

## SECTION XXVI.

### LOCAL GOVERNMENT.

#### § 1. Introduction.

1. **Systems of Local Government.**—In the previous issues of this book, a description was given of the systems of Local Government 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. New South Wales.

1. **Development of Local Government Systems.**—In the year 1858 the Municipalities Act was passed by which provision was made for the incorporation of any town or rural district as a municipality upon the presentation to the Governor of a petition signed by at least fifty of the respective ratepayers, and containing a larger number of signatures than those attached to any counter petition. The duties of the Council were defined, and under the Act the general rate was not to exceed one shilling in the pound, but a special rate for water supply, sewerage, and street lighting could be levied. Government endowment was provided for, by way of subsidies on the amount collected from rates, over a period of fifteen years. In all thirty-five districts were incorporated under this Act. The Act of 1858 was repealed in 1867 by the Municipalities Act of that year. Under the provisions of the latter Act the thirty-five existing municipalities were to continue their existence under the designation of boroughs, and all municipalities created in the future were to be classified either as boroughs or municipal districts.

The Act of 1867 was amended from time to time until the whole of the Acts were repealed by the consolidating Act of 1897. This Act did not alter the chief features of previous Acts, and still retained the voluntary principle of incorporation, which was not conducive to the adoption of a general system of local government, because so long as the central Government continued to construct and pay for local works, it was natural that the inhabitants benefited would be willing to deny themselves the advantages of self-government. The law on the subject remained in an admittedly unsatisfactory condition for several years, and, though various measures were introduced into Parliament for its amendment, it was not until the year 1905, when the Shires Act was passed, that a comprehensive scheme of local government was extended to the greater part of the State. By this Act, the whole State, with the exception of the existing municipalities, the Western Division, Lord Howe Island, the islands in Port Jackson, and the Quarantine Station of Port Jackson, was divided into shires, which were themselves subdivided into ridings, each riding having equal representation in the council. An important feature of the Act was that the rates were to be charged on the unimproved value of the land instead of on the annual rental, and as soon as a rate was imposed by a council, the operation of the Land Tax Act was suspended.

In 1906 the Local Government Extension Act was passed amending and consolidating the law relating to municipalities, and extending to them the principles of the Shires Act. Provision was also made whereby the Governor was authorised to proclaim as a city any municipality which had, during the five years preceding such proclamation, an average population of at least 20,000 persons and an average revenue of at least £20,000, and which formed an independent centre of population.

These Acts were in turn repealed, and their provisions amended and consolidated by the Local Government Act of 1906. Further acts were passed in the two following years, containing important amendments, more especially in regard to municipal loans, constitution of areas, valuations, etc. A fuller account of the provisions of these Acts may be found in Year Book No. 5, pp. 975 and 976.

**2. Local Government Systems now in Operation.** The law relating to local government in New South Wales is now contained in the Acts of 1906, 1907, and 1908 referred to above. Practically the whole of the State, with the exception of the Western Division, has now been brought under the operation of these Acts.

(i.) *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 1910, was 185,108 square miles, of which 182,111 square miles were comprised within shires and 2997 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.

(ii.) *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 councils 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.)

(iii.) *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.

3. **Shires, 1911.**—The total area of the 134 shires constituted under the new system is 182,111 square miles, and the population on the 31st December, 1911, was 601,840.

The shires vary in area from 36 square miles in the case of Ku-ring-gai, immediately north of the metropolis, to 5745 square miles in the case of Lachlan in the Condobolin district.

(i.) *Valuation and Rates Levied.* The unimproved capital value of the shires in 1911 was £94,189,939, as against £89,935,912 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 £469,605.

(ii.) *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, 1907 to 1911.**

Particulars.*	1907.	1908.	1909.	1910.	1911.
<i>General Fund—</i>	£	£	£	£	£
General rates ... ..	287,635	382,336	374,540	421,596	463,501
Government endowment...	235,794	162,859	261,029	277,731	319,593
Public works ... ..	3,064	65,781	57,017	59,527	45,331
Health administration ...	2,376	2,979	3,033	3,746	3,998
Public services ... ..	4,593	7,038	6,691	7,441	8,769
Shire property ... ..	...	517	1,721	4,229	6,731
Miscellaneous ... ..	2,197	4,198	5,651	5,008	8,594
<i>Special and Local Funds</i> ...	...	1,160	7,462	15,095	24,516
Total revenue... ..	535,659	626,368	717,144	794,373	881,033

\* The receipts for Public Works, Health Administration, Public Services, etc., include Government grants, the total endowments and special grants during 1911 amounting to £355,286.

(iii.) *Expenditure.* The following statement shows the expenditure of shires during the years 1907 to 1911 inclusive:—

## NEW SOUTH WALES.—EXPENDITURE OF SHIRES, 1907 to 1911.

Particulars.	1907.	1908.	1909.	1910.	1911.
<i>General Fund—</i>	£	£	£	£	£
Administrative expenses ...	100,435	116,932	117,696	125,669	128,126
Public works ...	249,868	516,072	529,954	599,945	647,220
Health administration ...	1,536	4,604	4,573	4,840	5,724
Public services ...	3,870	11,702	10,290	13,012	15,410
Shire property ...	18,853	397	1,911	4,561	7,657
Miscellaneous ...	11,043	6,453	5,886	5,129	7,120
<i>Special and Local Funds</i> ...	...	58	6,474	11,976	20,949
<b>Total expenditure...</b>	<b>385,605</b>	<b>656,218</b>	<b>676,784</b>	<b>765,132</b>	<b>832,206</b>

(iv.) *Assets and Liabilities.* The financial position of the shires at the end of the year 1911 was strong, as there was an excess of assets of £311,762. The following table gives particulars of assets and liabilities as at the 31st December, 1911:—

## NEW SOUTH WALES.—ASSETS AND LIABILITIES OF SHIRES, 1911.

Assets.		Liabilities.	
<i>General Fund—</i>		<i>General Fund—</i>	
Outstanding rates ...	£27,940	Temporary loans ...	£12,445
Stores and materials ...	10,585	Sundry creditors ...	38,067
Bank balance ...	140,551	Due on contracts ...	5,523
Sundry debtors ...	6,555	Due to trust fund ...	64
Land ...	9,686	Other ...	253
Buildings ...	41,300	<i>Special and Local Funds</i>	11,475
Plant and property* ...	107,337		
Furniture ...	13,653	Total ...	67,827
Other ...	2,171	Excess of assets ...	311,762
<i>Special and Local Funds</i> ...	19,811		
<b>Total ...</b>	<b>379,589</b>	<b>Total ...</b>	<b>379,589</b>

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

4. **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.

(i.) *Capital Value, Area, Population, and Rates Levied.* The following table shows the improved capital value, the area, population, number of buildings, and amount of rates levied in municipalities for the years 1901 and 1908 to 1911:—

**NEW SOUTH WALES.—MUNICIPALITIES, IMPROVED CAPITAL VALUE, AREA, POPULATION, NUMBER OF BUILDINGS, AND TOTAL RATES LEVIED, 1901 and 1908-11.**

Year ended February.*	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	†487,900	94,907	277,457	36,429,600	1,732,302	371,330	73,862	127,564
1908 ...	103,328,200	95,259	577,180	117,955	426,792	41,668,300	1,824,638	433,470	83,511	208,631
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	631,589	44,716,888	1,822,821	456,280	85,341	299,306
1910 ...	111,318,074	95,259	†629,503	§	647,762	45,824,999	1,822,821	†421,714	§	310,849
1911 ...	119,375,694	95,259	641,960	§	726,712	47,484,486	1,822,821	431,500	§	340,075

\* 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 1907 to 1911 inclusive :—

**NEW SOUTH WALES.—MUNICIPALITIES, IMPROVED AND UNIMPROVED CAPITAL VALUES, 1907 to 1911.**

Year.	Sydney.	Suburbs.	Metropolis.	Country.	Total.
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UNIMPROVED VALUE.

	£	£	£	£	£
1907 ...	20,207,812	19,583,598	39,791,410	14,875,612	54,667,022
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

IMPROVED VALUE.

