

CHAPTER XV.

LOCAL GOVERNMENT.

§ 1. Introduction.

1. *General.*—Statistics of local government operations are not entirely satisfactory, as they are incomplete, and not sufficiently comparable and up to date. Those on local government financial operations were improved, prior to the 1939–45 War, through the use by the State Statisticians of standard forms in supplying information on their respective States to the Commonwealth Statistician. The presentation of the statistics thus made available was still being developed when the war made it necessary to discontinue the returns. However, since the war these returns have been recommenced and efforts are being made, as opportunity and circumstances permit, to widen the range of information presented on local government activities beyond the purely, or primarily, financial.

2. *Local Government Authorities.*—In each State of the Commonwealth there exists a system of local government whose powers and responsibilities are in general similar, and which covers such matters as the upkeep and construction of roads, streets and bridges, water, sewerage and drainage systems and health and sanitary services, the supervision of building and the administration of regulations relating to items such as weights and measures, slaughtering, the registration of dogs, etc. In addition to these obligatory functions there are also a large number which may be performed by a local government authority either with or without the consent of the ratepayers or the Governor-in-Council. These include transport facilities, electricity, gas and other business undertakings, hospitals, charitable institutions, recreation grounds, parks, baths, libraries, museums, etc.

The system is based on the principle of a grant of specific powers by the State legislatures to the local authorities, their autonomy, however, being more or less limited by the provision for general supervision by a department of the central government or by the Governor-in-Council. Otherwise, within the scope of the Acts under which they are constituted or which they have to administer, they are responsible only to the ratepayers.

While the broad pattern of local government throughout the States of Australia is similar, the range of activities, election of officers, methods of valuation and rating powers, etc., differ considerably.

The areas over which local government bodies exercise general control, numbering 914, are known in New South Wales as cities, municipalities and shires; in Victoria as cities, towns, boroughs and shires; in Queensland as cities, towns and shires; in South Australia as municipal corporations and district councils; in Western Australia as municipalities and road districts; and in Tasmania as municipalities. In New South Wales some local government authorities in an area have combined to provide services such as electricity supply and water, sewerage and drainage—e.g., the county councils. Within shires there are also some municipal units known as urban areas. In Western Australia there are local health boards, whose personnel in most cases coincide with those of municipalities and road boards. Apart from the more thinly populated parts of New South Wales and South Australia and the Commonwealth Territories, practically the whole of Australia comes within local government jurisdiction.

The financial statistics in § 2 following are classified under the headings of Ordinary Services and Business Undertakings. The former covers the obligatory and general functions referred to above. Business Undertakings include public utilities such as water supply, sewerage, electricity, gas, transport and hydraulic power undertakings, and other miscellaneous works such as abattoirs, quarries, ice works, cinemas, etc.

3. **Semi-Governmental Authorities.**—In addition to local government authorities, there is a large number of authorities set up to control specific activities, which are often identical with some of those performed by either, or both, of the other classes of public authority—central government and local government—and a complete picture of any field of activity for a State or Australia as a whole cannot be obtained without reference to each class operating in that particular field. These semi-governmental authorities differ primarily from local government authorities in that their operations are restricted to the specific activity for which they were constituted—e.g. roads and bridges, or water and sewerage, or electricity and irrigation, or harbours, or tramways, etc.—i.e. each dispenses a specific service throughout an area as distinct from the general services of the local authority.

Sections 4 to 7 following, dealing with roads and bridges, water supply and sewerage, harbours and fire brigades, include particulars of the more important of these authorities which operate within the range covered by this chapter.

4. **Roads, Bridges, etc.**—The construction and maintenance of roads, bridges and ferries are generally part of the functions of local authorities, but in each State there exists a central road authority or a Government department whose duties relate to the construction and maintenance of "main" and "developmental" roads, the distribution of funds to local bodies, and the supervision and co-ordination of road construction and policy throughout the State. Although roads and bridges constructed and maintained directly by the Government or by the central road authority do not properly come under the heading of "Local Government", they have been included in this chapter for the sake of convenience. Owing to difficulty in obtaining complete particulars of receipts and expenditure by the various local governing bodies in regard to roads under their control, the details of receipts and expenditure given in § 4 are those of the Government only, relating either to the supervisory board or commission in the State or to direct activities of a department. In § 2 some information is given of the revenue and expenditure of local government authorities in respect of roads.

5. **Water Supply and Sewerage.**—In the cities of Sydney and Melbourne the control of water supply and sewerage is in the hands of special Boards, while in Adelaide and Perth these services are under the direct supervision of Government departments. In most of the other cities and towns, the municipal councils, or, in some cases, water trusts, are the controlling bodies which either construct the works out of their own resources or take them over after they have been constructed by the Government.

6. **Harbours.**—The majority of the harbours in Australia are managed by Boards, the members of which are either elected by persons interested, or are appointed by the Government. In a few instances, however, they are directly controlled by the Government.

7. **Fire Brigades.**—In all the States, the management of fire brigades is undertaken by Boards. These Boards usually comprise members elected by the councils of municipalities and insurance companies within the districts placed under their jurisdiction, and one or more members appointed by the Government. Occasionally volunteer or country fire brigades are represented.

8. **Other Local or Semi-Governmental Activity.**—The activities referred to above are not the only forms of local or semi-governmental undertakings. There are others, the most important being tramways and omnibus services and electricity and gas undertakings, which are not dealt with in this chapter, except to the extent that they are represented in the finances as shown in the following section. Chapter VI.—Transport and Communication contains information on municipal transport services, and Chapter XXV.—Electric Power Generation and Distribution deals with the various types of electricity undertakings in each State. In addition, particulars of municipal electricity and gas undertakings, although not shown separately, are included in the relevant sections in Chapter XXIV.—Manufacturing Industry.

§ 2. Local Government Authorities.

1. **New South Wales.**—For purposes of local government the whole of the Eastern and Central land divisions and a small portion of the sparsely populated Western division have been divided into cities, municipalities (most principal towns) and shires (mainly large rural areas, some of which embrace important towns). At the end of 1951 the area incorporated was 184,000 square miles, or nearly three-fifths of the total area of the State.

All local government authorities in the State are subject to the general provisions of the Local Government Act.

Municipalities and shires may combine to form county councils for the establishment and conduct of services of joint benefit, e.g., electricity, water, sewerage. There were 35 county councils and the Grafton and South Grafton Water Board at 31st December, 1951.

2. **Victoria.**—Local government is established throughout the State, the various divisions being termed cities, towns, boroughs, or shires. The only unincorporated areas are French Island (42,000 acres) in Westernport Bay, Julia Percy Island (650 acres) off Port Fairy, and Tower Hill (1,350 acres) adjacent to the Borough of Koroit. Melbourne and Geelong were incorporated under special statutes prior to the establishment of a general system of local government, but are now subject to several provisions of the Local Government Act. The law relating to local government was consolidated by the Local Government Act 1946.

As from 1st January, 1947, the metropolitan area for statistical and health purposes was redefined by the inclusion of the Cities of Nunawading and Sunshine, the Borough of Ringwood, the Broadmeadows and Campbellfield Ridings of the Shire of Broadmeadows, the Doota Galla Riding of the Shire of Keilor, and the Shire of Mulgrave.

3. **Queensland.**—The whole of the State (except certain islands along the coast, the Dawson Valley Irrigation Area and the Somerset Dam Area) is incorporated into cities, towns and shires under the Local Authorities Act 1902 and its amendments. In June, 1949, the State Government rearranged the boundaries of the local authorities to the south of Brisbane, reducing their number by ten. The towns of Coolangatta and Southport were absorbed by the new town of South Coast; two new shires were created and eleven were abolished, being absorbed by the new shires and existing cities, towns and shires.

4. **South Australia.**—The settled portion of South Australia is incorporated, being mostly under municipal corporations in the larger cities and towns, and district councils in the agricultural areas.

5. **Western Australia.**—In this State, local government is carried on by means of municipalities and district road boards. Certain functions are delegated to health boards, whose personnel, in most cases, coincide with those of the municipalities and district road boards.

6. **Tasmania.**—The whole State is divided into municipal districts, Hobart and Launceston being incorporated under separate Acts.

7. **Area, Population, Dwellings and Value of Ratable Property.**—The area, population, dwellings and value of ratable property in the incorporated areas of each State are shown in the table below. The valuations relate to ratable property only and exclude Government and other non-ratable property, whose value in the aggregate is considerable. In this table, particulars of dwellings in New South Wales, Queensland and Tasmania, are in accordance with the definition used in the 1947 Census, and are the results of information collected on the Census Schedules. Occupied dwellings include individual private houses, flats and tenements, and dwellings other than private (boarding houses, hotels, caretakers' quarters, hospitals, educational establishments, etc.). Also included are portions of shared private houses in respect of which portions separate Householders' Schedules were furnished. Unoccupied dwellings include "week-end" and holiday dwellings and other dwellings temporarily unoccupied on the night of the Census. Dwellings being built are not included.

LOCAL GOVERNMENT AUTHORITIES: AREA, POPULATION, DWELLINGS AND VALUE OF RATABLE PROPERTY, 1951-52.

Local Bodies.	Number.	Area. '000 Acres.	Popula- tion. '000.	Dwellings.		Value of Ratable Property.		
				Occu- pied. No.	Unoccu- pied. No.	Unim- proved Capital Value. £'000.	Im- proved Capital Value. £'000.	Annual Value. £'000.
NEW SOUTH WALES.(a)								
Metropolitan—				(b)	(b)			(c)
Capital City	1	7	212	51,934	539	70,556	238,153	12,551
Other	31	702	1,658	372,706	3,876	168,842	602,771	40,651
Outside Metropolitan Area ..	208	117,110	1,467	318,267	12,740	214,865	(d)	(d)
Total	243	117,819	3,337	712,937	17,155	484,263	(d)	(d)
VICTORIA.(e)								
Metropolitan—				(f)	(f)			
Capital City	1	8	101	24,132	7	(d)	144,103	7,205
Other(g)	22	328	1,305	338,428	6	(d)	536,260	27,323
Outside Metropolitan Area(h)	165	55,857	940	256,138	283	(d)	495,910	25,104
Total	109	50,113	2,346	618,698	196	(d)	1,176,279	59,632
QUEENSLAND.(i)								
Capital City(j)	1	246	(b)	(h)	(b)	26,396	(d)	(d)
Outside Metropolitan Area ..	133	428,871	402	99,771	1,475	8,071	74,784	(d)
Total	134	129,117	1,099	271,171	9,546	101,180	(d)	(d)
SOUTH AUSTRALIA.(i)								
Metropolitan—					(b)			
Capital City	1	4	35	8,200	68	12,084	44,000	2,185
Other	20	99	414	112,600	696	(d)	134,000	6,709
Outside Metropolitan Area ..	122	34,402	274	2,055	2,689	(d)	163,000	8,136
Total	143	34,505	723	107,855	3,453	(d)	311,000	17,030
WESTERN AUSTRALIA.(k)								
Metropolitan—				(l)				
Capital City	1	14	107	25,356		(d)	48,400	2,436
Other	19	107	235	56,577		(d)	(d)	1,026
Outside Metropolitan Area ..	126	621,169	259	67,129		(d)	(d)	1,217
Total	146	624,590	601	149,062		(d)	(d)	4,679
TASMANIA.(i)								
Metropolitan—				(b)	(b)			
Capital City	1	18	61	13,507	56	6,277	20,881	1,378
Other(m)	2	99	28	4,560	331	2,945	12,027	688
Outside Metropolitan Area ..	46	16,661	210	41,327	1,964	22,491	60,020	3,647
Total	10	16,778	299	62,484	2,351	31,713	93,828	5,713

(a) Year ended 31st December, 1951. (b) As at Census, 30th June, 1947. (c) Nine-tenths annual rental value of land with improvements thereon. (d) Not available. (e) Year ended 30th September, 1952. (f) Particulars of occupied and unoccupied dwellings are based on returns furnished by municipalities. These figures refer to number of units in all habitable dwellings. (g) Includes the whole of the Cities of Heidelberg and Sunshine, the Borough of Ringwood, and the whole of the Shires of Broadmeadows, Keilor and Mulgrave, whose parts do not all lie within the metropolitan area. (h) Excludes Yallourn area under the jurisdiction of the State Electricity Commission. (i) Year ended 30th June, 1952. (j) City of Greater Brisbane. (k) Municipalities—Year ended 31st October, 1952; Road Districts—Year ended 30th June, 1952. (l) Particulars of unoccupied dwellings are not available separately. (m) Comprises the whole of the Municipalities of Clarence and Glenorchy.

