

§ 4. Harbour Trusts.

1. **Introduction**.—In the chief ports and harbours of the Commonwealth, administrative bodies have been created, in whom is vested the control and management of the port with respect to dredging, wharf and harbour accommodation, pilotage, harbour dues, etc.

Of these Trusts or Boards some are purely departmental, some are nominated by Government, while others are comprised of members appointed by the municipal and other associations connected with the port. In the latter case, the Government is usually represented on the Board by one or more nominated members. The Boards and Trusts mentioned hereunder are the only ones for which information is at present available.

2. **Sydney Harbour Trust**.—The establishment of this Trust was the direct outcome of the outbreak of bubonic plague in the port of Sydney in the early part of the year 1900. It was proved that this disease was due to the introduction of plague-stricken rats in vessels arriving from ports in which the disease had made its appearance. As a consequence the whole of the foreshores of the harbour, together with certain adjoining wharves, stores, dwelling houses, and other properties, were vested in a body of trustees. The Trust was established by an Act which came into force on the 11th February, 1901. The powers and duties of the Trust have been dealt with in previous issues of this book, together with some of the more important improvements carried out by the Commissioners. (See Year Book No. 5, p. 990.)

(i.) *Revenue, Expenditure, and Capital Cost*. The subjoined table gives particulars of the revenue and expenditure of the Trust, and also shews the total capital debt for properties, etc., vested in the Commissioners, the amount of interest payable on the debt, and the balance of revenue after deducting expenditure, interest, and the amount of the Commissioners' salaries:—

SYDNEY HARBOUR TRUST.—REVENUE, EXPENDITURE, CAPITAL DEBT, INTEREST AND BALANCE, 1901 and 1909-13.

Year ended the 30th June—	Revenue.				Expenditure.	Total Capital Debt.	Interest.†	Balance.
	Wharfage & Harbour Rates.	Tonnage Rates & Berthg. Charges	From Other Sources.	Total.				
	£	£	£	£	£	£	£	£
1901* ...	42,784	3,208	12,324	58,316	11,275	4,692,782	55,554	— 8,513
1909 ...	183,753	11,539	139,076	334,368	103,882	5,338,108	191,532	38,954
1910 ...	183,094	11,563	142,390	337,047	142,763†	5,482,060	191,246	3,038
1911 ...	212,061	15,536	146,158	373,755	143,181†	5,697,756	200,845	29,729
1912 ...	234,731	18,163	158,755	411,649	143,170†	6,136,671	212,842	£56,398
1913 ...	258,703	18,417	173,162	450,282	154,540†	6,535,853	221,049	74,693

* For the period from 11th February to the 30th June, 1901. † The rate of interest charged each year is the average rate on the total capital debt of the State, which varies. ‡ Including expenditure for the renewal, replacement or reconstruction of wharves or buildings. § Including £761 repaid to previous revenue votes.

— Represents a loss.

The revenue for the year 1912-13 shows an increase of £38,635 on that for the previous year, and is the highest attained since the formation of the Trust. The working expenses for the year shewed an increase of £10,206 on the previous year, while the expenditure on renewals, etc., increased by £1164, making a total increased expenditure of £11,370.

(ii.) *Dredging and Towing.* The subjoined statement gives particulars of the dredging and towing done by the dredges and tug-boats owned by the Trust:—

**SYDNEY HARBOUR TRUST.—PARTICULARS OF DREDGING AND TOWING,
1901 and 1909-13.**

Year.	Dredging.			Towing Dredged Material.		
	Tons Dredged.	Total Expenditure.	Expenditure per Ton.	Miles run Towing.	Total Expenditure in Towing.	Expenditure per Mile Towing.
	Tons.	£	Pence.	Miles.	£	Pence.
1901 ...	317,500	3,696	2.79	29,277	2,849	23.35
1909 ...	434,504	13,066	7.22	38,699	6,634	41.14
1910 ...	448,650	11,495	6.15	33,048	5,519	40.08
1911 ...	1,675,945	19,058	2.72	38,372	5,442	34.04
1912 ...	1,671,540	24,036	3.45	30,163	6,636	52.80
1913 ...	1,875,925	28,104	3.95	28,317	5,976	48.22

3. *The Melbourne Harbour Trust.*—This Trust was constituted under an Act passed in 1876, as a result of public agitation and demands extending over a period of thirty-four years, to the effect that the cost of landing goods should be reduced, and the delays in receiving goods should be abolished. Both demands arose from the fact that vessels of a draught greater than twelve feet had to discharge in the bay into lighters.