1907 ...	45,749,800	57,578,400	103,328,200	41,668,300	144,996,500
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

(ii.) *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 1911 are given in the following table:—

## NEW SOUTH WALES.—MUNICIPALITIES, REVENUE, 1911.

Particulars.	Sydney.	Suburbs.	Country.	Total.
	£	£	£	£
General fund ... ..	658,221†	483,721	331,217	814,938†
Trading accounts ... ..		8,067	92,992	101,059†
Special and local funds ... ..		32,668	194,388	227,056†
Loan funds ... ..		43,988	46,298	90,286†
Reserve and Renewals Account ... ..		799	6,088	6,887†
Gross revenue ... ..	658,221†	569,243	670,983	1,898,447
Deduct transfers* ... ..	...	45,806	59,373	105,179
Net revenue ... ..	658,221†	523,437	611,610	1,793,268

\* 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.

(iii.) *Expenditure.* Reference has already been made to the system of accounts prescribed by the Local Government Act 1906 (see paragraph ii. hereof). The following table gives particulars of expenditure of municipalities for the year 1911:—

## NEW SOUTH WALES.—MUNICIPALITIES, EXPENDITURE, 1911.

Particulars.	Sydney.	Suburbs.	Country.	Total.
	£	£	£	£
General fund ... ..	624,000†	463,220	320,042	783,262†
Trading accounts ... ..		9,708	90,247	99,955†
Special and local funds ... ..		38,090	185,391	223,481†
Loan funds ... ..		35,574	31,738	67,312†
Reserve and Renewals Account ... ..		775	1,643	2,418†
Gross expenditure ... ..	624,000†	547,367	629,061	1,800,428
Deduct transfers* ... ..	...	45,806	59,373	105,179
Net expenditure ... ..	624,000†	501,561	569,688	1,695,249

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

(iv.) *Assets and Liabilities.* The financial position of the municipalities as at the 31st December, 1911, is shown by the following statement of assets and liabilities of the various funds:—

## NEW SOUTH WALES.—MUNICIPALITIES, ASSETS, AND LIABILITIES, 1911.

Particulars.	Sydney.	Suburbs.	Country.	Total.
<i>Assets—</i>	£	£	£	£
General fund ... ..	4,845,111†	250,675	410,251	660,926†
Trading accounts ... ..		2,409	62,024	64,433†
Special and local funds... ..		23,094	1,135,160	1,158,254†
Loan funds ... ..		160,955	444,973	605,928†
Reserves and renewals account ... ..		949	9,694	10,643†
Total ... ..	4,845,111†	438,082	2,062,102	7,345,295
<i>Liabilities—</i>				
General fund ... ..	4,310,441†	53,531	46,685	100,216†
Trading accounts ... ..		4,282	28,736	33,018†
Special and local funds... ..		8,474	1,062,015	1,070,489†
Loan funds ... ..		769,783	613,722	1,383,505†
Reserves and renewals account ... ..		949	9,694	10,643†
Total ... ..	4,310,441†	837,019	1,760,832	6,908,312

† See note † to first table on preceding page. ‡ See note ‡ to first table on preceding page.

5. **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.

6. **Metropolitan Water Supply.**—(i.) *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.

(ii.) *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  $16\frac{1}{2}$  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.

(iii.) *Storage Reservoirs.* In connection with the water supply there are in all thirty-two service reservoirs, with a total maximum capacity of 51,716,000 gallons.

(iv.) *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 1908-12.

**SYDNEY WATERWORKS—REVENUE, EXPENDITURE, AND CAPITAL COST,  
1901 and 1908-12.**

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 pay- ing Work- ing Expens- es and Interest.
	£	£	£	%	%	£	£
1901 ...	203,348	49,270	4,300,552	24.22	4.72	152,333	1,745
1908 ...	283,410	75,016	5,009,012	26.47	5.66	183,033	25 361
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

\* Rate reduced from 7d. to 6d. from 1st July, 1908, and water-meter rents abolished. † Meter rentals reimposed from 1st July, 1909, and meterage charge reduced from 1s. to 11d. per 1000 gallons.

(v.) *Quantity of Water, Number of Houses, and Population Supplied.* The following table gives various particulars for the years 1901 and 1908-12, shewing the increase in the supply of water in Sydney and suburbs:—

**SYDNEY WATERWORKS.—NUMBER OF GALLONS, HOUSES AND POPULATION  
SUPPLIED, 1901 and 1908-12.**

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
1908	124,083	620,400	24,567	8,967,135	197	39.50	48
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

(vi.) *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.

**7. 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.

(i.) *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 1908-12:—

**SYDNEY SEWERAGE SYSTEMS.—REVENUE, EXPENDITURE, AND CAPITAL COST, 1901 and 1908-12.**

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
1908 ...	216,258	64,020	4,053,591	29.60	5.33	148,142	4,096
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

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

(ii.) *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 1908 to 1912:—

**SYDNEY SEWERAGE SYSTEMS.—NUMBER OF HOUSES DRAINED, POPULATION, AND LENGTH OF SEWERS, 1901 and 1908-12.**

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
1908 ...	96,384	481,920	724.37	46.94	286,000	684
1909 ...	99,442	497,210	760.16	47.80	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	553,635	863.29	49.63	382,654	809

8. **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.)

(i.) *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, and a storage reservoir of 172,408,100 gallons capacity. 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. 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 346 miles.

(ii.) *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, 1912, was in respect of water supply £492,354, and £237,497 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 1908 to 1912:—

**PARTICULARS OF THE HUNTER DISTRICT WATER SUPPLY, 1901 and 1908-12.**

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
1908 ... ..	45,695	39,615	14,457	72,285	1,654	603,755
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

\* Inclusive of an instalment of £10,652 to the sinking fund for reconstruction of renewable works.

The average daily consumption of water for all purposes per inhabitant was 22.77 gallons during the year 1912, as against 21.55 gallons during the previous year.

(iii.) *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, 1912, about 37 miles of sewers, connecting with 2424 separate properties, were under the control of the Board. For the financial year 1911-12 the revenue was £10,999 and the expenditure £13,334, the latter amount including a £1324 instalment to the Sinking Fund for the reconstruction of renewable works.

9. **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.)

(i.) *Waterworks.* Up to the 30th June, 1911, forty-seven 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 £838,829, and the total of the sums payable annually for a period of 100 years was £31,546, including interest at the rate of 3½ per cent., the first repayments having become due at various dates ranging from the end of the year 1893 to the end of 1908. 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. A number of other municipalities have constructed works out of their own resources.

(ii.) *Sewerage Works.* Only ten municipal councils have taken advantage of the Act providing for the construction of sewerage works in country towns. On the 30th June, 1911, the capital debt of these systems was £119,879, the amount payable annually to the Government being £4428. Other sewerage systems are in existence in several places, but with few exceptions the operations have been on a small scale.

10. **Board of Fire Commissioners of New South Wales.**—Reference has been made in the section of this book dealing with the subject of *Private Finance* (see page 868) 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 shews the actual receipts and disbursements of the Board, for the years 1910, 1911 and 1912 :—

**NEW SOUTH WALES BOARD OF FIRE COMMISSIONERS.—RECEIPTS AND DISBURSEMENTS FOR SYDNEY FIRE DISTRICT, 1910, 1911, and 1912.**

Year.	Receipts.						Disbursements.
	From Government.	From Municipalities.	From Fire Insurance Companies.	From Firms.	From other Sources.	Total.	
	£	£	£	£	£	£	£
1910 ...	21,624	21,624	21,181	442	607	65,478	58,168
1911 ...	21,643	21,643	21,198	444	1,145	66,073	60,667
1912 ...	30,411	30,419	30,078	240	3,934	95,082	90,453

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 152½ square miles.

11. **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 shows 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 1908-12.**

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
1908 ...	183,045	12,525	131,955	327,525	90,782	5,227,360	189,265	47,478
1909 ...	183,753	11,539	139,076	334,368	103,882	5,338,108	191,532	33,954
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‡	5,627,756	200,845	29,729
1912 ...	234,731	18,163	158,755	411,649	143,170‡	6,136,671	212,842	56,398

\* 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. — Represents a loss. ‡ Including expenditure for the renewal, replacement or reconstruction of wharves or buildings, viz., £34,970 in 1910, £23,650 in 1911, and £28,446 in 1912. § Including £761 repaid to previous revenue votes.

The revenue for the year 1911-12 shows an increase of £37,894 on that for the previous year, and is the highest attained since the formation of the Trust. The working expenses for the year shewed a decrease of £4807 on the previous year, but the expenditure on renewals, etc., increased in the same period by £4796, leaving a small decrease in the total expenditure of £11.