8. Finances.—(i) General. The following tables show the latest available financial statistics for local government authorities. The figures relate to the year 1951-52 except for New South Wales where they relate to the year 1951.

(ii) *Ordinary Services.* In the returns of revenue and expenditure for 1951-52 in the following table, the proceeds from loans and expenditure thereof have been excluded, as have the operations of business undertakings controlled by the various local government authorities. The profits resulting from the working of these undertakings, where taken into general revenue, have been included.

**LOCAL GOVERNMENT AUTHORITIES : ORDINARY SERVICES—REVENUE
AND EXPENDITURE. 1951-52.**

Particulars.	N.S.W. (a)	Vic. (b)	Q'land. (c)	S. Aust. (e)	W. Aust. (d)	Tas. (f)	Total.
Number of Local Government Authorities ..	243	199	134	143	146	40	914

REVENUE (EXCLUDING LOAN RECEIPTS). (£.)

Taxation—							
Rates (net) ..	14,276,670	9,639,594	6,638,220	2,343,001	1,592,290	958,145	35,549,996
Penalties ..	71,989	29,659	63,890	41,435	35,758	428	19,300
Licences ..	293,271	67,311	101,422	212,004	108,530	12,977	1,642,679
Total ..	14,641,930	9,736,564	6,702,110	2,384,436	1,628,048	968,873	30,061,971
Public Works and Services—							
Sanitary and Garbage Services ..	1,700,938	684,076	1,197,612	58,201	273,824	62,462	3,977,113
Council Properties ..	1,349,819	1,409,924	1,402,475	213,905	510,468	159,450	5,046,101
Street Construction ..	679,972	527,578	101,422	212,004	108,530	12,977	1,642,679
Other ..	1,135,289	312,793	66,551	71,084	24,733	21,553	1,632,003
Total ..	4,866,018	2,934,371	2,768,060	555,450	917,555	256,442	10,777,896
Government Grants—							
Roads ..	3,791,891	137,505	1,880,156	1,269,687	651,652	201,841	7,932,732
Other ..	869,566	302,271	631,783	19,360	28,283	34,841	1,885,104
Total ..	4,661,457	439,776	2,511,939	1,289,047	679,935	236,682	9,817,836
Profits from Business Undertakings ..	..	243,158	4,338	..	43,871	..	291,367
Fees and Fines ..	..	38,935	..	61,769	773,579	128,398	1,814,718
All Other ..	..	110,880	486,454	99,391	115,312	..	1,814,718
Total Revenue ..	24,169,405	13,503,694	12,471,001	4,390,093	4,158,300	1,590,395	60,283,788

EXPENDITURE (EXCLUDING LOAN EXPENDITURE). (£.)

General Administration ..	1,768,456	2,060,44	1,070,235	420,551	549,878	193,500	6,075,065
Debt Services (excluding Business Undertakings)—							
Interest ..	789,828	443,999	822,056	29,703	92,883	47,126	2,226,495
Redemption ..	1,833,593	673,877	1,218,773	269,502	228,914	87,652	4,314,311
Exchange ..	21,560	..	178,716	..	..	508	200,814
Other ..	..	4,999	5,558	..	..	18	10,585
Total ..	2,644,981	1,122,875	2,226,043	299,205	321,797	135,304	6,750,205
Public Works and Services—							
Roads, Streets and Bridges ..	10,849,062	4,706,488	4,969,427	2,638,763	1,434,194	703,959	25,391,893
Health Administration ..	471,036	559,221	184,715	109,937	126,705	37,563	1,489,177
Sanitary and Garbage Services ..	2,359,938	1,250,092	1,073,293	257,435	374,362	79,484	5,394,604
Street Lighting ..	614,648	310,720	171,157	99,872	68,136	36,271	1,300,813
Council Properties ..	3,613,625	2,103,250	1,758,462	375,336	1,168,019	205,905	9,224,597
Other ..	685,466	766,324	786,655	54,423	38,368	24,873	2,356,109
Total ..	18,593,775	9,786,104	8,943,709	3,553,766	3,209,784	1,088,055	45,157,193
Grants—							
Fire Brigades ..	156,691	252,399	123,586	72,414	50,298	26,713	682,101
Hospitals and Ambulances ..	..	..	..	..	..	..	..
Other Charities ..	84,554	55,742	1,802	103,944	3,551	1,784	1,392,863
Other ..	..	..	975	6,634	5,613	2,228	..
Total ..	(h) 336,606	(i) 660,440	118,879	7,175	..	2,636	..
All Other ..	577,851	645,281	245,242	190,467	59,462	33,361	2,074,964
Total Expenditure ..	24,166,870	14,010,124	12,614,022	4,451,992	4,270,946	1,604,932	61,140,986

(a) Figures for New South Wales relate to the year ended 31st December, 1951, and are on an income and expenditure basis as distinct from those of other States, which are on a cash basis. (b) Year ended 30th September, 1952. (c) Year ended 30th June, 1952. (d) Municipalities—Year ended 31st October, 1952; Road Districts—Year ended 30th June, 1952. (e) Includes £70,629 reimbursement from Highways Department for work done. (f) Includes £338,732 for sewerage and drainage. (g) Includes £272,027 for sewerage, mosquito control and drainage. (h) To Main Roads Department. (i) Includes £324,502 to Country Roads Board.

The following table shows the revenue and expenditure (excluding loan) of local government authority ordinary services for the years 1938-39 and 1947-48 to 1951-52 :—

LOCAL GOVERNMENT AUTHORITIES : ORDINARY SERVICES—REVENUE AND EXPENDITURE.

(£.)

Year.	N.S.W.(a)	Victoria.(b)	Q'land.(c)	S. Aust.(c)	W. Aust.(d)	Tas.(c)	Total.
REVENUE (EXCLUDING LOAN RECEIPTS).							
1938-39 ..	10,657,409	6,070,551	4,177,632	1,578,688	1,447,154	518,755	24,450,189
1947-48 ..	11,587,287	7,270,196	6,399,888	2,162,229	2,066,424	766,819	30,252,843
1948-49 ..	13,524,992	8,190,347	7,035,155	2,526,530	2,436,790	895,920	34,609,734
1949-50 ..	16,293,311	9,454,755	8,291,960	2,917,606	2,858,147	1,050,930	40,866,718
1950-51 ..	18,591,800	11,044,520	10,182,127	3,460,747	3,581,714	1,214,430	48,075,338
1951-52 ..	24,169,405	13,503,694	12,471,901	4,390,093	4,158,300	1,590,395	60,283,788
EXPENDITURE (EXCLUDING LOAN EXPENDITURE).							
1938-39 ..	10,790,271	6,192,859	4,334,634	1,558,169	1,489,079	506,976	24,871,990
1947-48 ..	12,372,821	7,792,221	6,884,567	2,174,857	2,099,953	817,365	32,141,784
1948-49 ..	13,815,846	8,548,147	7,579,954	2,525,528	2,420,541	910,926	35,800,942
1949-50 ..	15,923,965	9,737,254	8,379,575	2,965,857	2,808,053	1,049,961	40,864,665
1950-51 ..	18,520,494	11,658,885	9,995,576	3,491,448	3,424,844	1,237,117	48,328,364
1951-52 ..	24,166,870	14,040,324	12,614,922	4,451,992	4,270,946	1,604,932	61,149,986

(a) Years ended previous 31st December. (b) Years ended 30th September. (c) Years ended 30th June. (d) Municipalities—Years ended 31st October; Road Districts—Years ended 30th June.

(iii) *Business Undertakings.* The table hereunder shows, for 1951-52, particulars of the revenue and expenditure, other than loan, of business undertakings under the control of local government authorities. These particulars are not included in the foregoing tables.

LOCAL GOVERNMENT AUTHORITIES : BUSINESS UNDERTAKINGS—REVENUE AND EXPENDITURE, 1951-52.

(£.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
REVENUE (EXCLUDING LOAN RECEIPTS).							
Water Supply and Sewerage—							
Rates	1,044,577	..	29,632	..	7,404	312,818	1,385,431
Charges for Services	300,593	75,257	2,033,548	1,912	2,742	68,065	2,482,117
and Sales of Products	(a) 36,000	22,359	1,050,453	..	..	28,069	1,462,917
Other (including Grants)	1,707,000	97,616	3,104,633	1,912	10,146	408,952	5,330,465
Total	3,058,170	195,172	4,208,266	3,824	20,292	818,905	8,298,690
Electricity and Gas—							
Rates	135,739	..	11,565	567	..	..	147,871
Charges for Services and Sales of Products	23,074,642	5,701,450	4,203,514	327,094	400,962	..	33,707,662
Other (including Grants)	548,837	60,000	242,734	33,048	7,717	..	892,336
Total	23,759,218	5,761,450	4,457,813	360,709	408,679	..	34,747,869
Railways, Tramways and Omnibuses—							
Rates .. .. .	..	..	..	..	..	40,249	40,249
Charges for Services and Sales of Products .. .. .	..	3,195	2,730,777	..	..	593,312	3,327,284
Other (including Grants) .. .. .	..	..	50,364	..	..	6,515	65,879
Total .. .. .	..	3,195	2,790,141	..	..	640,076	3,433,412
Other—							
Rates	(b)	(c)	(d)	(e)	(f)	(g)	
Charges for Services and Sales of Products .. .. .	..	..	18,324	..	404	54	18,782
Other (including Grants)	1,327,491	429,649	48,026	16,731	16,922	38,277	1,877,096
Total	1,327,491	429,649	48,026	16,731	16,922	38,277	1,877,096
Grand Total	1,327,491	429,649	48,026	16,731	16,922	38,277	1,877,096
Grand Total	1,327,491	429,649	48,026	16,731	16,922	38,277	1,877,096

NOTE.—See next page for footnotes.

LOCAL GOVERNMENT AUTHORITIES: BUSINESS UNDERTAKINGS—
REVENUE AND EXPENDITURE, 1951-52—*continued*.