(i.) *Constitution of the Trust.* The Harbour Trust Act was originally drafted on the lines of similar institutions in Great Britain, such as the Thames Conservancy, the Mersey Harbour Board, and the Clyde Trust. Under the Act of 1876, as amended in 1883, the number of Commissioners was fixed at seventeen.

(ii.) *Works Undertaken by Trust in the River and in the Port.* In 1890 a Consolidating Act was passed, and the borrowing powers of the Trust were increased to £2,000,000, and subsequently by the Act of 1913 to £3,000,000. The river was widened from Queen's Bridge to the bay to about 300 feet, while the depth has been gradually increased until at the present time it is twenty-six feet at low water. Five and three-quarter miles of wharves carrying sheds which measure a total length of 14,515 feet, and cover an area of 705,780 square feet, have been constructed along the river and at the Victoria Dock, Melbourne.

(a) *The Coode Canal.* In 1886 the canal across the flats below Fishermen's Bend was completed at a cost of £96,000. The length of the canal is 2002 yards, the distance from Queen's Bridge to the river entrance being thereby reduced from seven miles to five and three-quarter miles, and the navigation being greatly facilitated. This channel, which is called the Coode Canal, has been widened 164 feet, which will make its total width 487 feet, and its width at low water 430 feet. At the present time there is a depth of 26 feet at low water for a width of 250 feet.

(b) *The Victoria Dock.* This dock, four miles up the river and opened in 1892, has an area of ninety-one acres and a depth of twenty-six feet at low water. The entrance to the dock is 160 feet wide. There are 8750 feet of wharfage, and the total cost, including wharves, sheds, and approaches thereto, was, to 31st December, 1913, £522,100. The sheds have a total length of 4868 feet, and cover an area of 265,600 square feet.

(iii.) *Works in the Bay.* Prior to 1889 all the mail steamers and vessels of heavy draught had to lie at anchor in the bay, and there discharge into lighters. One of the first works undertaken by the Commissioners was to make the railway piers at Williamstown available to these vessels. This work was completed at a cost of £256,160. In 1893 a channel over 8000 feet long and 600 feet wide was constructed, running in a southerly direction from Port Melbourne Railway Pier and having a navigable depth of thirty feet o.l.w. The cost of this work was £218,379.

(iv.) *Dredging.* The total quantity of material raised by the dredging and excavation done in the improvement of the river and bay amounts to nearly 46 million cubic yards.

During the ten years ending 31st December, 1913, the average cost of dredging per cubic yard was 2.86 pence and the cost of towing and depositing 6.29 pence, not allowing for depreciation of plant. The Trust has expended £225,458 in reclaiming land within its jurisdiction. The amount of material raised annually is now about 2,500,000 cubic yards.

(v.) *Financial Operations.* The revenue of the Trust is obtained from wharfages, and quayage rates, rents and license fees from lands and ferries, and other license fees. One-fifth* of the revenue of the Trust is paid to the consolidated revenue of Victoria. The following table gives particulars of the revenue and expenditure of the Trust from 1908 to 1913 inclusive:—

MELBOURNE HARBOUR TRUST.—REVENUE AND EXPENDITURE, 1908 to 1913.