(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 1908-12.**

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
1908 ...	504,760	8,915	4.24	45,485	6,940	36.62
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

### § 3. Victoria.

1. **Development of Types of Local Authorities.**—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 1847; 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.)

2. **Local Government Systems now in Operation.**—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.

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

(a) *Shires.* Any part of the State containing ratable property yielding, upon a rate not exceeding one shilling in the pound, a sum of £1500 may be constituted a shire upon petition of at least fifty inhabitants.

(b) *Boroughs.* Any part of the State, not exceeding in area nine square miles, and having no point distant more than six miles from any other point, and containing a population of not less than 500 and a ratable property yielding, upon a rate not exceeding one shilling in the pound, a sum of £300, may be constituted a borough upon petition of at least 250 resident householders. Any borough having during the preceding financial year a revenue of £10,000 may be declared a town, or having a revenue of £20,000 may be declared a city upon petition under the common seal of such borough. Provision is also made for severing any part of a municipality and annexing the same to an adjoining municipality: for dividing municipalities into any number of subdivisions not exceeding eight; and for uniting two or more boroughs which form one continuous area so as to form one borough.

(c) *Townships.* Upon petition signed by not less than twenty-five ratepayers resident in any portion not exceeding three square miles in extent of any shire and distant more than ten miles from the boundaries of the city of Melbourne, the Governor may, with the consent of the municipal council, proclaim such portion a township.

(ii.) *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.)

(iii.) *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 1911-12 a sum of £82,673 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, 1911-12.**

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 and 1911-12 by Acts No. 2267 and 2334 respectively.

**3. Boroughs and Shires.—Number, Population, and Value of Ratable Property.**  
—The following table shews the number of cities, towns, boroughs, and shires, their estimated population, the number of ratepayers and dwellings, and the value of ratable property for the years 1901 and 1908-12 inclusive:—

**VICTORIA.—PARTICULARS OF MUNICIPALITIES, 1901 and 1908-12.**

Financial Year.	Number of Municipalities.	Estimated Population.	Number of Ratepayers (both sexes).	Estimated Number of Dwellings.	Estimated Value of Real Property.	
					Total.	Annual.
<b>CITIES, TOWNS, AND BOROUGHS.</b>						
1901	58	627,237	153,783	130,358	£ 67,302,423	£ 4,765,632
1908	60	711,000	176,420	153,629	103,666,178	5,944,691
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
<b>SHIRES.</b>						
1901	150	571,683	159,128	122,645	£ 106,839,331	£ 5,771,865
1908	146	553,000	152,973	121,465	129,059,488	6,694,209
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

\* Census figures. † Coburg was proclaimed a town in September, 1912. ‡ Not available.

**4. 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 shews the amount of municipal assets and liabilities for the years 1901 and 1907 to 1911:—

## VICTORIA.—MUNICIPAL ASSETS AND LIABILITIES, 1901 and 1907-11.

Items.	1901.	1907.	1908.	1909.	1910.	1911.
<b>ASSETS.</b>						
	£	£	£	£	£	£
<b>MUNICIPAL FUND—</b>						
Uncollected rates ... ..	187,205	112,435	116,223	114,538	110,676	105,241
Other assets ... ..	122,581	196,048	182,790	267,944	350,092	473,054
<b>LOAN FUND—</b>						
(a) Sinking funds—						
Amount at credit ... ..	675,310	772,662	796,272	819,920	834,935	893,528
Arrears due ... ..	1,351	3,616	2,806	2,627	3,286	1,182
(b) Unexpended balances ... ..	394,136	325,901	220,674	106,852	345,287	264,048
<b>PROPERTY—</b>						
Buildings, markets, etc. ... ..	2,507,441	2,697,701	2,826,394	2,992,809	3,149,476	3,246,854
Waterworks ... ..	197,675	223,687	220,669	207,451	202,210	207,365
Gasworks ... ..	63,732	66,269	66,638	57,399	70,687	72,274
<b>Total ... ..</b>	<b>4,149,471</b>	<b>4,398,319</b>	<b>4,432,466</b>	<b>4,562,800</b>	<b>5,066,009</b>	<b>5,263,546</b>
<b>LIABILITIES.</b>						
	£	£	£	£	£	£
<b>MUNICIPAL FUND—</b>						
Arrears due sinking funds ... ..	1,021	3,616	2,806	2,827	3,286	1,182
Overdue interest ... ..	9,413	17,060	18,535	15,639	15,750	11,997
Bank overdrafts ... ..	157,046	94,825	122,453	120,705	133,237	165,275
Temporary Government advances ... ..	20,901	...	...	...	...	...
Other liabilities ... ..	142,530	179,342	194,283	233,359	293,089	*357,722
<b>LOAN FUNDS—</b>						
Loans outstanding ... ..	4,253,304	4,442,713	4,437,673	4,416,103	4,767,138	4,831,984
Due on loan contracts ... ..	52,826	39,726	88,086	49,452	45,089	92,363
<b>Total ... ..</b>	<b>4,637,041</b>	<b>4,777,282</b>	<b>4,863,836</b>	<b>4,838,085</b>	<b>5,257,589</b>	<b>5,460,523</b>

\* Including £100,351 due on current contracts.

5. 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 1907 to 1911:—

## VICTORIA.—REVENUE AND EXPENDITURE OF MUNICIPALITIES, 1901 and 1907-11.

Items.	1901.	1907.	1908.	1909.	1910.	1911.
<b>SOURCES OF REVENUE.</b>						
	£	£	£	£	£	£
<b>Taxation ...</b>						
Rates ... ..	722,346	887,580	902,741	946,956	999,799	1,046,943
Licenses ... ..	104,499	106,742	106,758	101,682	102,066	100,845
Dog fees ... ..	14,965	17,455	17,628	18,751	19,296	19,833
Market and weighbridge dues ... ..	49,623	57,190	57,386	68,014	65,739	63,071
Government endowments and grants ... ..	175,972	117,304	172,648	175,601	187,323	157,141
Contributions for streets, etc. ... ..	24,999	30,816	34,246	35,173	47,532	47,342
Sanitary charges ... ..	48,253	56,918	58,072	59,966	62,720	66,389
Rents ... ..	54,117	66,601	67,387	69,842	77,958	79,263
Other sources ... ..	89,210	163,825	208,403	195,831	207,181	237,601
<b>Total ... ..</b>	<b>1,283,984</b>	<b>1,504,431</b>	<b>1,625,269</b>	<b>1,671,816</b>	<b>1,769,614</b>	<b>1,818,428</b>
<b>HEADS OF EXPENDITURE.</b>						
	£	£	£	£	£	£
<b>Salaries, etc ... ..</b>						
Salaries, etc ... ..	139,270	147,933	152,302	158,436	163,435	168,303
Sanitary work street cleaning, etc. ... ..	132,542	134,632	142,769	150,964	159,571	178,623
Lighting ... ..	86,059	76,217	79,832	82,354	83,972	87,341
Fire brigades' contributions ... ..	16,769	17,144	20,724	22,051	23,223	23,120
Public works   Construction ... ..	244,315	266,658	313,607	288,869	335,446	311,065
Maintenance ... ..	345,334	441,335	474,188	490,341	548,583	571,254
Formation of private streets, etc. ... ..	23,350	28,296	32,718	37,888	32,163	46,849
Redemption of loans ... ..	27,745	54,998	60,568	58,263	46,439	66,860
Interest on loans ... ..	197,810	196,965	198,632	201,199	206,355	213,752
Charities ... ..	13,407	13,401	14,666	15,241	15,589	15,785
Other expenditure ... ..	103,403	156,894	187,830	173,154	170,840	187,514
<b>Total ... ..</b>	<b>1,330,004</b>	<b>1,534,473</b>	<b>1,677,836</b>	<b>1,678,760</b>	<b>1,785,616</b>	<b>1,870,466</b>

6. **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 twelve cities, eight 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, 1912, of 614,300 (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 £8,750,000, 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, 1912, was £1,688,663 and for loans raised by the Board was £9,296,053. The Board is still empowered to borrow £155,218 before reaching the limit of its borrowing powers.

(i.) *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 1912.