(£.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
EXPENDITURE (EXCLUDING LOAN EXPENDITURE).							
Water Supply and Sewerage—							
Working Expenses ..	886,054	61,061	1,173,258	1 874	9,150	182,815	2,314,212
Depreciation ..	(h) 49,659	7,441	..	..	..	..	42,216
Debt Charges ..	556,885	15,084	918,254	15	6,113	172,580	1,668,931
Other (including Transfers to General Revenue and Construction) ..	..	14,947	988,199	..	..	53,097	1,056,243
Total	1,393,280	98,533	3,079,711	1,889	15,263	408,492	4,997,166
Electricity and Gas—							
Working Expenses ..	21,472,857	4,932,641	3,808,997	339,164	351,415	..	30,905,074
Depreciation ..	(h) 984,703	230,274	..	..	29,950	..	1,253,927
Debt Charges ..	2,202,416	285,283	533,027	15,968	27,025	..	3,063,716
Other (including Transfers to General Revenue and Construction) ..	..	246,849	284,752	20,631	16,776	..	569,008
Total	24,659,976	5,704,047	4,626,776	375,763	425,166	..	35,791,728
Railways, Tramways and Omnibuses—							
Working Expenses ..	..	7,288	2,522,966	..	..	494,456	3,024,710
Depreciation ..	..	..	..	..	..	..	..
Debt Charges ..	..	404	369,713	..	..	92,985	463,102
Other (including Transfers to General Revenue and Construction) ..	..	57	53,780	..	..	35,902	89,739
Total .. ..	..	7,749	2,946,459	..	..	623,343	3,577,551
Other—	(b)	(c)	(d)	(e)	(f)	(g)	
Working Expenses ..	1,298,470	378,545	57,451	16,864	13,420	26,187	1,790,937
Depreciation ..	(h) 6,185	6,642	..	..	..	..	12,827
Debt Charges ..	23,517	35,336	754	..	114	7,755	67,476
Other (including Transfers to General Revenue and Construction) ..	..	17,299	23,660	..	..	4,696	45,655
Total	1,328,172	437,822	81,865	16,864	13,534	38,638	1,916,895
Grand Total	27,381,428	6,248,151	10,734,811	394,516	453,063	1,070,473	46,283,342

(a) Includes Government grant, £272,676, for part of cost of new works borne by Government.
 (b) Abattoirs and ice-works. (c) Abattoirs and hydraulic power undertakings. (d) Municipal markets, amusement parks, hotels, and cinemas. (e) Quarries. (f) Quarries, ice-works and abattoirs. (g) Abattoirs. (h) Net balance after deducting charge for debt redemption. The full amount of charge for debt redemption is included under debt charges.

NOTE.—For years to which particulars relate, see preceding table. Minus sign (—) indicates an excess of credits.

The next table shows the revenue and expenditure, other than loan, of local government business undertakings for the years 1938-39 and 1947-48 to 1951-52.

LOCAL GOVERNMENT AUTHORITIES : BUSINESS UNDERTAKINGS—REVENUE AND EXPENDITURE.

(£.)

Year.	N.S.W.(a)	Victoria.(b)	Q'land.(c)	S. Aust.(c)	W. Aust.(d)	Tas.(e)	Total.
REVENUE (EXCLUDING LOAN RECEIPTS).							
1938-39 ..	6,405,010	1,813,796	3,373,966	113,132	962,470	528,461	13,196,835
1947-48 ..	11,929,432	3,270,875	4,604,268	207,830	1,495,123	663,411	22,260,939
1948-49 ..	14,294,306	3,667,290	5,658,198	229,896	(e) 733,538	750,963	25,334,191
1949-50 ..	16,337,869	4,520,750	6,608,009	272,369	523,054	795,929	29,059,186
1950-51 ..	20,773,694	5,094,127	7,923,664	328,840	550,538	927,257	35,598,120
1951-52 ..	26,803,005	6,309,312	10,135,609	379,576	436,151	1,088,285	45,451,968
EXPENDITURE (EXCLUDING LOAN EXPENDITURE).							
1938-39 ..	5,556,123	1,802,972	3,256,263	123,356	935,052	513,666	12,187,432
1947-48 ..	11,704,990	3,272,629	4,869,383	229,604	1,452,802	698,264	22,227,672
1948-49 ..	14,394,433	3,597,041	5,701,314	258,702	(e) 755,793	736,647	25,443,950
1949-50 ..	16,659,960	4,494,128	6,655,037	202,237	535,287	797,887	29,435,136
1950-51 ..	20,556,981	5,219,901	7,917,019	339,556	585,938	926,330	35,545,821
1951-52 ..	27,381,428	6,248,151	10,734,811	394,516	453,903	1,070,473	46,283,342

(a)-(d) See notes to corresponding table on Ordinary Services (page 506). (e) Electricity undertaking taken over by State Electricity Commission on 20th December, 1948. Includes trading from 1st November, 1948 to 19th December, 1948.

(iv) *Loan Expenditure.* The table below shows particulars for 1951-52 of loan expenditure on works connected with the ordinary services and the business undertakings of local government authorities.

LOCAL GOVERNMENT AUTHORITIES : LOAN EXPENDITURE ON WORKS, 1951-52.

(£.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
ORDINARY SERVICES.							
Roads, Bridges, Streets, Footpaths, Drainage and Sewerage	1,607,633	750,624	3,118,020	487,229	347,119	467,938	12,041,639
Council Properties	1,672,926	734,421	2,127,788	24,937	277,152		
Parks, Gardens and Recreational Reserves	286,318	141,784		..	32,961		
Other	(a) 598,714	73,885	166,505	..	35,676	..	..
Total	4,255,591	1,700,714	4,412,322	512,166	692,908	467,938	12,041,639
BUSINESS UNDERTAKINGS.							
Water Supply	1,070,259	19,159	1,668,088	..	..	811,166	20,310,418
Sewerage	325,141	..	468,823	..	..
Electricity and Gas	10,337,339	1,794,214	2,801,759	100,873	46,884		
Railways, Tramways and Omnibuses .. .. .	..	..	486,634	..	..	..	..
Abattoirs	320,717	27,695	..	..	..
Other	24,167	..	7,500	..	..
Total	12,077,623	1,841,068	5,432,804	100,873	46,884	811,166	20,310,418
Grand Total	16,333,214	3,541,782	9,845,126	613,039	739,792	1,279,104	32,352,057

(a) Includes advances for homes, £86,759.

NOTE.—For years to which particulars relate, see next table.

The following table shows the loan expenditure on works connected with local government ordinary services and business undertakings during the years 1938-39 and 1947-48 to 1951-52 :—

LOCAL GOVERNMENT AUTHORITIES : LOAN EXPENDITURE ON WORKS.
(£.)

Year.	N.S.W.(a)	Victoria.(b)	Q'land.(c)	S. Aust.(c)	W. Aust.(d)	Tas.(c)	Total.
ORDINARY SERVICES.							
1938-39 ..	1,757,704	662,986	1,316,651	43,479	117,172	39,481	3,937,473
1947-48 ..	1,911,795	522,443	1,669,617	185,095	278,638	79,046	4,646,634
1948-49 ..	2,614,670	712,378	2,326,484	189,792	356,977	189,497	6,389,798
1949-50 ..	2,769,996	924,630	2,737,791	331,047	500,995	315,439	7,579,808
1950-51 ..	3,242,674	1,194,723	3,540,437	280,704	586,386	347,347	9,198,271
1951-52 ..	4,255,591	1,700,714	4,412,322	512,166	692,908	467,938	12,041,639
BUSINESS UNDERTAKINGS.							
1938-39 ..	1,481,484	452,374	941,911	9,542	76,280	232,687	3,194,278
1947-48 ..	1,842,304	418,186	1,327,630	..	58,782	95,664	3,742,566
1948-49 ..	4,038,922	654,619	2,109,218	16,900	36,794	196,499	7,052,982
1949-50 ..	6,356,107	680,481	2,811,709	8,044	71,005	396,297	10,323,643
1950-51 ..	8,950,059	1,185,122	3,311,223	74,864	64,087	449,703	14,035,058
1951-52 ..	12,077,623	1,841,068	5,432,804	100,873	46,884	811,166	20,310,418

(a) Years ended previous 31st December. (b) Years ended 30th September. (c) Years ended 30th June. (d) Municipalities—Years ended 31st October; Road Districts—Years ended 30th June.

§ 3. Local and Semi-Governmental Authorities' Debt.

1. **General.**—Statistics of local and semi-governmental debt for the years 1938-39 and 1948-49 to 1951-52 are given in the following paragraph. The information covers all local government authorities and those semi-governmental authorities responsible for the provision of the following services :—

New South Wales. Water Supply, Sewerage and Drainage, Electricity Supply, Fire Brigades, Banking. County Councils are included among these authorities.

Victoria. Water Supply and Sewerage, Irrigation and Drainage, Harbours, Tramways, Electricity and Gas Supply, Fire Brigades, Marketing (Buying and Selling), Industry Assistance, Grain Elevators, Banking, Housing.

Queensland. Water Supply and Sewerage, Irrigation and Drainage, Harbours, Electricity Supply, Roads and Bridges, Trading Activities, n.e.i., Fire Brigades, Universities, Hospitals and Ambulances, Marketing (Buying and Selling and Agency), Industry Assistance, Miscellaneous.

South Australia. Irrigation and Drainage, Tramways, Electricity Supply, Fire Brigades, Hospitals and Ambulances, Marketing (Agency), Industry Assistance, Banking, Housing, Miscellaneous.

Western Australia. Water Supply and Sewerage, Irrigation and Drainage, Harbours, Tramways, Electricity Supply, Fire Brigades, Hospitals and Ambulances, Marketing (Agency), Housing.

Tasmania. Harbours.

A detailed list of the authorities included is shown in *Finance Bulletin* No. 44, 1952-53.

2. **Local and Semi-Governmental Authorities' Debt.**—The following table provides a summary of new money loan raisings, provisions for the redemption of debt, debt outstanding and interest payable of local and semi-governmental authorities for the year ended 30th June, 1952. For greater detail see *Finance Bulletin* No. 44, 1952-53.

**LOCAL AND SEMI-GOVERNMENTAL AUTHORITIES : NEW MONEY LOAN
RAISINGS, REDEMPTION, DEBT AND INTEREST PAYABLE, 1951-52.**

(£'000.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
LOCAL GOVERNMENT AUTHORITIES.							
New Money Loan Raisings—							
From Government ..	264	50	2,473	381	7	..	3,175
From Public ..	8,231	2,583	5,338	249	703	1,277	18,381
Total ..	8,495	2,633	7,811	630	710	1,277	21,556
Funds Provided for Redemption—							
Government Loans ..	20	10	694	207	3	8	942
Loans due to Public ..	2,405	886	1,476	64	246	274	5,351
Total ..	2,425	896	2,170	271	249	282	6,293
Accumulated Sinking Fund Balance ..	5,404	1,723	1,840	..	234	341	9,542
Debt—							
Due to Government ..	1,340	321	10,719	813	75	106	13,374
Due to Banks (Net Overdraft) ..	84	752	1,444	70	5	212	2,567
Due to Public Creditor (a) ..	44,133	16,453	40,117	841	2,945	5,120	100,609
Total (a) ..	45,557	17,526	52,280	1,724	3,025	5,438	125,550
Maturing Overseas (a)(b) ..	1,812	..	2,317	..	..	100	4,229
Annual Interest Payable (a) ..	(c)	639	1,841	38	112	188	(c)

SEMI-GOVERNMENTAL AND OTHER PUBLIC AUTHORITIES.