Particulars.	1908.	1909.	1910.	1911.	1912.	1913.
REVENUE.						
	£	£	£	£	£	£
Rates and rents	272,409	259,641	316,787	332,732	337,626	337,562
Interest	3,662	90	410	2,039	2,375	665
Recoups	1,068	3,082	2,138	4,654	7,297	544
Total	277,139	262,813	319,335	339,425	347,298	338,771
EXPENDITURE.						
	£	£	£	£	£	£
Wharfage refunds	1,161	997	1,618	1,097	1,457	1,112
Consolidated revenue of Victoria	53,869	51,612	62,604	65,413	68,344	60,960
Maintenance and management	70,224	54,962	56,794	58,987	86,486	94,621
Interest on loans	81,413	72,517	69,409	69,366	69,264	71,081
Dredging (construction) ...	9,162	16,368	25,200	31,932	26,244	37,602
Wharf	4,942	5,146	6,308	22,656	108,346	176,286
Other Harbour improvements ...	4,522	7,724	9,880	787	3,777	7,760
Plant account	13,753	11,887	860	21,935	72,078	52,741
Redemption of loans expenses ...	603	1,794	...	...	...	...
Total	239,649	223,007	232,673	272,173	435,996	502,163
SURPLUS.						
					†	†
Surplus	37,490	39,806	86,662	67,252	88,698	163,392

* Limited by Act 2449 to £60,000 per annum for five years from 1st January, 1913.

† Signifies a deficit.

4. **Fremantle Harbour Trust.**—Under the provisions of an Act passed in 1902, a Harbour Trust was constituted for the general administration of Fremantle harbour, and since January, 1903, the Trust has had full control of all the affairs of the harbour, and undertakes the duties of wharfingers, and the receiving, sorting, storing, delivering, and handling of all cargo, between vessels and the owners of the goods. The works, which were commenced in 1892, were designed with the object of forming a safe and commodious harbour within the mouth of the Swan River, so as to admit vessels at all states of the tide, and thus enable cargo to be loaded and discharged at the quays and goods-sheds on the river banks. Two ocean moles have been thrown out from the north and south heads, the former being 3450 feet and the latter 2040 feet long. A channel, 450 feet wide and 30 feet deep at low water, has been blasted and dredged through the rock which formerly crossed the estuary to the river, and wharves and goods-sheds have been constructed along the reclaimed foreshore on both sides of the harbour. The port possesses up-to-date-electrically operated grain storage and shipping appliances and the quays are well equipped with electric cranes and elevators, all wharves and stores being in direct communication with the State railway system. At the present time all the European mail boats, which make Fremantle the first and last port of call in Australia, are able to enter and leave the harbour in all weather and at all tides. For the year ended 30th June, 1913, the total revenue of the Trust was £99,768, and the expenditure £76,198. The gross amount paid to the Treasury for the year was £123,570, being interest £54,613, sinking fund £15,604, and surplus revenue account £39,000.

5. **Hobart Marine Board.**—The Hobart Marine Board was established in 1858, and consists of nine wardens, elected by the shipowners, importers and exporters of the port. To meet the requirements of the large steamers now visiting the Commonwealth, extensive harbour improvements were commenced in 1912. The ocean wharf and pier has now a length of 1150 feet, with a depth of water from 36 feet at the inner to 60 feet at the outer end.

The total capital debt on properties in connection with the Harbour Trust vested in the Board is £96,000. The interest paid thereon in 1913 amounted to £3865. The Marine Board also guarantees the interest on the cost of Tasman Island Lighthouse, £22,202. The revenue and expenditure of the Board for the years 1912 and 1913 were as follows:—

HOBART MARINE BOARD.—REVENUE AND EXPENDITURE.

Year.	REVENUE.				EXPENDITURE.			
	General.	Harbour Improvements.	Light-house Fund.	Total.	General.	Harbour Improvements.	Light-house Fund.	Total.
	£	£	£	£	£	£	£	£
1912 ..	19,281	35,000	10,804	65,085	20,293	32,490	11,590	64,373
1913 ..	21,343	*38,000	10,634	69,977	*20,453	35,917	11,948	68,318

* Including £8000 transferred from the General account to the Harbour Improvements account.

6. **Launceston Marine Board.**—The Board was formed in 1858 and consists of nine members, elected on the State Parliamentary franchise, with special residential conditions. The principal work of the Board is in connection with the straightening, deepening, and widening of the River Tamar, the distance from the wharves to the open sea being 40 miles.

Wharves to the length of 3758 feet have been constructed, the depth at some of them being 40 feet S.L.W. The total capital debt on 31st December, 1913, was £75,758, of which £27,250 was incurred on the Tamar Improvements Scheme. The revenue for 1913 was £19,469 and the expenditure £17,249.