**MELBOURNE AND METROPOLITAN BOARD OF WORKS.—TOTAL COST OF CONSTRUCTION AND MAINTENANCE OF WATER SUPPLY AND SEWERAGE,  
1853 to 1912.**

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 ...	126,671	28,447	195,301	6,667	40,714	397,800
<b>Total</b> ...	<b>4,140,919</b>	<b>547,238</b>	<b>6,463,062</b>	<b>108,390</b>	<b>319,722</b>	<b>11,579,331</b>

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

(ii.) *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 1908-12 :—

MELBOURNE AND METROPOLITAN BOARD OF WORKS.—REVENUE AND EXPENDITURE DURING EACH YEAR, 1901-2 and 1908-12.

Particulars.	1901-2.	1907-8.	1908-9.	1909-10.	1910-11.	1911-12.
ORDINARY RECEIPTS.						
Water supply ... ..	£ 171,956	£ 229,674	£ 241,790	£ 248,356	£ 253,002	£ 267,917
Sewerage ... ..	124,696	226,609	242,296	253,756	267,444	272,365
Live stock—Metropolitan farm ... ..	19,929	39,132	22,153	31,289	35,016	63,225
Interest { Water supply ... ..	...	129	15	138	890	953
{ Sewerage ... ..	17,448	16,562	15,929	10,229	8,995	8,885
Total ... ..	334,029	512,106	522,183	543,768	555,287	613,345

ORDINARY EXPENDITURE.

General management ... ..	33,621	33,267	33,984	34,863	35,779	40,104
Live stock—Metropolitan farm ... ..	16,702	41,586	20,316	17,900	19,336	46,283
Maintenance { Water supply ... ..	22,205	25,018	24,643	24,944	25,016	30,234
{ Sewerage ... ..	24,396	35,588	38,016	42,921	45,665	47,797
Interest { Water supply ... ..	102,670	101,044	103,297	101,578	105,760	112,886
{ Sewerage ... ..	192,952	270,130	280,647	286,655	293,608	297,962
Total ... ..	392,546	506,583	499,903	508,861	525,164	575,266

LOAN RECEIPTS.

Water supply ... ..	1,636	6,725	2,435	5,272	4,788	5,982
Sewerage ... ..	88,425	72,415	67,771	61,509	56,313	59,907
Proceeds of loans ... ..	396,238	307,500	429,595	257,833	291,310	322,223
Miscellaneous ... ..	...	14,865	15,246	9,104	9,238	12,399
Total ... ..	486,299	401,505	515,047	333,758	361,649	400,511

LOAN EXPENDITURE.

Water supply construction ... ..	17,058	40,183	67,271	35,964	98,145	133,149
Sewerage construction ... ..	410,760	309,194	273,508	331,214	286,035	245,911
Expenses in floating and redemption of loans ... ..	5,200	34	239,189	2,677	2,936	5,393
Miscellaneous ... ..	4,293	18,655	24,961	18,002	26,288	35,638
Total ... ..	428,725	368,066	593,929	387,877	413,404	420,091

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

7. Melbourne Metropolitan Water Supply.—In December, 1857, the construction of the Yan Yean 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.

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

## MELBOURNE WATER SUPPLY SYSTEM, 1857 to 1912.

Year.	Served Population.*	Capital Cost.	Charge per 1000 Gallons.	Rate in £	Mains & Pipes, Mileage of—	Supply in Gallons, Averaged daily.
1857 ...	95,442	£ 748,974	10/- and 6/-	1/-	104	3,250,000
1912 ...	614,300	4,140,919	1/-	7d.	1,424	38,506,855

\* On the 31st December.

(ii.) *Description of Water Supply Systems.* The water supply of Melbourne consists of two main systems—the Yan Yean and the Maroondah.

(a) *The Yan Yean System* is the main source of supply. It commences by collecting the water from the Silvery and Wallaby Creek valleys, to the north of Mount Disappointment 2700 feet high, which forms one of the prominent heights of the main Dividing Range in Victoria. The waters of the Silvery Creek are brought by means of an aqueduct a little over eight miles long, to a weir at the head of the Wallaby Creek aqueduct, which carries the combined waters of the two creeks for a distance of five and a quarter miles, and discharges over the crest of the Dividing Range at a height of 1694 feet above sea level, and then drops a height of 133 feet in 683 feet into Jack's Creek, one of the branches of the Plenty River. From its drop into Jack's Creek the water follows the natural bed of the stream for about three miles to the Tourourrong reservoir, which has a capacity of 60,000,000 gallons. From Tourourrong the Clear Water Channel carries the water for a distance of four and three-quarter miles to the old Plenty inlet channel of the Yan Yean reservoir. The Yan Yean reservoir, which is twenty-two miles from the city, is formed by the construction of an earthen bank 49 chains long, 30 feet high, 20 feet wide on top, with a slope next the water of three to one, and an outside slope of two to one. The reservoir, when full, covers an area of 1360 acres, with a maximum depth of 26 feet, and an average depth of 18 feet. Its total capacity is 6,400,000,000 gallons, of which 5,400,000,000 are available for consumption. From the Yan Yean reservoir to the Pipe Head reservoir at Morang, a distance of seven miles, an aqueduct capable of delivering 33,000,000 gallons a day has been constructed. From the Morang reservoir, mains carry the water a distance of seven miles to the storage reservoir within the metropolitan area, at Preston. The No. 1 Preston reservoir is 20 feet deep, and holds 16,000,000 gallons. A second reservoir of 25,000,000 gallons capacity was built during 1908-9, the walls being of reinforced concrete. These are the main distributing reservoirs of the central city supply.

(b) *Maroondah System.* The water for this system is obtained from the Maroondah River, a tributary of the Yarra. The Maroondah River is the principal stream diverted, but its contribution to the aqueduct flow is supplemented by diversions from tributary creeks. A temporary weir of Portland cement concrete has been constructed across the Maroondah River, from which point the water is led in an aqueduct forty-one miles long to the Preston reservoir, where it joins the water from the Yan Yean system. The channel is now capable of delivering 29,000,000 gallons daily. The valleys are crossed by wrought-iron syphons, and with the exception of the Plenty River, which is crossed on a wrought-iron girder bridge, all the syphons are laid under the beds of the streams. The total cost of the Maroondah system to 30th June, 1912, was £778,221.

(c) *High Level System.* Besides the Yan Yean and Maroondah systems, the high levels of the eastern suburbs of Melbourne are provided for by a direct main from the Yan Yean reservoir. This main is 20½ miles long, and cost to the

30th June, 1912, £199,594. The discharge is about 9,000,000 gallons per day. There is a storage reservoir of 9,000,000 gallons capacity at Surrey Hills, costing to June 30th, 1912, £19,953.

(d) *O'Shanassy Supply.* The O'Shanassy River is a tributary of the Yarra. It is proposed to divert the waters of this river by an open aqueduct and pipe line of an aggregate length of about 48½ miles, delivering water by way of Mitcham. 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 works are in full progress, and the scheme is estimated to cost £450,000. The watershed of the O'Shanassy River, containing 32,650 acres, has been excised from the permanent forests area and a crown grant was issued to the Board on the 28th January, 1910.

(iii.) *Catchment Areas, Reservoirs, and Aqueducts.* (a) *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, 1912.

Area in acres	Silver and Wallaby Creeks.	Plenty River and Jack's Ck.	Yan Yean Reservoir Catchment.	Maroondah Catchment.	Total.
	12,000	12,000	5,000	40,000	69,000

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

(b) *Storage Reservoirs.* In connection with distribution there are ten service reservoirs having a total capacity of 95,000,000 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	29,000,000	9,000,000	71,000,000

(iv.) *Quantity of Water, Number of Houses, and Population Supplied.* The following table gives various particulars for the years 1901 and 1908-12, shewing the increase in the supply of water in Melbourne and suburbs:—

#### MELBOURNE WATERWORKS.—NUMBER OF HOUSES, POPULATION, AND WATER SUPPLIED, 1901 and 1908-12.

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
1908	116,781	536,540	33,654	12,317,239	288.2	62.2		4,484,868
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	128,086	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

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

**MELBOURNE WATERWORKS.—CONSTRUCTION, COST, REVENUE, EXPENDITURE,  
AND NET PROFITS, 1854 to 1912.**

Period.	Capital Cost. <sup>1</sup>	Annual Revenue. <sup>2</sup>	Cost of Maintenance and Management. <sup>3</sup>	Percentage of Working Charges to Revenue.	Interest. <sup>4</sup>	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	21.97	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 ...	126,671	277,305	50,879	18.35	111,933	114,493
Total ...	4,140,919.	7,167,740	1,224,089	...	3,181,152	2,762,490

1. Works commenced in 1853. 2. Revenue commenced in 1854. 3. Returns for expenditure commenced in 1859. 4. First interest paid in 1856.