New Money Loan Raisings—							
From Government ..	30	12,366	4,622	15,219	4,836	..	37,073
From Public ..	14,023	35,216	3,827	1,506	41	438	56,041
Total ..	14,053	47,582	8,449	16,815	4,877	438	93,114
Funds Provided for Redemption—							
Government Loans ..	235	518	382	277	245	11	1,668
Loans due to Public ..	2,388	956	547	3	35	30	3,959
Total ..	2,623	1,474	929	280	280	41	5,627
Accumulated Sinking Fund Balance ..	10,178	5,538	..	388	11	4	16,119
Debt—							
Due to Government ..	19,929	49,234	18,567	40,279	19,301	102	147,412
Due to Banks (Net Overdraft) ..	2,943	4,791	1,307	48	53	..	9,142
Due to Public Creditor (a) ..	120,121	155,677	16,352	12,811	379	1,709	307,049
Total (a) ..	142,993	209,702	36,226	53,138	19,733	1,811	163,603
Maturing Overseas (a)(b) ..	8,591	3,900	..	767	..	..	13,267
Annual Interest Payable (a) ..	(c)	6,956	1,308	1,820	728	65	(c)

(a) Includes debt or interest payable in London and New York. The former is expressed in United Kingdom currency, the latter is payable in dollars which have been converted at the rate of 4.8665 dollars to £1. (b) Included in debt figures above. (c) Not available.

In this and the following tables, debt includes all liabilities for which arrangements have been made for repayment over a period of one year or more, and net overdrafts. Interest capitalized and amounts due for the capital cost of assets or for services rendered which are to be repaid over a period of one year or more are included. Current liabilities, such as interest accrued (but not capitalized), trade creditors, amounts held in trust and other debts which are to be repaid in less than one year are not included. Net overdraft is the gross overdraft of all funds less all bank credit balances (including fixed deposits) which do not form part of a sinking fund to repay a loan. New loans raised during the year include new loan liabilities incurred during the year, loans raised to repay indebtedness to the Government, and interest capitalized. Loans raised and redeemed within the year, increases in overdrafts and loans raised for conversion or redemption

of existing debt are excluded. Funds provided for redemption include instalments of principal repaid and amounts credited to sinking funds established for the purpose of repaying the debt on maturity. Amounts provided for redemption from loans raised for that purpose are excluded.

In the following table a summary is given of new money loan raisings, provisions for the redemption of debt and debt outstanding of local and semi-governmental authorities for the years 1938-39 and 1948-49 to 1951-52.

LOCAL AND SEMI-GOVERNMENTAL AUTHORITIES, AUSTRALIA: NEW MONEY LOAN RAISINGS, REDEMPTION AND DEBT.

(£'000.)

Particulars.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.
LOCAL GOVERNMENT AUTHORITIES.					
New Money Loan Raisings—					
From Government	371	841	1,498	1,970	3,175
From Public	7,060	11,242	13,843	16,502	18,381
Total	7,431	12,083	15,341	18,472	21,556
Funds provided for Redemption—					
Government Loans	2,141	675	506	748	942
Loans due to Public	2,995	3,740	4,163	4,777	5,351
Total	5,136	4,414	4,669	5,525	6,293
Accumulated Sinking Fund Balance ..	(a)	9,050	9,334	9,826	9,542
Debt—					
Due to Government	13,207	9,051	10,032	11,110	13,374
Due to Banks (Net Overdraft)	1,544	435	537	1,163	2,567
Due to Public Creditor(b)	76,582	73,766	83,908	97,038	109,609
Total(b)	91,333	83,252	94,477	109,311	125,550
Maturing Overseas(b)(c)	17,893	6,775	4,838	4,429	4,229

SEMI-GOVERNMENTAL AND OTHER PUBLIC AUTHORITIES.

New Money Loan Raisings—					
From Government	1,524	10,740	15,749	23,205	37,073
From Public	7,038	18,046	32,674	54,140	56,041
Total	8,562	28,786	48,423	77,345	93,114
Funds provided for Redemption—					
Government Loans	600	1,239	1,075	1,616	1,668
Loans due to Public	1,146	5,101	5,466	5,415	3,959
Total	1,845	6,340	6,571	7,031	5,627
Accumulated Sinking Fund Balance ..	(a)	13,139	13,462	14,583	16,119
Debt—					
Due to Government	(d)44,817	76,055	89,919	111,676	147,412
Due to Banks (Net Overdraft)	2,006	2,793	3,423	4,718	9,142
Due to Public Creditor(b)	118,506	173,768	203,100	253,160	307,049
Total(b)	165,329	252,616	296,541	369,553	463,603
Maturing Overseas(b)(c)	12,088	14,655	12,991	12,923	13,267

(a) Not available. (b) Includes debt in London and New York. The former is expressed in United Kingdom currency, the latter is payable in dollars which have been converted at the rate of 4.8665 dollars to £1. (c) Included in debt figures above. (d) Approximate only.

§ 4. Roads and Bridges.

1. **Commonwealth Government Grants.**—The following table shows particulars of allocations to the several States from the Commonwealth Consolidated Revenue Fund under the several Commonwealth Aid Roads and Works Acts, for road construction, maintenance, repair and other works connected with transport during the years 1938–39 and 1947–48 to 1952–53. Allocations for the construction and maintenance of strategic roads and for the promotion of road safety practices made in the years 1947–48 to 1952–53 are excluded. The aggregate amounts payable under the relevant Acts from 1922–23 to 1952–53 for the purposes outlined above are also shown. Further particulars of these grants appear in Chapter XVII.—Public Finance and in *Finance Bulletins*.

ROAD CONSTRUCTION, MAINTENANCE, ETC.: GRANTS BY COMMONWEALTH GOVERNMENT.

(£'000.)

Year ended 30th June—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total
1939	1,199	747	815	474	819	213	4,267
1948	2,017	998	1,102	631	1,102	287	6,137
1949	2,003	1,236	1,363	781	1,363	355	7,101
1950	2,172	1,526	1,683	965	1,683	438	8,767
1951	3,819	2,357	2,600	1,190	2,600	677	13,543
1952	4,131	2,549	2,812	1,611	2,812	732	14,647
1953	4,260	2,629	2,900	1,662	2,900	756	15,107
Aggregate, years 1922–23 to 1952–53	34,550	21,623	23,516	13,687	23,651	6,160	123,187

In addition to the foregoing amounts, financial assistance from loan fund has been granted by the Commonwealth Government to the States for road construction. Such assistance has not been granted in recent years. At 30th June, 1953 the aggregate amount was £249,686.

2. **New South Wales.**—(i) *General.* A central road authority was created by legislation early in 1925 for the purpose of providing improved and uniform standards of construction and maintenance of the principal roads, and to administer Governmental subsidies for work on those roads. This authority (now organized as the Department of Main Roads) exercises control over Governmental activities in connexion with road works, these activities embracing works on main and developmental roads throughout the State, all roads in the unincorporated portion of the Western Division, and proclaimed national works, principally bridges and vehicular ferries, constructed from Government funds. The department co-operates with the municipal and shire councils in the work of constructing and maintaining a well-organized system of main highways.

In the metropolitan district the whole cost of the construction and maintenance of main roads is paid from the funds of the Main Roads Department, while in the country districts assistance in respect of road works may be granted for any area through which a main road passes. The cost of constructing developmental roads and works is borne in full by the Main Roads Department, but local councils are required to maintain them in satisfactory condition. For other roads the cost of both construction and maintenance work is generally chargeable to the revenue of local authorities, although Governmental assistance is not infrequently granted for works of construction and re-construction. In the Western Division the full cost of all roads and bridges is met by the Department of Main Roads.

The general system of road communication throughout the State is made up of main roads classified into State highways, trunk roads and ordinary main roads. There are also secondary roads (metropolitan area) and developmental roads.

Public roads, except those within the City of Sydney, may be proclaimed as main roads on the recommendation of the Commissioner for Main Roads, who takes into consideration representations made by councils concerned, availability of funds for construction and maintenance purposes, and the value as connecting links between centres of population or business.

(ii) *Length of Roads.* (a) *Proclaimed Roads.* The following table shows lengths of proclaimed roads at 30th June, 1953, according to class of road :—

PROCLAIMED ROADS, NEW SOUTH WALES : LENGTHS, 30th JUNE, 1953.
(Miles.)

Division.	Main Roads.				Secondary Roads.	Developmental Roads.	Total.
	State Highways.	Trunk Roads.	Ordinary Main Roads.	Total.			
Eastern and Central	5,201	2,874	9,687	17,762	(a) 75	2,911	20,748
Western ..	1,325	1,351	2,88c	5,566	..	..	(b) 5,566
Total ..	6,536	4,225	12,567	23,328	75	2,911	26,314

(a) Metropolitan area.
Department.

(b) Excludes 2,620 miles of unclassified roads, the responsibility of the

During 1952-53, 39 miles of new developmental roads were proclaimed. There were no main roads proclaimed during the year.

The length of main and secondary roads maintained by the Department of Main Roads at 30th June, 1953 (excluding the Western Division) was 2,757 miles (15 per cent.), while the length maintained by councils was 15,080 miles (85 per cent.). The proportions of the several classes of main roads maintained by the Department and councils respectively were :—State highways, 40 per cent., 60 per cent.; trunk roads, 2 per cent., 98 per cent.; ordinary main roads, 6 per cent., 94 per cent. Secondary roads were wholly maintained by councils. In the County of Cumberland (the metropolis and adjoining areas) the Department maintained 55 per cent. of the roads (504 miles).

(b) *Composition of Roads.* In 1951, the latest year for which details are available, the total length of all roads in New South Wales was estimated at 126,624 miles, including 7,911 miles in the Western Division. The lengths of roads, according to their composition or nature, were as follows :—cement concrete, 390 miles; asphaltic concrete, 197 miles; tar or bituminous macadam, 4,187 miles; surface water-bound macadam, 4,679 miles; water-bound macadam, 2,068 miles; gravel or crushed rock, 35,076 miles; formed only, 27,390 miles; cleared or natural surface only, 52,637 miles.

(iii) *Main Roads Department.* (a) *General.* Progress has continued with the implementation of the Main Roads Department plan for main road development in the metropolis and the balance of the County of Cumberland. This plan is now incorporated in the County of Cumberland Planning Scheme approved by Parliament under the Local Government (Amendment) Act 1951. Surveys and designs have been advanced, and the acquisition of land is proceeding, in connexion with the planned Newcastle and District Arterial Road System and Wollongong-Port Kembla District Main Roads System.

In addition to its construction and maintenance work on roads, the Main Roads Department is engaged on a scheme for widening metropolitan roads. The acquisition of land required to implement approved schemes has been proceeding.