7. **Geelong Harbour Trust.**—This Trust was appointed in 1905, and consists of three Commissioners appointed by the Government of Victoria. To the 31st December, 1912, the Trust had borrowed £240,000. The sinking fund at the same date stood at £6794. The revenue for the year 1912 was £34,695 and the expenditure £36,263. Under the Act appointing the Trust, one-fifth of a certain portion of the revenue is paid into the Consolidated Revenue of Victoria. In 1912, this amounted to £2985, making a total of £17,267 paid to the State since the inception of the Trust. At Sparrovale the Trust has established an experimental and model farm, confined almost entirely to dairy farming and the growing of lucerne. The revenue from this source for the year 1912 was £5191.

8. **Bundaberg Harbour Board.**—The principal port in Queensland for the shipment of sugar is Bundaberg, more than 55,000 tons of that commodity having been shipped from the port during 1913. The Harbour Board consists of nine members, representing the district shire councils and the shipowners and exporters, with one Government nominee.

The revenue for the year amounted to £8963 and the expenditure to £8067. The total Port Improvements Loans and Government Endowment amounted on the 31st December, 1913, to £31,147. During the year 1913, 256,850 tons were dredged at a cost of £3047.

9. **Bunbury (Western Australia) Harbour Board.**—The Bunbury Harbour Board was constituted in 1909, and consists of five members appointed by the Government.

The capital expenditure for the year ending 30th June, 1913, was £5776, making the total capital expenditure to that date £227,132. The revenue for the year was £27,231 and the expenditure £7941, the balance being paid into Consolidated Revenue. The timber trade is the principal industry of the port, the shipments of timber for the year ending 30th June, 1913, amounting to 217,068 loads.

10. **Burnie and Table Cape (Tasmania) Marine Board.**—While the existing works accommodate steamers of 4000 to 5000 tons, which visit the port regularly, they are insufficient for the rapidly increasing traffic in produce and ores from the north-west and west coast districts of Tasmania. A scheme is, therefore, being carried out by which the port will eventually be capable of taking any shipping trade in the Commonwealth. A breakwater is being constructed 1200 feet in length and with a depth of 40 feet at low water. It is intended later on to increase the length to 4000 feet and to enclose 300 acres of deep water space, of which 100 acres will have a depth of nearly 45 feet. The expenditure on that portion of the scheme at present under construction will be £150,000.

§ 5. Fire Brigades.*

1. **New South Wales.**—Reference has been made in the section of this book dealing with the subject of *Private Finance* (see page 758) to the constitution of the Board of Fire Commissioners of New South Wales, which has now superseded the Metropolitan and all other Fire Brigade Boards in that State.

(i.) *Receipts and Disbursements of Board of Fire Commissioners of New South Wales.* The subjoined table shows the actual receipts and disbursements of the Board, for the years 1911, 1912 and 1913 :—

* See § 7, Fire Insurance, p 758.

NEW SOUTH WALES BOARD OF FIRE COMMISSIONERS.—RECEIPTS AND DISBURSEMENTS FOR SYDNEY FIRE DISTRICT, 1911, 1912 and 1913.

Year.	Receipts.					Total.	Disbursements.
	From Government.	From Municipalities.	From Fire Insurance Companies.	From Firms.	From other Sources.		
	£	£	£	£	£	£	£
1911 ...	21,643	21,643	21,198	444	1,145	66,073	60,667
1912 ...	20,100	20,100	19,896	204	1,874	62,174	65,713
1913 ...	25,586	25,586	25,404	182	2,270	79,028	76,853

With reference to the preceding table, under the "Fire Brigades Act 1909," by which the New South Wales Board of Fire Commissioners was constituted and which came into operation on 1st January, 1910, insurance companies do not now, as formerly, return the amount of their risks, but give in lieu thereof the amount of premiums received, which forms the basis of their contribution towards the revenue of the Board. By this Act also, firms which effect insurances with companies not registered in New South Wales are likewise required to make contributions on account of the premiums paid to such companies, which is the first instance of this class of insurer being compelled to share the expense of local advantages, which had hitherto been available free of cost. A fuller description of the principal provisions of this Act will be found in previous issues of this book (see Year Book No. 5, page 990). The Sydney fire district includes the City of Sydney and suburbs, comprising a total area of 168 square miles.