**8. 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.

(i.) *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, 1912, 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, and very nearly the whole of Essendon, St. Kilda and Brighton. The greater part of Malvern, Footscray and Williamstown had also been dealt with, together with the thickly populated portions of Caulfield, Camberwell, Kew, Hawthorn, Brunswick, Northcote, Coburg, Preston, and Moorabbin, besides small portions of Nunawading and Heidelberg.

(ii.) *Metropolitan Sewerage Farm.* The farm contains 9152 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). The cost of the farm to the 30th June, 1912, was £472,602. About 31,066,653 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 1911-12, 49,721 sheep were bought, the profit from that source being £11,298. Cattle to the number of 1007 were purchased, the profit for the year on cattle being £2774.

(iii.) *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.

(iv.) *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 1908-12:—

**MELBOURNE SEWERAGE WORKS.—TENEMENTS CONNECTED, CAPITAL COST, REVENUE, MAINTENANCE AND WORKING EXPENSES, 1901-2 and 1908-12.**

Year.	Number of Houses Connected.	Capital Cost.	Revenue.			Maintenance and Working Expenses.
			From Rates.	From other Sources.	Total.	
	No.	£	£	£	£	£
1901-2 ...	47,172	3,610,225	126,725	10,968	137,693	24,336
1907-8 ...	94,067	5,520,303	222,134	—2,197*	219,937	35,225
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	260,529	15,200	275,728	46,904
1911-12 ...	118,350	6,463,062	271,682	18,042	289,724	47,381

\* Loss on sheep, £6247.

**9. 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 1908-12:—

**VICTORIA.—COUNTRY WATERWORKS UNDER TRUSTS AND MUNICIPAL CORPORATIONS, 1911 and 1908-12.**

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	748,089	+	+	+	24	+	470,041	+
1908...	87	1,429,836	950,293	20,512	72,952	69,291	23	675,066	465,778	9,750
1909...	83	952,486	731,276	16,130	85,054	88,190	23	676,358	461,881	9,894
1910...	86	960,719	769,442	14,727	+	+	25	686,356	457,981	10,718
1911...	87	1,017,396	819,698	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

\* 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 owners 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.

(i.) *Geelong Waterworks Trust.*—(a) *Constitution.* Constituted under The Geelong Municipal Waterworks Act 1907, with borrowing powers up to £300,000, and further increased by Act No. 2322, 1911, to £350,000. 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.

(b) *Water Supply.* The available storage capacity of the reservoirs is 1353 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.

(c) *Sewerage.* 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 Newtown and Chilwell, and Geelong West, and the suburban areas situated in Corio and South Barwon Shires.

10. **Fire Brigades.**—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 been 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, 1912, the Board had under its control 50 stations, 230 permanent men, 152 auxiliary firemen, 27 special service firemen, 10 steam fire engines, 5 gasolene engines, 2 chemical engines (1 motor), 2 petrol motor fire engines, 105,391 feet of hose, and 220 fire-alarm circuits having 776 street fire-alarms, of which 694 contained telephones. The total length of wire in use outside stations for fire alarms and telephones is about 483 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 1912 there were 102 municipal councils and fifty-nine 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 118 registered brigades and 2308 registered firemen at the end of the year 1912.

(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 1908 to 1912 inclusive :—

**VICTORIA.—REVENUE AND EXPENDITURE OF METROPOLITAN FIRE BRIGADES BOARD, 1908 to 1912.**

Particulars.	1908.	1909.	1910.	1911.	1912.
<b>ORDINARY RECEIPTS.</b>					
	£	£	£	£	£
Contributions ... ..	50,675	51,498	56,497	56,993	63,775
Receipts for services ... ..	2,545	3,212	3,990	3,719	6,011
Interest and sundries ... ..	5,136	3,821	2,451	3,420	6,965
<b>Total ... ..</b>	<b>58,356</b>	<b>58,531</b>	<b>62,938</b>	<b>64,132</b>	<b>76,751</b>
<b>ORDINARY EXPENDITURE.</b>					
Salaries ... ..	27,358	31,759	33,742	37,913	45,613
Interest and sinking fund ... ..	8,467	8,425	11,009	9,538	9,681
Other expenditure ... ..	22,531	18,347	18,187	16,631	21,457
<b>Total ... ..</b>	<b>58,356</b>	<b>58,531</b>	<b>62,938</b>	<b>64,132</b>	<b>76,751</b>

For the year 1912 the receipts of the Country Fire Brigades Board amounted to £14,515, and the expenditure to £14,864.

**11. 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 is fixed at seventeen, nominated or elected as follows:—Five were nominated by the Governor-in-Council, three elected by merchants, three by ship-owners, two were elected by the City Council, and one each by the ratepayers of South Melbourne, Port Melbourne, Williamstown, and Footscray. The sum of £1700 per annum was set aside for the remuneration of the Commissioners.

(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. 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 13,235 feet, and cover an area of 675,420 square feet, have been constructed along the river and at the Victoria Dock, Melbourne.

(a) *The Cooke 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. At the present time this channel, which is called the Cooke Canal, is being widened 164 feet, which will make its total width 487 feet, and its width at low water 430 feet. The work of widening the canal is still in progress.

(b) *The Victoria Dock.* This dock, four miles up the river and opened in 1892, has an area of ninety-six acres and a depth of twenty-six feet at low water. The entrance to the dock is 160 feet wide. There are 8800 feet of wharfage, and the total cost, including wharves, sheds, and approaches thereto, was £416,038. The sheds have a total length of 4660 feet, and cover an area of 255,380 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 about 43 million cubic yards.

During the ten years ending 31st December, 1912, the average cost of dredging per cubic yard was 2.85 pence and the cost of towing and depositing 4.92 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 1,200,000 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 1907 to 1912 inclusive:—

**MELBOURNE HARBOUR TRUST.—REVENUE AND EXPENDITURE, 1907 to 1912.**

Particulars.	1907.	1908.	1909.	1910.	1911.	1912.
<b>REVENUE.</b>						
	£	£	£	£	£	£
Rates and rents ... ..	257,787	272,409	259,641	316,787	332,732	337,626
Interest ... ..	2,949	3,662	90	410	2,039	2,375
Recoups ... ..	5,542	1,068	3,082	2,138	4,654	7,297
<b>Total ... ..</b>	<b>266,278</b>	<b>277,139</b>	<b>262,813</b>	<b>319,335</b>	<b>339,425</b>	<b>347,298</b>

MELBOURNE HARBOUR TRUST.—REVENUE AND EXPENDITURE—  
(continued.)

Particulars.	1907.	1908.	1909.	1910.	1911	1912.
EXPENDITURE.						
Wharfage refunds ... ..	£ 783	£ 1,161	£ 997	£ 1,618	£ 1,097	£ 1,457
Consolidated revenue of Victoria	51,565	53,869	51,612	62,604	65,413	68,344
Maintenance and management	53,741	70,224	54,962	56,794	58,987	86,486
Interest on loans ... ..	86,375	81,413	72,517	69,409	69,366	69,264
Dredging (construction) ...	8,163	9,162	16,368	25,200	31,932	26,244
Wharf .. ..	12,345	4,942	5,146	6,308	22,656	108,346
Other Harbour improvements ...	4,999	4,522	7,724	9,880	787	3,777
Plant account ... ..	11,310	13,753	11,887	860	21,935	72,078
Redemption of loans expenses ...	...	603	1,794	...	...	...
<b>Total ... ..</b>	<b>229,281</b>	<b>239,649</b>	<b>223,007</b>	<b>232,673</b>	<b>272,173</b>	<b>435,996</b>
PROFIT.						
<b>Profit ... ..</b>	<b>36,997</b>	<b>37,490</b>	<b>39,806</b>	<b>86,662</b>	<b>67,252</b>	<b>88,698</b>

#### § 4. Queensland.

1. **Development of Local Government Systems.**—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).

2. **Systems of Local Government now in Operation.**—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.

(i.) *The Municipal Council.* All local areas are governed by councils, the members of which are called aldermen in the case of towns and councillors in the case of shires. *Town councils* are composed of either seven, nine, or eleven members, as declared by Order-in-Council, but if the town 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.