During 1952-53, 29 new bridges were completed on main roads by the Department and councils including a new steel and reinforced concrete bridge over the Hunter River at Hexham (length 840 feet). Major bridge works under construction include steel

and concrete bridges over Iron Cove between Balmain and Drummoyne, Sydney (length 1,536 feet), over Middle Harbour at the Spit, Sydney (length 745 feet), and over the Clyde River at Bateman's Bay (length 1,008 feet).

(b) *Receipts and Payments.* The funds of the Department of Main Roads are derived principally from taxation of motor vehicles, contributions by the Commonwealth Government under the Commonwealth Aid Roads and Works Acts (*see* Chapter XVII.—Public Finance, for some particulars of the basis and distribution of grants under these Acts and para. 1 of this section for particulars of the amounts paid in recent years), contributions by municipal and shire councils, and special (not statutory) assistance by the State Government by way of loan moneys or special grants from revenue funds. Receipts and payments for the four years 1949–50 to 1952–53 compared with the income and expenditure for 1938–39 are shown below.

DEPARTMENT OF MAIN ROADS, NEW SOUTH WALES : RECEIPTS AND PAYMENTS.

(£.)

Item.	1938–39. (a)	1949–50.	1950–51.	1951–52.	1952–53.
RECEIPTS.					
Motor Vehicle Taxation, and Registration and Licence Fees	2,018,556	2,744,617	3,586,260	5,046,392	6,381,289
Commonwealth Aid Roads and Works Acts	1,176,039	1,777,500	2,560,447	2,881,122	2,916,757
Councils' Contributions	250,679	285,478	328,983	396,766	486,352
Consolidated Revenue (State) .. ..	..	..	350,000	300,000	100,000
Loans from State Government	302,643	..	215,000	225,000	150,000
Grants and Contributions from State Government and Departments, etc.	13,549	9,909	26,470	58,545	64,177
Commonwealth Funds for Special Works .. ..	..	142,000	133,140	192,566	365,574
Hire of Plant and Motor Vehicles .. ..	..	340,016	393,224	479,048	618,913
Suspense Accounts .. ..	..	1,080	..	..	39,685
Other	54,782	149,415	149,679	171,562	271,362
Total	3,816,248	5,450,015	7,743,293	9,751,001	11,394,109
PAYMENTS					
Roads and Bridges—					
Construction	1,736,898	2,303,637	2,276,055	3,625,036	4,330,600
Maintenance	1,519,929	2,856,578	3,787,059	4,921,350	4,554,406
Other Works .. ..	..	9,134	..	..	..
Debt Charges—					
Interest, Exchange, etc.	152,460	121,895	120,702	123,297	122,651
Debt Redemption	200,591	40,861	25,875	27,776	(d) 129,472
Repairs and Expenses, Plant and Motor Vehicles .. ..	..	220,007	253,405	367,940	510,867
Purchase of Assets .. ..	..	292,081	435,885	816,649	548,167
Suspense Accounts .. ..	..	19,538	98,259	92,528	..
Administration, etc.	100,583	246,226	279,622	348,652	3,956,300
Other	914	97,600	97,181	139,341	131,218
Total	3,711,384	66,207,490	7,374,043	10,462,569	10,723,011

(a) Income and expenditure. (b) Excludes £500,000 transferred from the County of Cumberland Main Roads Fund to the Country Main Roads Fund. (c) Excludes £250,000 transferred from the Country Main Roads Fund to the County of Cumberland Main Roads Fund. (d) Includes £100,000 repayment to Treasury of funds specially provided by the State Government in earlier years from Consolidated Revenue.

The figures shown above represent the aggregate receipts and payments of three funds—the County of Cumberland Main Roads Fund, the Country Main Roads Fund and the Developmental Roads Fund. From 1st January, 1925 to 30th June, 1953 receipts amounted to £126,015,579 and payments to £124,178,665. Particulars of the individual funds are—County of Cumberland, receipts £33,255,124, payments £32,292,078; Country, £88,478,383, £87,814,228; Developmental, £4,282,072, £4,072,359.

The total expenditure on roads, streets and bridges in the State by all authorities during the years 1938-39 and 1948-49 to 1951-52 was, respectively, £8,894,099, £10,479,716, £12,394,814, £15,063,845, and £20,009,994. These figures are approximate and they include expenditure on construction, maintenance and direct administration, but not on debt charges. Expenditure on the Sydney Harbour Bridge is not included.

(c) *Sydney Harbour Bridge.* The Sydney Harbour Bridge was opened for traffic on 19th March, 1932. The main span is 1,650 feet and the clearance for shipping 170 feet from high water level. The deck, 160 feet wide, carries a roadway, two railway tracks and two tramway tracks, and there is also a footway on each side. The capital cost of the bridge to the 30th June, 1953, was £9,725,507, but this amount will be reduced by approximately £260,000 on the disposal of all surplus resumed property. The portion met from repayable loan funds, over £8,000,000, is to be repaid over a period of 53 years ending approximately in 1985. The accumulated balance of the Bridge Account at 30th June, 1953, showed a surplus of £10,529, after the transfer of sums totalling £655,000 to a reserve account. Annual income, after a decline to less than £300,000 during the 1939-45 War, has risen from about £400,000 in 1938-39 to £773,008 in 1952-53; expenditure over the same period has risen from about £430,000 to a little over £500,000. In 1952-53 income included road tolls £596,261, railway passenger tolls £136,365, and tram and omnibus passenger tolls £26,057. Expenditure amounted to £503,650, including interest, exchange, etc., £241,786, sinking fund, £65,156 and maintenance and improvement £122,033. During 1952-53, 24,737,000 rail travellers, 23,764,000 tram and omnibus travellers, and 26,342,000 road travellers in 16,383,000 road vehicles crossed the bridge, contributing respectively, 18 per cent., 3 per cent., and 79 per cent. of the total toll revenue.

3. *Victoria.*—(i) *General.* With the object of improving the main roads of the State the Country Roads Board was established by legislation passed in 1912. The principal duties of the Board are to determine the main roads, State highways, tourists' roads, etc., to inquire into the State's resources in road materials and the most effective methods of road construction and maintenance, and to recommend deviations in existing roads or the construction of new roads in order to facilitate communication or to improve the conditions of traffic.

(ii) *Length of Roads.* (a) *Declared Roads.* The total length of declared roads in Victoria at 30th June, 1953, was 14,448 miles, classified as follows:—State highways, 3,849 miles; main roads, 9,792 miles; tourists' roads, 432 miles; forest roads, 375 miles. The total length of the surface treated (black) system included in the foregoing totals was 7,361 miles or 51 per cent.

(b) *Composition of Roads.* It is estimated that, in addition to the 14,448 miles of classified roads as above, there were 90,200 miles of unclassified roads at 30th June, 1953. The latest detailed estimate of the length of roads and streets in Victoria (as at 30th September, 1948) provides the following information:—Wood or stone, 62 miles; portland cement concrete, 150 miles; asphaltic concrete and sheet asphalt, 202 miles; tar or bitumen surface seal, 10,241 miles; water-bound macadam, gravel, sand and hard loam pavements, 28,418 miles; formed only, 23,901 miles; surveyed only, 38,437 miles; total 101,411 miles.

(iii) *Country Roads Board.* (a) *General.* During 1952-53 1,066 miles of declared roads under the Board's control were treated with bitumen. In addition, 28 miles of undeclared roads, for which the Board contributed funds, were similarly treated. Work for other authorities carried out by the Board's plant amounted to 137 miles. The total length of bitumen treatment carried out in 1952-53 was 1,231 miles. Of the work on the roads under the Board's control, 587 miles related to State highways.

During 1952-53, 169 bridge projects with a total value of £429,876 were initiated. Of these new projects, 29 with a total value of £129,285 were supervised by the Board and 140 with a total value of £300,591, were supervised by municipalities.

The Swan-street Bridge, Melbourne, for which the Country Roads Board was the constructing authority, was opened for traffic in August, 1952.

(b) *Receipts and Payments.* The funds of the Country Roads Board are derived principally from motor vehicle registration fees, drivers' licence fees, contributions from the Commonwealth Government under Commonwealth Aid Roads and Works Acts and payments from municipalities. In addition loans have been authorized from time to time under the Country Roads Acts for permanent works on main roads and State highways and restoration of flood and bush fire damage. During the year ended 30th June, 1953, loan receipts and payments each amounted to £1,191,509, and expenditure included £426,509 for restoration of flood and bush fire damage. The total loan expenditure to 30th June, 1953 was £8,856,004. This figure does not include loan expenditure from the Developmental Roads Loan Account, which fund was created for the purpose of constructing and maintaining subsidiary or developmental roads. Loan money raised on this account was exhausted at 30th June, 1937, the total expenditure at that date being £6,425,758.

Total receipts and payments during each of the years 1938–39 and 1949–50 to 1952–53 are shown below :—

COUNTRY ROADS BOARD, VICTORIA : RECEIPTS AND PAYMENTS.

(£.)

Item.	1938–39.(a)	1949–50.	1950–51.	1951–52.	1952–53.
RECEIPTS.					
Motor Vehicle Registration Fees ..	1,690,962	2,555,812	3,015,82c	3,694,c12	3,7c2,131
Drivers' Licence Fees (b) ..	..	131,678	143,291	159,950	159,402
Municipalities' Payments ..	318,878	189,788	187,109	283,391	344,320
Commonwealth Aid Roads and Works Acts (c) ..	716,019	1,370,528	1,988,662	2,501,150	2,446,029
Loans from State Government ..	57,972	391,867	715,956	1,046,621	1,191,509
Stores and Materials ..	233,104	..	..	..	..
Hire of Plant ..	53,724	..	..	..	..
Other ..	117,341	20,958	3,521	4,222	2,092
Total ..	3,188,000	4,660,631	6,054,359	7,689,346	7,845,483
PAYMENTS.					
Construction and Maintenance of Roads and Bridges—					
State Highways ..	453,708	1,340,588	2,077,175	2,158,205	2,250,803
Main Roads ..	1,027,210	1,265,457	2,059,075	2,626,675	2,492,855
Tourist Roads ..	77,694	149,841	212,398	196,512	232,778
Forest Roads ..	..	44,174	63,333	69,150	113,895
Unclassified Roads ..	468,122	378,179	937,692	773,384	918,946
Roads adjoining Commonwealth Properties ..	13,321	735	709	1,099	..
Other ..	(d) 58,729	6,022	11,641	10,775	13,843
Relief to Municipalities ..	240,170	..	..	..	..
Plant, Stores and Materials ..	310,332	211,661	578,273	701,760	840,258
Interest, Debt Redemption, etc. ..	427,445	531,213	526,845	537,870	570,001
Administration Expenditure ..	230,125	251,117	310,706	450,351	449,030
Other ..					
Total ..	3,306,856	4,333,487	7,188,700	7,815,252	7,882,409

(a) Figures for 1938–39 are not directly comparable with those of succeeding years owing to a change in the method of compilation adopted by the Country Roads Board. (b) Prior to 1st July, 1949 drivers' licence fees were paid into Consolidated Revenue Fund. From that date until 31st December, 1950 the fees were credited to the funds of the Country Roads Board. Since then one half of the fees have been credited to the funds of the Country Roads Board while the remaining half have been credited to the Municipalities Assistance Fund. (c) Excludes portion of Commonwealth Aid Roads and Works Acts advances drawn by the Public Works Department for expenditure on wharfs, jetties, etc. (d) Includes £54,662 expenditure on unemployment relief works.