2. Victoria.—Under the Fire Brigades Act of 1890 a metropolitan fire district and nine country fire districts were established, the former being placed under the control of a Metropolitan Fire Brigades Board, and the latter under the control of a Country Fire Brigades Board.

(i.) *Metropolitan Fire Brigades Board.* The metropolitan fire district originally comprised the area included in the several municipalities within a radius of ten miles from the Melbourne General Post Office, but this area has since being extended in certain directions so as to include the greater part of the Shire of Moorabbin and also the township of Mordialloc. The Board is composed of nine members, of whom three are appointed by the Governor-in-Council, three by the municipal councils, and three by the insurance companies. On the 31st December, 1913, the Board had under its control 49 stations, 231 permanent men, 150 auxiliary firemen, 28 special service firemen, 10 steam fire engines, 5 gasolene engines, 2 chemical engines (1 motor), 2 petrol motor fire engines, 104,127 feet of hose, and 251 fire-alarm circuits having 827 street fire-alarms, of which 755 contained telephones. The total length of wire in use outside stations for fire alarms and telephones is about 556 miles.

(ii.) *The Country Fire Brigades Board.* This Board consists of nine members, of whom three are appointed by the Governor-in-Council, two are elected by the municipal councils of the districts where there are brigades registered under the Board, two by the fire insurance companies, and two by the registered fire brigades. At the end of the year 1913 there were 103 municipal councils, and sixty-five insurance companies included in the operations of the Act. All the brigades are volunteer brigades, but in the large towns permanent station-keepers and watchmen are employed. There were 121 registered brigades and 2396 registered firemen at the end of the year 1913.

(iii.) *Financial Operations of both Boards.* The Government, the insurance companies and the municipalities in which the Boards operate contribute equally to the cost and maintenance of the brigades. The following table gives particulars as to the financial operations of the Melbourne Board during each year from 1909 to 1913 inclusive:—

VICTORIA.—REVENUE AND EXPENDITURE OF METROPOLITAN FIRE BRIGADES BOARD, 1909 to 1913.

Particulars.	1909.	1910.	1911.	1912.	1913.
ORDINARY RECEIPTS.					
	£	£	£	£	£
Contributions	51,498	56,497	56,993	63,775	66,238
Receipts for services	3,212	3,990	3,719	6,011	5,941
Interest and sundries	3,821	2,451	3,420	6,965	3,669
Total	58,531	62,938	64,132	76,751	75,848
ORDINARY EXPENDITURE.					
Salaries	31,759	33,742	37,913	45,613	47,210
Interest and sinking fund	8,425	11,009	9,588	9,681	8,357
Other expenditure	18,347	18,187	16,631	21,457	20,281
Total	58,531	62,938	64,132	76,751	75,848

For the year 1913 the receipts of the Country Fire Brigades Board amounted to £16,359, and the expenditure to £16,528.

3. **Queensland.**—In the year 1911 there were twenty-six fire brigades organised in various towns in Queensland. The revenue of these brigades is derived chiefly from grants from the Government, from municipalities, and from the insurance companies, generally in equal proportions, and the following table gives these particulars for the year 1911:—

QUEENSLAND.—FIRE BRIGADES.

Receipts.	Amount.	Expenditure.	Amount.
	£		£
From Government	4,722	Salaries and wages	8,248
„ Local authorities	4,805	Building, repairs, etc....	870
„ Insurance companies	4,711	Plant, stores, clothing, etc.	2,008
„ Other sources	787	Other	2,799
Total	15,025	Total	13,925

At the end of the year 1911 the fire brigades staffs comprised 54 permanent men, 294 partly paid, and 72 volunteers. The Metropolitan brigade at Brisbane and the South Brisbane brigade protect an area of 9½ square miles; their joint staffs comprise 55 men. They have three steam engines, one motor turbine, one chemical motor, eight hose reels, and 17,210 feet of hose. There are 38 telephone fire alarms and 35 call points.