(ii.) *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.

**3. 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 1907 to 1911:—

**QUEENSLAND.—PARTICULARS OF CITIES AND TOWNS AND SHIRES, 1907 to 1911.**

Year.	Municipality.	Area.	Population.	Number of Inhabited Dwellings.	Capital Value.	Assets.	Liabilities.		
							Government Loans.	Other.	Total.
1907	Cities and Towns	Square Miles. 354	No. 231,861	No. 43,864	£ 13,840,010	£ 1,296,743	£ 325,685	£ 637,196	£ 962,881
	Shires ...	669,901	318,336	66,984	29,977,860	259,519	100,951	44,525	145,476
	Total ...	670,255	550,197	110,848	43,817,870	1,556,262	426,636	681,721	1,108,357
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	364½	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	53,643	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	1,009,637
	Shires ...	669,890½	368,292	77,731	38,482,811	367,078	127,079	58,741	185,819
	Total ...	670,255	600,375	124,041	52,788,079	1,792,481	341,982	853,474	1,195,459

4. **Receipts and Expenditure of Cities, Towns, and Shires.**—The following table shews 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 1907 to 1911 :—

**QUEENSLAND.—REVENUE AND EXPENDITURE OF CITIES, TOWNS, AND SHIRES, 1907 to 1911.**

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.*
		£	£	£	£	£	£	£	£	£
1907	Cities and Towns	10,824	226,948	52,037	289,809	173,587	13,651	24,303	73,198	285,039
	Shires ...	5,813	187,397	26,249	219,459	141,252	12,594	34,311	31,500	219,657
	Total	16,637	414,345	78,286	509,268	315,139	26,245	58,614	104,698	504,696.
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.

\* Including interest on loans.

5. **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, and Toombul.

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

(i.) *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.

(a) *The Brisbane River Supply.* Of these the principal source of supply is the Brisbane River, about 60 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.

(b) *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.

(c) *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.

(d) *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.

(ii.) *Brisbane Waterworks: Cost, Revenue, Expenditure, and Interest.* The subjoined 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 1908 to 1912:—

**BRISBANE WATERWORKS.—COST, REVENUE, EXPENDITURE, INTEREST, AND  
REDEMPTION OF LOANS, 1901 and 1908-12.**

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
1908 ... ..	811,055	69,493	22,125	18,791	26,716
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

(iii.) *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 1908 to 1912:—

**BRISBANE WATERWORKS.—PARTICULARS, 1901 and 1908-12.**

Year.	Length of Reticulation Mains.	Number of Tenements Connected.	Estimated Population Supplied.	Quantity	Average	Average
				Supplied.	Daily Supply.	Daily Supply 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
1908 ... ..	296½	20,365	101,825	1,620,057	4,438,514	43½
1909 ... ..	308½	21,660	107,800	1,673,287	4,584,351	42½
1910 ... ..	317	22,830	114,150	1,776,734	4,867,766	42½
1911 ... ..	333½	24,153	120,765	1,870,767	5,125,390	42.44
1912 ... ..	347	28,580	129,575	2,020,404	5,520,231	42.60

The total length of the trunk mains is 58½ 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.

6. **Country Towns Water Supply.**—In addition to the city of Brisbane there were at the end of the year 1911 twenty-five 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 1911 :—

QUEENSLAND.—PARTICULARS OF COUNTRY WATER SUPPLY SYSTEMS, 1911.

		£			£
Cost of construction to 31/12/11 ...		728,215	Expenditure	Office and salaries ...	10,850
Receipts	Rates and sales of water	70,458		Construction ...	47,113
	Other ...	46,059*		Maintenance ...	30,460
				Interest & redemption	27,383
	Total Receipts ...	116,517	Total	115,806	
Assets ...		605,045	Liabilities ...		440,729

\* Including £42,534 from Government loans.

7. **Fire Brigades.**—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, 1911.

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.

§ 5. South Australia.

1. **Development of Local Government Systems.**—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.

2. **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 council 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 and 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.

(i.) *The District Councils Act 1887* provides for the continuation and amalgamation of existing districts and for the constitution as a new district of any part of the State containing rateable property capable of yielding upon a rate not exceeding one shilling in the pound the sum of £200. The Governor is authorised to alter the area or boundaries of any district by annexation or by subdivision. New districts are constituted upon petition to the Governor; every petition must be signed by fifty inhabitants of the part sought to be constituted, and if the proposed district comprises portion of a previously existing district, by a majority of the ratepayers of such portion.

(a) *Qualification of Councillors.* Every male ratepayer, if of full age, is qualified to be a councillor, unless he is a minister of religion, a stipendiary magistrate, an uncertificated insolvent, or is the treasurer or paid official of the district council, or is interested in any contract, except for advertisements and printing, with the district council. The chairman is elected by the councillors from their own number.

(b) *Qualification of Electors.* Every person of either sex, if of the age of twenty-one years, whose name appears as a ratepayer in the assessment book is entitled to a vote at the elections of councillors and auditors. In case of a joint tenancy or a tenancy in common, only one person is entitled to a vote for every £75 or part thereof at which the property is assessed.

The powers and duties of district councils have been given *in extenso* in previous issues.

3. **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 of 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 Act of 1890, which was in turn amended in 1893, 1896, and 1903. These Acts were again amended by the Local Government Act 1910.

(i.) *The Municipal Corporations Act 1890.* After making provision for continuing existing corporations and by-laws, the Act authorises the Governor to constitute new municipalities, or to alter the boundaries of existing ones, on petition of not less than

two-fifths of the ratepayers or owners of ratable property within the land proposed to be incorporated, separated, or added; and also to rearrange, increase or diminish the number of wards of a municipality on petition of not less than one-fifth of the ratepayers therein. Each council consists of a mayor, and of two councillors for each ward, and the provisions as to their qualifications are substantially the same as in the case of district councils referred to above. All persons of full age, if British subjects and not in receipt of public relief or alms, who are either owners or occupiers of any ratable property within a municipality are entitled to vote at the election of the mayor and councillors. Provision is made for the nomination and election of the mayor, councillors, and auditors, and for regulating the meetings of the councils. The functions of municipal councils will be found described in previous issues of this book.

4. **Finances of District Councils and Corporations.**—The subjoined tables shew the amounts of assessments and the revenue and expenditure of district councils and of corporations for the financial years 1901 and 1907 to 1911; 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 1907-11 (EXCLUSIVE OF MAIN ROADS FUNDS).**

Year.*	Amount of Assessment (Annual Value).	Revenue.				Expenditure.	
		From Rates.	From Subsidies.	Other Sources.	Total.	On Public Works.	Total.
<b>DISTRICT COUNCILS.</b>							
1901	£ 1,412,507	£ 63,321	£ 15,225	£ 51,919	£ 130,465	£ 65,406	£ 128,499
1907	1,647,895	81,295	18,296	28,395	127,986	81,208	121,030
1908	1,801,370	84,036	23,054	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
<b>CORPORATIONS.</b>							
1901	1,177,850	87,289	9,733	49,342	146,364	55,533	146,091
1907	1,254,956	100,863	14,276	39,779	154,918	88,525	161,754
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

\* 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. **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, 1912, was £1,843,607, the total revenue being £2,607,160 and the area served approximately 85,000 acres.

The following table gives various particulars relating to the water supply of Adelaide for the years 1907 to 1912 inclusive:—

**ADELAIDE WATER SUPPLY.—LENGTH OF MAINS, REVENUE, EXPENDITURE, AND CONSUMPTION OF WATER, 1907 to 1912.**

Year Ended 30th June.	Length of Mains.	Gross Revenue.	Working Expenses.	Net Revenue.	Percentage of Net Revenue on Capital Cost.	Total Consumption of Water. <sup>1</sup>
	Miles.	£	£	£	%	Million of Gals.
1907 ...	667½	74,727	19,703	55,024	3.24	3,350
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

1. 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.

6. **Adelaide Sewerage System.**—In connection with the sewerage system of Adelaide, which is also under the control of the Public Works Department, about 309 miles of sewers had been laid in the city and suburbs up to the 30th June, 1912. 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 1907 to 1912 inclusive:—

**ADELAIDE SEWERAGE SYSTEM.—REVENUE AND EXPENDITURE, 1907 to 1912.**

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.
	£	£	£	£	£	£	£	%
1907 ...	32,380	6,390	38,770	6,284	5,460	11,744	27,026	4.00
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

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, 1912, was £1383, being 3.49 per cent. on the capital cost. Up to the same date 12½ miles of sewers had been laid.