4. *Queensland.*—(i) *General.* Under the Main Roads Act 1920 a Main Roads Board was constituted, consisting of three members appointed by the Governor-in-Council. In 1925 the Board was abolished and its powers conferred upon a single Commissioner. The Main Roads Commission was constituted a Department under the name of the Department of Main Roads in February, 1951, with the Commissioner of Main Roads as its permanent head. The duties of the Commissioner are to carry out surveys and investigations necessary to determine State highways, main, developmental, secondary, mining access, farmers' and tourist roads and tourist tracks, and the responsibility for building and maintaining these declared roads is largely that of the Commissioner. Roads of purely local importance are constructed and maintained by local authorities. In many cases construction is subsidized by the State Government by means of Treasury loans. Other roads are built by the Public Estate Improvement Branch of the Lands Department in order to open up areas of previously inaccessible or undeveloped country.

(ii) *Length of Roads.* (a) *Declared Roads.* The total length of declared roads in Queensland at 30th June, 1953 was 20,954 miles, comprising State highways, 7,772 miles ; main roads, 11,120 miles ; developmental roads, 245 miles ; secondary roads, 638 miles ; mining access roads, 567 miles ; farmers' roads, 312 miles ; tourist roads, 298 miles ; tourist tracks, 2 miles. During 1952-53, 64 miles were added to the list. The length of roads improved in Queensland from the date of commencement of work under the Main Roads Acts 1920-1952 to 30th June, 1953 was 11,764 miles (56 per cent.). At that date, also, 832 miles of new road construction and 520 miles of stage construction work were proceeding.

(b) *Composition of Roads.* The total length of roads and streets in Queensland at 30th June, 1953 was :—Concrete, 90 miles ; bitumen, 5,250 miles ; macadam, 11,565 miles ; other formed, 42,943 miles ; unconstructed, 72,349 miles ; total, 132,197 miles.

(iii) *Department of Main Roads.* (a) *General.* During 1952-53 (1951-52 in parentheses), the Department completed 1,479 (1,364) miles of roads including new construction and stage construction. Bridges of all types to a length of 7,808 (4,756) linear feet were constructed, bringing the total constructed by the Department at 30th June, 1953 to 165,901 feet. In addition, at 30th June, 1953, 7,363 feet were under construction. These figures exclude particulars of the Fitzroy River and Burdekin River bridges which are special projects.

The first of these projects, the Fitzroy River Bridge (length 1,210 feet), was constructed jointly by the Main Roads Department and the Rockhampton City Council and was opened for traffic in September, 1952. The second project is a combined road and rail bridge over the Burdekin River, with an overall length, including approaches, of 3,620 feet, originally estimated to cost about £1,900,000. Work on the substructure was completed during 1953 and a start has been made on fabricating the superstructure. Expenditure, which was adversely affected by floods in earlier years, totalled £1,253,063 to 30th June, 1953.

(b) *Receipts and Payments.* The funds of the Department of Main Roads are obtained chiefly from motor vehicle registration and collections, fees, etc., under the Transport Acts, contributions under the Commonwealth Aid Roads and Works Acts and loans, grants and advances from the State Government. The total receipts and

payments, including amounts for defence works, during each of the years 1938-39 and 1949-50 to 1952-53 are shown below :—

DEPARTMENT OF MAIN ROADS, QUEENSLAND : RECEIPTS AND PAYMENTS.
(£.)

Item.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.
RECEIPTS.					
Motor Vehicle Registration, Transport Acts Collections, Fees, etc.	938,227	1,165,888	1,936,656	2,573,971	3,573,958
Loans from State Government ..	392,225	700,000	587,500	1,313,000	825,000
Grants, Advances, Refunds, etc. from State Government ..	579,775	594,471	553,768	305,013	103,855
Commonwealth Aid Roads and Works Acts ..	806,218	1,693,567	2,458,763	3,141,560	3,135,034
Maintenance Repayments—Local Authorities ..	98,154	258,673	258,709	317,437	308,178
Hire, Rent, Sales of Plant, etc. ..	288,330	81,169	84,840	108,276	107,468
Other ..		125,469	130,999	68,572	386,210
Total ..	3,102,929	4,619,237	6,011,235	7,827,829	8,389,703
PAYMENTS.					
Permanent Road Works and Surveys ..	2,045,900	2,146,692	2,943,923	5,226,719	4,113,945
Maintenance of Roads ..	331,734	1,063,255	1,434,319	1,421,304	1,180,788
Plant, Machinery, Buildings, etc. (including Plant Maintenance)	73,632	402,744	576,845	1,133,565	666,963
Loans—Interest ..	38,861	189,836	200,258	221,271	265,074
Redemption ..	78,153	183,406	201,451	218,053	239,066
Payments to State Consolidated Revenue ..	340,244	..	..	..	..
Payments to Local Authorities ..	27,418	1,769	1,625	1,625	1,625
Commonwealth and Allied Works and Services ..	..	12,313	..	..	..
Other Works and Services ..	..	4,000	22,293	94,188	..
Administration, etc. ..	149,950	458,730	505,544	634,733	682,729
Other ..	1,750	25,173	..	..	..
Total ..	3,087,642	4,487,918	5,885,958	8,951,458	7,450,190

5. *South Australia.*—(i) *General.* The Highways Act 1926-1949 created a Commissioner of Highways and provided for a Highways Fund. The Commissioner is virtually empowered to determine upon which main roads he will spend the moneys available; in doing which he has to take into account the availability of funds for main roads, the service the road is intended to render, and the present or future adequacy of railway facilities in the area through which it passes.

The Highways Fund is credited with the receipts from State motor taxation, fees, fines and licences, after deduction of the costs of collection, and all loans raised and appropriated for roads. All moneys received by the State from the Commonwealth under the Commonwealth Aid Roads and Works Acts are also expended by the Commissioner of Highways under the general provisions of the Highways Act.

(ii) *Length of Roads.* The total length of roads in use for general traffic at 30th June, 1953 was as follows :—Within district council and corporation boundaries; blocks (wood or stone), 6 miles; bituminous concrete (asphalt and premix), 600 miles; cement concrete and cement penetration, 5 miles; penetration or surface dressed (bitumen or tar), 2,914 miles; metalled (gravelled or rubbled), 16,829 miles; formed, but little or no metal, 12,391 miles; surveyed, used by traffic, but little or no improvement, 22,270 miles; total, 55,015 miles; outside districts (main roads only), 565 miles; grand total, 55,580 miles. Lengths of main roads within district council and corporation boundaries aggregated 7,575 miles.

(iii) *State Highways and Local Government Department.* (a) *General.* The Department's programme for the acquisition of land for road improvement in the metropolitan and rural areas was continued during 1952-53 when approximately 34,000 linear feet of frontages in the metropolitan area were acquired and set back. This brought the total acquisition since the inception of the metropolitan widening scheme to 122,000

linear feet. In rural areas the policy of widening roads and improving the alignments was continued in order to provide for an expected future increase in the volume of traffic.

Construction and reconstruction works on main roads were carried out in the following areas:—Northern and Eyre Peninsula, Mid-Northern, Central, Metropolitan, Murray Lands, Upper South-Eastern and Lower South-Eastern. In other areas local authorities carried out the works under departmental supervision.

(b) *Receipts and Payments.* The following table shows particulars of receipts and payments, during the years 1938–39 and 1949–50 to 1952–53, of funds controlled by the Highways and Local Government Department.

**HIGHWAYS AND LOCAL GOVERNMENT DEPARTMENT, SOUTH AUSTRALIA :
RECEIPTS AND PAYMENTS.
(£.)**

Item.	1938–39. (a)	1949–50.	1950–51.	1951–52.	1952–53.
RECEIPTS.					
Motor Vehicle Registration, Licences, Fees, Fines, etc. . .	690,849	1,144,454	1,286,677	1,409,510	1,497,227
Commonwealth Aid Roads and Works Acts . . .	479,922	1,009,574	1,448,845	1,650,993	1,682,961
Loans from State Government . .	200,000	..	100,000	450,000	360,000
Recoups—Local and Semi-governmental Authorities . .	1,531	4,646	33,398	26,018	38,267
Other		115,386	149,013	211,483	(b)864,480
Total	1,372,302	2,274,060	3,017,933	3,748,004	4,442,935
PAYMENTS.					
Construction and Reconstruction of Roads and Bridges . .	1,150,082	1,018,157	1,142,010	1,475,602	1,786,777
Maintenance		298,550	384,939	538,634	666,239
Recoups to Consolidated Revenue Fund—Interest, Debt Redemption and Exchange . .	(d)178,273	141,783	139,796	139,811	148,651
Grants and Advances to Local and Semi-governmental Authorities . .	(e)	750,043	646,903	1,033,519	670,460
Administration		100,938	141,614	199,915	231,542
Stores, Plant, Machinery, Suspense Accounts, etc. . .		198,148	175,063	531,060	252,135
Other		12,060	18,126	19,578	48,506
Total	1,374,108	2,520,579	2,648,451	3,938,119	3,804,310

(a) Figures for 1938–39 are not completely comparable with those for following years. (b) Includes special contribution of £620,000 from Consolidated Revenue for roads for war service land settlement and developmental roads. (c) Roads, plant, etc. (d) Interest and sinking fund payments. (e) Not separately available; included elsewhere.

The total expenditure, both revenue and loan, by State and local governments on roads, streets and bridges in South Australia during the years 1938–39 and 1949–50 to 1951–52 was, respectively, £1,966,000, £3,166,000, £3,384,000, and £4,596,000.

6. *Western Australia.*—(i) *General.* Under the Main Roads Act 1930–1939 the Main Roads Board previously existing was abolished and a Commissioner of Main Roads was appointed. His duties relate to the determination of main roads after consideration of the funds available and the services to be rendered by the roads, the declaration and provision of developmental roads, the construction and maintenance of main roads, and the carrying out of surveys, investigations and experiments connected with roads and road materials. The Act authorizes two trust accounts (Main Roads Trust Account and Main Roads Contribution Trust Account) to record the moneys prescribed as available to the Commissioner for expenditure associated with roads, etc. In addition, the Commissioner operates on those Trust Accounts which are used for funds made available under the Commonwealth Aid Roads and Works Acts.

(ii) *Length of Roads and Streets.* The total known lengths of roads and streets in existence in the various municipalities at 31st October, 1953 and in road districts at 30th June, 1953, were as follows:—Bituminous, 4,573 miles; gravel water-bound, 13,200 miles; other constructed surfaces, 1,466 miles; formed only, 32,349 miles; unprepared, 28,478 miles (incomplete); total 80,066 miles.

The lengths of declared roads at 30th June, 1953, were :—Main roads, 3,154 miles ; important secondary roads, 6,930 miles ; developmental roads, 8,346 miles ; other classified roads, 24 miles ; total, 18,454 miles. No new main roads were declared during the years 1951-52 and 1952-53.