4. **South Australia.**—The fire brigades of South Australia are managed by a Board consisting of five members, one being nominated by the Government, one by the Adelaide city council, one by the other metropolitan and country municipalities, and the other two by the contributing insurance companies. The Board is incorporated under the Fire Brigades Act 1913. The revenue of the Board is derived by contributions of three-ninths by the Government, four-ninths by the insurance companies, and two-ninths by the city of Adelaide and the other municipalities subject to the Act, the contributions for 1913 amounting to £22,340. Brigades are established in the following municipalities, viz., Adelaide, Kensington and Norwood, including St. Peter's, Unley, Port Adelaide,

Glenelg, Gawler, Kapunda, Moonta, Kadina, Port Pirie and Port Augusta. The strength of the brigades consists of 87 permanent firemen and 22 auxiliary firemen. The number of calls received during the year 1913 was 307, of which 10 were to fires of a serious nature.

5. **Western Australia.**—Under the Fire Brigades Act 1898, fire brigades were established in a number of the more important centres of population in the State. These brigades were under the control of local boards, and were in some cases municipal and in others volunteer.

An Act to make further provision for the protection of life and property from fire was passed in 1909 and came into operation on the 1st January, 1910. It is called the District Fire Brigades Act, and divides Western Australia into two fire districts under the control of the Western Australian Fire Brigades Board. The Board is constituted as follows:—Two members nominated by the Government; one member nominated by the Perth City Council; one member elected by the Municipalities of Kalgoorlie, Boulder, Coolgardie, and the Kalgoorlie Road Board; one member elected by the Municipalities and Road Boards other than those above-mentioned; three members elected by the Insurance Companies; and one member elected by the Volunteer Fire Brigades. The election of the Board takes place bi-annually, and its income is provided as follows:—Two-eighths by the Government, three-eighths by the Municipalities and Road Boards, and three-eighths by the Insurance Companies. The receipts for the year 1913 amounted to £30,270, and the expenditure to £30,530. The value of buildings and plant belonging to the Board is £46,715.

The whole of the Brigades throughout the State are now controlled by this Board, and number three purely permanent, twelve permanent and partially paid, four partly permanent and partly volunteer, two purely partially paid, and twenty-five purely volunteer brigades; making a total of forty-six. The staff includes a chief officer, deputy-chief officer, third officer, 16 other officers, 86 permanent firemen, 70 partially-paid firemen, and 477 volunteer firemen.

6. **Tasmania.**—Under the present system, the Government, the City Council, and the Fire Insurance Companies contribute equally to the annual expenditure of the Hobart Fire Brigade. It is intended to increase the scope of operations so as to include in the metropolitan district the suburbs of Queenborough, New Town and Glenorchy. Under the new scheme, the estimated annual cost is £2700. There are volunteer brigades under the control of local boards in most of the larger centres of population.

§ 6. Local Government Finance.

1. **Introduction.**—In the preceding parts of this section certain particulars have been given regarding local authorities in each individual State. It is proposed to here give in a comparable form for each State particulars regarding the financial operations of local governing bodies. The areas controlled by these bodies are variously known in the several States as cities, towns, boroughs, shires, municipalities, municipal districts, and road districts. The particulars given in the tables in the two next paragraphs relate to financial years ending as follows:—New South Wales: for the calendar year 1912. Victoria: 30th September, 1912, except Melbourne, 31st December, and Geelong, 31st August, 1912. Queensland: Calendar year, 1912. South Australia: Corporations, 30th November, and district councils, 30th June, 1912. Western Australia: 31st October, 1911, except road districts, 30th June, 1912. Tasmania: Calendar year, 1912.

2. **Number, Revenue, Expenditure and Valuation of Local Authorities.**—The following table gives particulars of the number, revenue, expenditure, and valuation of local authorities in each State and in the Commonwealth during the year 1912. It may be noted that, excepting in Tasmania, the metropolitan water supply systems are not under municipal control; the particulars given of revenue and expenditure for the five States other than Tasmania do not, therefore, include revenue and expenditure on account of these systems.