7. **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. These three reservoirs have a capacity of over 3,000,000,000 gallons, and serve an area of nearly 4000 square miles. In the section of this book dealing with "Irrigation" reference has been made to these reservoirs. (See page 581.) 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.

8. **Fire Brigades Board.**—The Fire Brigades of South Australia are managed by a Board consisting of six members, two 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 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 1912 amounting to £21,311. 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 26 auxiliary firemen. The number of calls received during the year 1912 was 366, of which 16 were to fires of a serious nature.

## § 6. Western Australia.

1. **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.

2. **Municipalities** 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.

(i.) *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.

(ii.) *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 £ 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.

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

WESTERN AUSTRALIA.—NUMBER, AREA, POPULATION, NUMBER OF DWELLINGS,  
AND VALUATION OF MUNICIPALITIES, 1901 and 1907-11.

Year ended the 31st October.	Number of Muni- cipalities.	Area.	Population.	Dwellings.			Amount Payable in respect of Rates.
				Occupied.	Unoc- cupied.	Total.	
				No.	No.	No.	
1901 ... ..	42	71,721	196,807 <sup>2</sup>	<sup>2</sup> 20,989	<sup>2</sup> 967	<sup>2</sup> 21,956	£ 3
1907 ... ..	47	89,748	136,845	<sup>4</sup> 26,756	<sup>4</sup> 2,050	<sup>4</sup> 28,806	142,770
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	<sup>5</sup> 143,808	<sup>5</sup> 31,064	<sup>5</sup> 1,652	<sup>5</sup> 32,716	139,835
1911 ... ..	42	75,430	<sup>5</sup> 143,808	<sup>5</sup> 31,064	<sup>5</sup> 1,652	<sup>5</sup> 32,716	144,745

1. Census figures, 1901. 2. Returns for thirty-nine municipalities only. 3. Not available.  
4. Exclusive of one municipality. 5. 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.

4. *Revenue and Expenditure of Municipalities.*—The following table gives particulars as to the revenue and expenditure of municipalities during the years 1901 and 1907 to 1911:—

**WESTERN AUSTRALIA.—REVENUE AND EXPENDITURE OF MUNICIPALITIES,  
1901 and 1907-11.**

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
1907 ...	136,868	85,473	151,865	374,206	132,103	57,516	228,763	418,382
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

\* Incomplete.

5. **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 1907 to 1911:—

**WESTERN AUSTRALIA.—ASSETS AND LIABILITIES OF MUNICIPALITIES,  
1901 and 1907-11.**

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
1907 ...	39,414	553,873	125,742	55,430	774,459	730,994	47,131	778,125
1908 ...	27,291	605,165	143,434	58,988	834,878	757,494	42,321	799,815
1909 ...	41,216	628,205	152,416	56,705	878,542	795,108	36,352	831,460
1910 ...	24,603	669,499	174,119	58,548	926,769	844,644	53,304	898,148
1911 ...	19,570	703,044	195,892	48,884	967,390	893,064	55,615	948,679

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

6. **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.

7. **Boards of Health** 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 continuous with road districts are administered by the local authorities. Those not continuous 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 1907 to 1911 :—

**WESTERN AUSTRALIA.—RECEIPTS AND EXPENDITURE OF LOCAL HEALTH  
BOARDS, 1901 and 1907-11.**

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
1907 <sup>1</sup> ... ..	433,289	35,285	68,574	39,419	31,697	71,116
1908 ... ..	36,304	41,674	77,978	43,830	34,981	78,811
1909 ... ..	39,447	50,688	90,135	49,502	38,465	87,967
1910 <sup>2</sup> ... ..	738,741	52,095	90,836	56,278	34,144	90,442
1911 <sup>3</sup> ... ..	38,398	56,807	95,205	59,639	32,919	92,558

1. Exclusive of particulars of twenty-one boards which did not furnish returns, and of five boards which were not active, all outside municipalities. Particulars for previous years are also incomplete. 2. Exclusive of 10 boards which did not furnish returns, and 14 boards which were non-active. 3. Exclusive of 1 board which furnished no returns and 22 boards which were inactive. 4. Including sanitary rates, £16,564. 5. Including sanitary rates, £17,707. 6. Including sanitary rates, £16,804. 7. Including sanitary rates, £17,986. 8. Including sanitary rates, £17,427. 9. Including sanitary fees and charges, £13,341. 10. Including sanitary fees and charges, £50,617. 11. Exclusive of expenditure of one extra-municipal board.

On the 31st October, 1911, there were forty-two Local Boards of Health within municipalities and seventy-six extra-municipal Boards.

**8. Water Supply, Sewerage and Drainage Department.**—Prior to 1912, water supply, sewerage and drainage, in Western Australia, although under Governmental control, was 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 to be 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.”

9. **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).

(i.) *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. There are three service reservoirs, respectively of 2,413,000, 10,000,000 and 900,000 gallons capacity.

(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 yearly supply of 23 million gallons is drawn from this source.

(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. During the year 1910-11, 10,457,000 gallons were drawn. This reservoir has a catchment area of 569 square miles, and was constructed in connection with the goldfields water supply.

(d) *Artesian Bores.* There are in all six artesian bores, the flow from which augments the main supply from the Victoria reservoir. The total flow is about 420,000,000 gallons during the season, which lasts approximately for six months.

(ii.) *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 1912 inclusive:—

**PERTH METROPOLITAN WATER SUPPLY BRANCH.—PARTICULARS OF FINANCIAL OPERATIONS, 1909 to 1912.**

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

\* 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.

(iii.) *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 1912 inclusive:—

**PERTH METROPOLITAN WATER SUPPLY BRANCH.—CONSUMPTION OF  
WATER, 1909 to 1912.**

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.
<b>PERTH DISTRICT.</b>								
1909 ...	349,467	281,585	631,052	1,731	14,012	54,000	123	32.0
1910 ...	392,715	281,104	673,819	1,846	14,512	56,000	127	33.0
1911 ...	414,512	355,810	770,322	2,110	15,075	59,000	131	35.7
1912 ...	364,428	420,914	785,342	2,441	16,055	62,250	152	39.4
<b>FREMANTLE DISTRICT.</b>								
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
<b>CLAREMONT DISTRICT.</b>								
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

(iv.) *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 2700 premises connected to the sewers, while in Fremantle 400 houses have been already connected. A description of the method of sewage disposal adopted may be found in previous issues. (See Year Book No. 5, p. 1031.)

**10. 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 the section dealing with "Water Conservation" (see page 575 *ante*). 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 £3,317,414. The total consumption for the financial year 1911-12 was 1,134,800,000 gallons, an increase on the previous year of 75,900,000 gallons. The gross revenue for the year was £243,521, and the working expenses £78,240, leaving a surplus available towards interest and sinking fund of £165,281. The outlay for interest and sinking fund charges in respect of supplementary capital borrowed on debentures absorbed £23,650, leaving £141,631 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 £27,182.

11. **Mines Water Supply Branch.**—On the first 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 follow :—

- (i.) Domestic supplies for mining towns and the supply of water for battery and general mining purposes.
- (ii.) Opening up the very remote portions of the State by means of tracks, of which there are nearly 4000 miles.
- (iii.) 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.
- (iv.) Diamond drilling has also been carried out for the purpose of testing the country for minerals at depths unattainable with the ordinary boring plants.
- (v.) 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 193,000,000 gallons, and their cost over £400,000. Owing to the poor rainfall, the excessive evaporation, and the porosity of the soil, it has been found necessary to line and roof many of these tanks, and it has been proved that a reservoir so treated is equal in value to one 5 or 6 times as large but open to evaporation and unlined. By the reduction of the loss from all causes to a minimum, water is available at the end of a dry year, when water is badly needed, and when the open, unlined tank is empty. The capacities range from a 40,000 gallon roofed and lined tank for use of prospectors to a 38,000,000 gallon reservoir for a town supply.

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.

Some of the town supplies, after being constructed by the Mines Water Supply Branch, have been handed over to a local board for administration, but further extensions and improvements are subject to the approval of the engineer.

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 240. 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.

**12. 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 8 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 1912, 236 tanks have been constructed and 218 wells have been sunk.