(iii) *Main Roads Department.* During the year 1952-53 (1951-52 in parentheses) the activities of the Department included :—clearing, 1,376 (1,267) miles ; forming 1,592 (1,407) miles ; gravelling, 1,049 (1,113) miles ; reconditioning 2,537 (2,721) miles ; sanding, 175 (75) miles ; side drains, 119 (109) miles. In addition, lengths of tar and bitumen work performed aggregated 677 (550) miles. Bridges constructed numbered 30 (21). Work on the new Perth Causeway Bridges over the Swan River was completed in September, 1952. The construction consists of two steel and reinforced concrete bridges each seventy feet wide. The eastern bridge is 725 feet long while the western is 376 feet. Construction of the Marble Bar-Port Hedland road was completed in 1951-52 and the Wyndham-Ord River-Nicholson Road was continued during 1951-52 and 1952-53.

(iv) *Receipts and Payments—Combined Road Funds.* The following table shows the combined transactions of the Main Roads Trust Account, the Main Roads Contributions Trust Account, the Metropolitan Traffic Trust Account, and the Commonwealth Aid Roads and Works Trust Accounts during the years ended 30th June, 1939 and 1950 to 1953.

ROAD FUNDS, WESTERN AUSTRALIA : RECEIPTS AND PAYMENTS.

(£.)

Item.	1938-39. (a)	1949-50.	1950-51.	1951-52.	1952-53.
RECEIPTS.					
Motor Vehicle Registration, Licences, Fees, Fines, etc. ..	218,962	346,246	394,887	427,432	472,477
Commonwealth Aid Roads and Works Acts	823,162	1,740,482	2,476,903	2,861,389	2,886,672
Recoups from Local Authorities, etc.	1,958	110,370	82,467	209,352	210,777
Other		29	2,396	22,572	43,129
Total	1,044,082	2,197,127	2,956,653	3,520,745	3,613,055
PAYMENTS.					
Construction and Reconstruction of Roads and Bridges ..	922,756	1,507,873	2,203,645	2,527,612	3,079,210
Maintenance		133,474	180,996	245,558	258,289
Grants to Local Authorities, etc. .	143,544	230,492	243,492	260,492	273,796
Transfer to State Consolidated Revenue .. .. .	..	67,711	76,337	70,272	70,000
Interest, Debt Redemption and Exchange—State Consolidated Revenue	7,616	8,842	7,396	7,396	7,396
Administration	52,176	38,380	41,951	44,682	68,703
Plant, Machinery, etc. .. ..	..	..	..	277,660	502,444
Other	19,181	..	..	415,359	640,478
Total	1,145,273	1,986,772	2,753,817	3,249,031	4,900,316

(a) Figures not completely comparable with those for following years. Includes Transport Co-ordination Trust Account.

7. *Tasmania.*—(i) *General.* Under the Transport Act 1938, which came into operation on 1st July, 1939, the Transport Commission was constituted to co-ordinate, regulate, control, and improve the means of, and facilities for, transport by road, rail or air within the State. Revenues at its disposal for road and motor traffic purposes are the Commonwealth Aid Roads and Works grants, motor vehicle registration fees and tax, and licensing fees for drivers and public motor vehicles. Under the Roads and Jetties Act 1944, which provides for the classification of the whole of the roads of the State so that they will be adequately and efficiently maintained, the cost of maintenance of roads classified as State highways, tourist roads and developmental roads is borne by the Transport Commission. It is also responsible for a proportion of the cost of maintenance of main and secondary roads. Except in special cases, municipal councils bear the cost

of maintaining country roads and a proportion of the cost of main and secondary roads. The cost of construction of roads and bridges in Tasmania is borne almost entirely by the State Government. The expenditure of the Public Works Department (the construction and maintenance authority for the Transport Commission) during 1952-53 (1951-52 in parentheses) on roads, tracks and bridges amounted to £1,591,898 (£1,389,801), of which £1,056,449 (£807,598) was charged to road funds, £29,917 (£47,647) to revenue, £406,112 (£532,601) to loan and £99,420 (£1,955) to other funds.

As from 1st July, 1951 certain functions with respect to the construction and maintenance of roads and the vesting and control of certain plant were transferred from the Transport Commission to the Minister for Lands and Works. The existing Road Account and Commonwealth Aid Roads and Works Account in the books of the Transport Commission were closed and a new Fund—the State Highways Trust Fund—was opened in the Treasury books.

(ii) *Length of Roads.* (a) *Classified Roads.* The mileages of classified roads in Tasmania at 30th June, 1953 were as follows:—State highways, 1,162 miles; main roads, 651 miles; secondary roads, 186 miles; tourist roads, 45 miles; developmental roads, 49 miles; subsidized roads, 92 miles; total 2,185 miles. Country roads totalled more than 10,000 miles. The mileages of sealed roads, and their proportions to the respective totals, were:—State highways, 565 miles (49 per cent.); main roads, 174 miles (27 per cent.); secondary and other roads, 11 miles (6 per cent.); total, 750 miles (34 per cent. of all classified roads, and 6 per cent. of all roads, in Tasmania).

(b) *Composition of Roads.* The length of all roads in Tasmania, including those with surfaces of lower grade, at 30th June, 1953, was as follows:—Bituminous, 938 miles; concrete, 20 miles; granite, limestone, etc., water-bound, 8,620 miles; surfaces of lower grade, 3,098 miles; total, 12,676 miles.

(iii) *Receipts and Payments—Combined Road Funds.* The table hereunder shows particulars of the receipts and payments of combined Road Funds and Commonwealth Aid Roads and Works Funds under the control of the Transport Commission for the years 1939-40 and 1949-50 to 1952-53:—

ROAD FUNDS, TASMANIA : RECEIPTS AND PAYMENTS.

(£.)

Item.	1939-40. (a)	1949-50.	1950-51.	1951-52.	1952-53.
RECEIPTS.					
Motor Vehicle Taxation and Registration, Licences, Fees, Fines, etc.	193,165	327,475	364,708	305,352	432,738
Commonwealth Aid Roads and Works Acts	220,241	450,930	640,824	739,989	745,985
Recoups from Local Authorities, etc. . . . .	..	8,966	9,176	9,249	11,539
State Loan Fund . . . . .	..	60,689	495,914	577,931	494,125
Hire of Plant . . . . .	..	237,899	400,214	551,202	553,678
Other	719	179,481	57,364	98,071	152,556
Total	414,125	1,265,440	1,968,200	2,281,794	2,390,621
PAYMENTS.					
Construction and Reconstruction of Roads and Bridges	130,924	219,118	621,905	689,370	716,223
Maintenance	113,199	549,241	620,288	627,785	768,395
Jetties, etc.	22,457	..	..	..	..
Other works connected with Transport	5,748	20,988	29,928	21,870	15,566
Grants to Local Authorities, etc. . . . .	..	2,037	4,663	2,256	2,762
Administration	15,053	67,726	73,646	51,979	58,736
Purchase, Hire and Maintenance of Plant	(b)	203,539	539,673	600,344	586,409
Other	31,894	191,342	71,246	156,358	120,925
Total	319,285	1,253,991	1,961,349	2,149,962	2,269,016

(a) First year of operation of Transport Commission. Figures not completely comparable with those for following years. (b) Not available, included with other.

8. Summary of Roads used for General Traffic.—(i) *Proclaimed or Declared Roads.*

The table hereunder is a summary of the roads proclaimed or declared under the Acts of the several States relative to the operations of the central road authorities, and shows the lengths of various classes proclaimed or declared as at 30th June, 1953. These proclaimed or declared roads are those for which the central road authority assumes responsibility under the Act for the whole, or a proportion, of the cost of construction and/or maintenance, the extent varying from State to State and with the class and locality of the roads. Before proclamation of a main road, consideration is given, in general, to the following points:—availability of funds; whether the road is, or will be, within one of several classes of main trunk routes; whether the district is, or will be, sufficiently served by railways. Provision is also made in some States for the declaration of roads other than main. The absence of a particular class from the following data for any State does not necessarily imply that there are no roads within that State that might be so classified; the classes are restricted only to roads proclaimed or declared under the Acts. A further point to make is that, through various causes, e.g. insufficiency of funds, manpower or materials etc., construction or maintenance may not keep pace with gazettals of mileages, and that therefore the condition of a road may not match its status.

PROCLAIMED OR DECLARED ROADS : LENGTHS, 30th JUNE, 1953.

(Miles.)

Class of Road.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.				
State highways	6,536	3,849	7,772	8,140	3,154	1,162 651	68,968				
Trunk roads	4,225	9,792	11,120								
Ordinary main roads	12,567										
Total Main Roads ..	23,328	13,641	18,892	8,140	3,154	1,813	68,968				
Secondary roads	75	..	638	..	6,930	186	7,829				
Developmental roads	2,911	..	245	..	8,346	49	11,551				
Tourist roads .. ..	..	432	298	..	..	45	775	
Other roads .. ..	..	(a) 375	(b) 881	..	24	(c) 92	1,372			
Total Other Roads ..	2,986	807	2,062	..	15,300	372	21,527				
Grand Total	26,314	14,448	20,954	8,140	18,454	2,185	90,495				

(a) Forest roads.
tourist tracks, 2 miles.

(b) Includes mining access roads, 567 miles; farmers' roads, 312 miles;
(c) Subsidized roads.

(ii) *Composition of Roads.* The following table represents an attempt to classify all the roads used for general traffic in Australia, at the latest dates available, according to States and Territories and to certain broad composition groups. The results are not entirely satisfactory, (i) because it is doubtful whether the whole of Australia is covered, (ii) because the dates of reference differ, and (iii) because the figures constituting each group are not wholly comparable for the States and Territories. It is hoped, however, despite these defects, that the table will provide an approximate and general idea of the main types of roads in Australia.

The data in the table for the States are obtained from the State Government Statisticians, and are derived mainly from local government sources. Unincorporated areas in some States are probably excluded and the figures on the returns supplied by the local government authorities are in some cases of doubtful accuracy. Details of the composition of roads, as far as they are available, vary to such an extent that it was considered preferable to show here only major divisions.

Groups 1-4 as shown in the table include, respectively, the following types of composition :—

1. *Wood or Stone.* Wood blocks ; stone paved.
2. *Concrete.* Cement concrete ; asphaltic concrete ; bituminous concrete ; sheet asphalt on concrete base.
3. *Bituminous.* Tar or bituminous macadam ; tar and bituminous surface seal ; surfaced water-bound macadam or gravel ; bituminous or cement penetration.
4. *Macadam and Other.* Water-bound macadam ; granite, limestone, and blast-furnace slag, water-bound ; water-bound gravel ; gravel or crushed rock ; metalled (gravel or rubble) ; gravel, sand and hard loam pavements.

Groups 5 and 6 include roads so-called mainly because they are used for general traffic, irrespective of their surfaces, prepared or otherwise.

It will be noticed that some of the terms used above are practically synonymous. Such terms are, of course, not used by any one State, but are the classifications adopted by different States.

For details of any particular State, see the respective paragraphs in the preceding pages.

ALL ROADS USED FOR GENERAL TRAFFIC : LENGTHS. (Miles.)