**NUMBER, REVENUE, EXPENDITURE, AND VALUATION OF LOCAL AUTHORITIES (a)
IN EACH STATE, 1912.**

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wlth.
No. of local authorities (a)	324	208	173	178	143	51	1,082
RECEIPTS.							
Rates—	£	£	£	£	£	£	£
General	1,456,883	1,103,210	479,944	189,273	170,202	91,688	3,491,200
Other (b)	212,817	347,046	153,572	68,186	48,733	67,602	927,950
Government grants	423,557	161,513	11,525	47,392	90,676	26,051	765,714
Loans (c) & other sources	731,277	333,753	190,365	108,578	871,488	107,935	2,343,396
Total	2,829,534	1,945,516	865,406	413,429	1,181,099	293,276	7,528,260
EXPENDITURE.							
Works, services, etc. ...	2,106,235	1,421,325	677,019	280,284	364,672	179,451	5,028,986
Interest on loans and overdrafts	215,669	217,933	17,071	9,612	51,575	39,973	551,833
Redemptions, sinking funds, etc.	(d) 46,423	61,782	34,407	19,676	55,016	6,941	224,245
Administration	221,747	176,489	82,154	47,634	47,099	37,519	612,642
Other	(e) 161,865	173,577	114,148	59,124	597,172	32,910	1,138,796
Total	2,751,939	2,051,106	924,799	416,330	1,115,534	296,794	7,556,502
VALUATIONS.							
Capital value of property	1169,737,901	287,872,434	54,991,920	78,640,713	31,339,483	31,146,771	643,729,222
Annual value of property	(d) 2,582,788	15,423,445	(g)	3,750,186	(h) 1,381,751	1,534,789	(g)

(a) Including particulars for all areas controlled by local governing bodies responsible for the construction and maintenance of roads and streets, such areas being variously known in the several States as cities, towns, boroughs, shires, municipalities, road districts, etc. (b) Exclusive of rates for water-supply and sewerage in metropolitan and most other principal towns, such rates being collected by special boards or general Government. (c) Exclusive of loans in connection with extraordinary works of construction. (d) City of Sydney only. (e) Including redemptions, sinking funds, etc., for municipalities other than Sydney. (f) Unimproved capital value. (g) Not available. (h) Exclusive of District Road Boards.

3. Local Government Loans, 1912.—The following table gives particulars for each State of loans raised by local authorities during the year 1912, of loans current at the end of that year, of liability on account of interest and sinking fund, and of loans maturing during 1912:—

PARTICULARS OF LOANS RAISED BY LOCAL AUTHORITIES, 1912.

Particulars.	N.S.W.	Victoria.	Q'land.	S.A.	W.A.	Tas.	C'wealth.
	£	£	£	£	£	£	£
Loans from general Government—							
Raised during year ... ..	...	...	52,335	...	6,700	15,425	74,460
Current at end of year ... ..	...	203,035	360,236	...	92,005	293,682	948,958
Loans from other sources—							
Raised during year	1,005,155	284,234	(a)	41,544	589,050	82,043	(a)
Current at end of year	6,463,696	4,808,915	(a)	223,234	1,385,777	681,739	(a)
Total—							
Raised during year	1,005,155	284,234	(a)	41,544	595,750	97,468	(a)
Current at end of year	6,463,696	5,011,950	1,295,162	223,234	1,477,782	975,421	15,447,245
Current loans, exclusive of those obtained from general Government, raised within the C'wealth	5,323,781	4,808,915	(a)	223,234	861,044	266,263	(a)
Annual liability on account interest	253,162	214,634	16,632	8,502	65,365	40,794	599,089
Total sinking fund at end of year	387,118	897,944	45,617	21,462	220,867	111,956	1,684,964
Amount loans maturing during year							
Redeemed ... ..	...	(a)	(b)	15,162	12,632	59,444	(a)
Renewed	120,535	(a)	(a)	1,900	...	5,875	(a)

(a) Not available. (b) In the case of loans from Government the periodical payments include interest and sinking funds. (c) Excluding £841 credited to three municipalities, but which was not in the hands of the Sinking Fund Trustees on 31st October, 1912.