The tests by boring vary considerably in different parts of the country. In the south and in the Broomhill and Dumbleyung areas the percentage of well strikes was very small, but as there was no difficulty in the matter of catchments for reservoirs and as the holding ground was perfect, the deficiency of well water was not of so great importance.

The further north of these areas that boring operations were extended, the better was the supply of water obtained, a large percentage of success being met with in the Dowerin District.

Boring is still being carried on in all the districts except Broomhill and Dumbleyung, while the dams are equipped with rabbit-proof fencing, pumps, etc.

**13. 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 the 30th June, 1912, the total revenue of the Trust was £170,338, and the expenditure £60,422, shewing a gross profit of £53,464. The gross amount paid to the Treasury for the year was £96,320, being interest £53,464, sinking fund £15,275, and surplus revenue account £27,581.

**14. Fire Brigades Boards.**—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 1912 amounted to £29,611, and the expenditure to £29,219. The value of buildings and plant belonging to the Board is £41,715.

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, ninety-one permanent firemen, sixty-three partially paid firemen, and 527 volunteer firemen.

## § 7. Tasmania.

1. **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.

2. **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.

(i.) *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.

(ii.) *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.

**3. Annual Value, Revenue, and Expenditure of Municipalities.**—The following table shows the annual value, total receipts, and expenditure of municipalities for the years 1908 to 1911 inclusive:—

**TASMANIA.—ANNUAL VALUE, REVENUE, AND EXPENDITURE OF MUNICIPALITIES, 1908 to 1911.**

Year.	Number of Municipalities.	Annual Value of Ratable Property.	Revenue.				Expenditure. <sup>2</sup>
			From Rates.	From Govt.	From other Sources. <sup>1</sup>	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	88,365	280,165	307,334

1. Including sums derived from loans. 2. 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.

**4. 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 shows the total revenue and expenditure for all local bodies, exclusive of all amounts contributed by the general Government, during each financial year from 1909 to 1912 inclusive:—

**TASMANIA.—REVENUE AND EXPENDITURE OF ALL LOCAL BODIES, EXCLUSIVE OF AMOUNTS CONTRIBUTED BY THE GENERAL GOVERNMENT, 1909 to 1912.**

Particulars.	1908-9.	1909-10.	1910-11.	1911-12.
*REVENUE.				
	£	£	£	£
Marine Boards and Lighthouses	72,810	74,723	72,507	72,676
Municipalities	396,186	309,990	271,360	280,165
Road and Bridge Trusts	†	†	†	†
Cemetery Trusts	†	†	894	918
Town Boards	†	†	†	†
Water Trusts	2,281§	2,325	2,267	2,272
Total	471,277	387,038	347,028	356,031
†EXPENDITURE.				
	£	£	£	£
Marine Boards and Lighthouses	69,213	82,627	68,894	68,529
Municipalities	353,699	318,501	266,108	307,334
Road and Bridge Trusts	†	†	†	†
Cemetery Trusts	†	†	769	902
Town Boards	†	†	†	†
Water Trusts	2,334§	1,923	4,138	1,834
Total	425,246	403,051	339,909	378,599

\* Exclusive of amounts contributed by the general Government † Exclusive of expenditure from Government contributions. ‡ Included in municipalities under the new Local Government Act. § Receipts and expenditure of eight water trusts not included in municipalities. || Exclusive of a number of cemetery trusts incorporated in the newly organised municipalities.

5. **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.

(i.) *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.

(ii.) *Capital Cost, Tenements Connected, Length of Mains, Revenue and Expenditure.* The total capital cost to the end of 1912 was £228,229, 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 1912 amounted to £182,175. At the same

date the number of tenements supplied in the city and suburbs was 8013, the population 38,985 and the length of reticulation mains 84½ miles. The revenue and expenditure for the last six years were as follows:—

**HOBART WATERWORKS.—REVENUE AND EXPENDITURE, 1907 to 1912.**

Particulars.	1907.	1908.	1909.	1910.	1911.	1912.
	£	£	£	£	£	£
Revenue ... ..	21,802	19,719	20,091	20,643	31,207	23,858
Expenditure ... ..	17,785	22,901	23,729	22,238	20,381	20,584

(iii.) *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.

**6. 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 1912 about 70 miles of sewers had been laid at a cost of about £183,370, and 6560 tenements (out of a total of 6716) had been connected. The revenue for the year was £10,284. 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.

**7. Fire Brigades.**—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.

**§ 8. 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 follow:—New South Wales: for the calendar year 1911. Victoria: 30th September, 1911, except Melbourne, 31st December, and Geelong, 31st August, 1911. Queensland: Calendar year, 1911. South Australia: Corporations, 30th November, and district councils, 30th June, 1911. Western Australia: 31st October, 1911, except road districts, 30th June, 1911. Tasmania: Calendar year, 1911.

**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 1911. 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, 1911.**

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wth.
No. of local authorities (a)	324	207	166	177	146	51	1,071
<b>RECEIPTS.</b>							
Rates—	£	£	£	£	£	£	£
General ... ..	1,322,466	1,046,943	441,512	177,085	156,195	96,335	3,240,536
Other (b) ... ..	198,908	324,443	212,613	63,428	110,831	53,898	964,121
Government grants ... ..	381,422	157,141	11,308	44,437	128,070	35,215	757,593
Loans (c) & other sources	581,213	289,901	156,299	91,731	206,486	94,717	1,420,347
Total ... ..	2,484,009	1,818,428	821,732	376,681	601,582	280,165	6,382,597
<b>EXPENDITURE.</b>							
Works, services, etc. ... ..	1,684,218	1,195,132	558,569	226,107	304,643	181,059	4,149,728
Interest on loans and over-drafts ... ..	175,535	213,752	14,283	8,731	41,730	38,183	492,214
Redemptions, sinking funds, etc. ... ..	(d) 36,610	66,860	32,643	11,293	30,290	4,252	181,948
Administration ... ..	288,629	168,303	74,385	44,394	45,836	35,498	637,045
Other ... ..	(e) 200,565	226,419	128,719	87,913	147,511	48,342	839,469
Total ... ..	2,365,557	1,870,466	808,599	378,438	570,010	307,334	6,300,404
<b>VALUATIONS.</b>							
Capital value of property	£164,034,416	275,078,517	52,788,079	75,943,584	20,362,374	30,924,993	619,131,963
Annual value of property	(d) 2,498,429	14,774,660	(g)	3,645,542	1,321,715	1,492,533	(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) Sydney only. (e) Including redemptions, sinking funds, etc., for municipalities other than Sydney. (f) Unimproved capital value. (g) Not available.

3. **Local Government Loans, 1911.**—The following table gives particulars for each State of loans raised by local authorities during the year 1911, of loans current at the end of that year, of liability on account of interest and sinking fund, and of loans maturing during 1911:—

**PARTICULARS OF LOANS RAISED BY LOCAL AUTHORITIES, 1911.**

Particulars.	N.S.W.	Victoria.	Q'land.	S.A.	W.A.	Tas.	C'wealth.
	£	£	£	£	£	£	£
Loans from general Government—							
Raised during year ... ..	...	...	45,532	...	15,500	17,040	78,072
Current at end of year ... ..	...	188,398	341,982	...	89,770	282,643	902,788
Loans from other sources—							
Raised during year ... ..	1,197,360	101,918	(a)	12,975	40,700	53,006	(a)
Current at end of year ... ..	5,327,228	4,643,591	(a)	200,350	804,894	636,176	(a)
Total—							
Raised during year ... ..	1,197,360	101,918	(a)	12,975	56,200	70,046	(a)
Current at end of year ... ..	5,327,228	4,831,984	1,195,456	200,350	894,664	918,819	13,368,501
Current loans, exclusive of those obtained from general Government, raised within the C'wealth	4,672,769	4,643,591	(a)	200,350	804,894	...	(a)
Annual liability on account interest	209,971	206,763	14,008	8,013	41,388	38,938	519,081
Total sinking fund at end of year	331,196	894,710	39,108	28,887	193,528	115,489	1,602,918
Amount loans maturing during year							
Redeemed ... ..	...	(a)	(b)	3,514	7,980	33,559	(a)
Renewed ... ..	145,106	(a)	(a)	4,013	...	70,715	(a)

(a) Not available. (b) In the case of loans from Government the periodical payments include interest and sinking funds. (c) Excluding £2364 credited to four municipalities, but which was not in the hands of the Sinking Fund Trustees on 31st October, 1911.