Composition of Road.	N.S.W. 30th June, 1951.	Vic. 30th Sept., 1948.	Q'land. 30th June, 1953.	S. Aust. 30th June, 1953.	W. Aust. 1953. (a)	Tas. 30th June, 1953.	N. Terr. 30th June, 1953.	A.C.T. 30th June, 1953.	Total.
1. Wood or stone	..	62	..	6	..	..	..	..	68
2. Concrete	587	352	90	605	..	20	..	3	1,657
3. Bituminous	8,866	10,241	5,250	2,914	4,573	938	1,258	155	34,195
4. Macadam and other	37,144	28,418	11,565	16,829	14,666	8,620	170	161	117,573
5. Formed only	27,390	23,901	42,943	12,956	32,349	3,098	8,817	215	367,460
6. Cleared, or natural surface, only	52,637	38,437	72,349	22,270	28,478		1,620	..	
Total	126,624	101,411	132,197	55,580	80,066	12,676	11,865	534	520,953

(a) Municipalities, 31st October and Road Districts, 30th June.

It will be seen from the foregoing table that a little more than one-quarter of the road lengths of Australia have actually been constructed, the remainder, for the greater part, being in little more than the natural state. The percentages for each group are as follows :—Group 1, 0.01 ; group 2, 0.32 ; group 3, 6.56 ; group 4, 22.57 ; groups 5 and 6, 70.54. The percentage of constructed lengths to total length in each State is as follows :—New South Wales, 37 ; Victoria, 39 ; Queensland, 13 ; South Australia, 37 ; Western Australia, 24 ; Tasmania, 76 ; Northern Territory, 12 ; Australian Capital Territory, 60. Comparisons between the States should be made with caution, however, because, in addition to the defects enumerated at the beginning of this section, factors such as the area, physiography, density and distribution of population, nature of economic activity, other facilities for transport, etc., in each State must be taken into account.

9. *Summary of Expenditure on Roads and Bridges.*—(i) *General.* Figures showing the total expenditure on roads and bridges in all States are not available. Such totals are very difficult to obtain, not only because of the number of States, but also because of the number of authorities concerned. In most States there are three classes of authorities—the State Government, the central road authority, and the numerous local

government bodies. Both State Government and local government bodies operate through revenue and loan funds, and payments may be made by the State Government direct from either fund, or through the funds of other authorities. The expenditure of the central road authority may also be direct or indirect. Consequently the problem of duplication caused by inter-fund payments arises. On the other hand, some expenditure may be omitted because separate particulars are not available. Ignorance of the precise nature of items may cause either incorrect inclusion or omission. To produce accurate figures would entail more research than can at present be undertaken.

The two paragraphs following therefore represent only : (a) aggregate expenditure from the various State road funds referred to in the foregoing pages, and (b) loan fund expenditure by State Governments. No direct expenditure by local government bodies is included. Paragraph 8, Finance, of § 2, Local Government Authorities, contains some particulars of local government revenue and expenditure in connexion with roads, streets and bridges (see pages 505 and 508).

(ii) *Aggregate Expenditure from State Road Funds.* The following table shows expenditure on the construction and maintenance of roads, including payments to local government bodies, by each State during the years 1938-39 and 1948-49 to 1952-53, as summarized from the foregoing sections. Expenditure on administration, debt charges, Commonwealth defence works, payments to State consolidated revenues, and on plant and materials is not included. In some instances expenditure on works other than roads and bridges is included. Figures are not completely comparable as between States, and, in some States, as from year to year.

ROADS AND BRIDGES : AGGREGATE EXPENDITURE FROM ROAD FUNDS.
(£'000.)

Year ended 30th June—	N.S.W.(a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
1939 ..	3,257	2,339	2,405	(b) 1,150	1,067	(c) 250	10,468
1949 ..	4,224	2,639	2,708	1,499	1,614	610	13,294
1950 ..	5,160	3,185	3,212	2,067	1,872	791	16,287
1951 ..	6,063	5,362	4,380	2,174	2,628	1,277	21,884
1952 ..	8,546	5,836	6,650	3,048	3,034	1,341	28,455
1953 ..	8,885	6,023	5,296	3,123	3,611	1,503	28,441

(a) Excludes Sydney Harbour Bridge.
1939-40.

(b) Includes expenditure on plant.

(c) Year

The foregoing particulars do not represent the total expenditure on roads and bridges in each State. To obtain such information additions must be made on account of (a) State Government expenditure from revenue and loan through Departments or authorities other than the Central Road Authority and (b) local government expenditure from revenue and loan, while, on the other hand, allowances must be made for inter-fund payments (see (i) above.)

(iii) *State Net Loan Expenditure.* In recent years, expenditure from State loan funds on roads and bridges has not been large, and it would appear, also, that a considerable proportion passes through the funds of the central road authorities and is therefore included in the figures of their financial operations in the foregoing sections. Gross loan expenditure by all State Governments during 1951-52 amounted to about £4,000,000 and to about £2,500,000 in 1952-53. Net expenditure during both years was about £400,000 less. Aggregate net loan expenditure on roads and bridges in each State to 30th June, 1953 amounted to the following approximate sums :—New South Wales, £21,000,000; Victoria, £17,000,000; Queensland, £11,000,000; South Australia, £5,000,000; Western Australia, £3,000,000; Tasmania, £8,000,000; total, £65,000,000.

§ 5. Water Supply, Sewerage and Drainage.

NOTE.—See also Chapter XXVI.—Water Conservation and Irrigation.

1. New South Wales.—(i) *General*. The two largest domestic water supply and sewerage systems are controlled by statutory boards each consisting of a president and a vice-president appointed by the State Government and five members elected by local councils. These are (a) the Metropolitan Water, Sewerage and Drainage Board, which administers the systems in the County of Cumberland, i.e., in Sydney and in the surrounding districts, and, in addition, has jurisdiction over territory extending along the South Coast beyond Wollongong to Lake Illawarra, and (b) the Hunter District Water Board, serving the Newcastle area. At Broken Hill a similar board includes a representative of the mining companies. Other systems, apart from irrigation projects and water storage systems administered by the State Government, are controlled by county, municipal and shire councils.

(ii) *Water Supply—to 30th June, 1953. (a) Metropolitan*. The storage reservoirs of the metropolitan system, with a combined available capacity of 124,892 million gallons, drain catchment areas of 376 square miles (Upper Nepean, 347 square miles and Woronora, 29 square miles). Water is drawn also from the Warragamba River, with a catchment of 3,383 square miles. This system is being developed, and building has commenced on a dam to have an overall height of 415 feet (greatest depth of water 340 feet) having a storage capacity of 460,000 million gallons and giving a net safe draught estimated at 263 million gallons per day and in addition 11 million gallons per day for riparian purposes. The existing temporary storage is supplied by a weir 50 feet high with a maximum storage of 579 million gallons. At 30th June, 1953 there were 103 service reservoirs in use with a combined capacity of 542.8 million gallons. Rating for water for 1952-53 was 10d. in the £1 of assessed annual value and the charge for water measured by meters 1s. 9d. per 1,000 gallons.

(b) *Newcastle*. The water supply is drawn from two sources (1) the Chichester Reservoir, with a storage capacity of about 5,000 million gallons and draining a catchment of 76 square miles, and (2) the Tomago Sandbeds, which extend northerly along the coast towards Port Stephens. Service reservoirs and tanks distributed throughout the Water Supply District have a total storage capacity of 106 million gallons. Water rating for 1952-53 was 1s. 6d. in the £1 on assessed annual value. The price of water to domestic and industrial consumers is 2s. per 1,000 gallons.

(c) *Water Supplied, etc.* The following tables show, for the Sydney and Newcastle systems, the number of properties, the estimated population supplied, and other details for the years 1938-39 and 1948-49 to 1952-53 :—

WATER SUPPLY, SYDNEY(a) : SERVICES.

Year.	Improved Properties for which Water Main available.	Estimated Population Supplied.	Average Daily Consumption.	Total Consumption for the Year.	Average Daily Consumption.		Length of Mains.	Number of Meters.
					Per Property.	Per Head of Estimated Population.		
	No.		Mill. gals.	Mill. gals.	Gallons.	Gallons.	Miles.	
1938-39	350,161	1,466,000	106.3	38,790	304	72.5	4,539	126,754
1948-49	414,893	1,800,000	131.3	47,925	316	73.5	4,894	132,566
1949-50	428,392	1,870,000	130.8	47,735	305	72.1	4,992	196,121
1950-51	442,913	1,940,000	138.9	50,689	314	71.6	5,114	208,712
1951-52	461,294	2,000,000	155.9	57,069	338	80.0	5,252	227,850
1952-53	478,598	2,032,000	149.6	54,621	313	73.6	5,357	246,383

(a) Includes part of South Coast.

WATER SUPPLY, NEWCASTLE : SERVICES.

Year.	Pro- perties Supplied.	Esti- mated Popu- lation Supplied.	Average Daily Supply.	Total Supply for Year.	Average Daily Supply.		Length of Mains.
					Per Pro- perty.	Per Head of Esti- mated Popu- lation.	
	No.		Mill. gals.	Mill. gals.	Gallons.	Gallons.	Miles.
1938-39..	48,370	193,480	11.9	4,331	245	61.3	936
1948-49..	61,215	241,036	19.0	6,951	310	79.0	1,202
1949-50..	63,289	247,992	19.6	7,176	310	79.3	1,215
1950-51..	65,445	261,780	22.3	8,131	340	85.1	1,234
1951-52..	67,122	268,488	25.1	9,144	373	93.1	1,257
1952-53..	69,244	276,976	23.9	8,719	345	86.3	1,262

(iii) *Sewerage and Drainage*—to 30th June, 1953. (a) *Metropolitan*. The Sydney sewerage systems consist mainly of outfall systems discharging into the Pacific Ocean. At 30th June, 1953 there were six outfalls and seven treatment works, serving a population of 1,427,000 over a length of sewers of 3,055 miles.

Stormwater drainage channels under the Metropolitan Water, Sewerage and Drainage Board's control at the same date were 174 miles long. Sewerage rating for 1952-53 was 10½d. in the £1 of assessed annual value and drainage rating ½d. in the £1.

(b) *Newcastle*. The main sewerage system of the Newcastle area discharges into the Pacific Ocean at Merewether Gulf. In some of the outlying districts treatment works have been installed.

Sewerage rates for 1952-53 were 1s. 5d. in the £1 of assessed annual value and drainage rates (on certain areas served) 2d. in the £1.

(c) *Particulars of Services*. The following table supplies, for the Sydney system, details of sewerage services and stormwater drains as at 30th June, 1939 and 1949 to 1953.

SEWERAGE AND DRAINAGE, SYDNEY(a) : SERVICES.

At 30th June—				Improved Properties for which Sewer Available.	Estimated Population Served.	Length of Sewers.	Length of Stormwater Channels.
				No.		Miles.	Miles.
1939	..	..	..	254,632	1,066,000	2,561	87
1949	..	..	..	294,822	1,282,000	2,855	153
1950	..	..	..	298,996	1,306,000	2,899	154
1951	..	..	..	303,508	1,380,000	2,951	173
1952	..	..	..	309,995	1,400,000	3,000	176
1953	..	..	..	316,439	1,427,000	3,055	174

(a) Includes part of South Coast.

At 30th June, 1953, 48,307 premises had been connected to the Hunter District Water Board's sewerage system (Newcastle area). The total length of sewers under the Board's control was 625 miles, and the length of drains was 41 miles.

(iv) *Finances, Sydney and Newcastle Systems.* The following table shows the debt, revenue and expenditure of the Metropolitan Water, Sewerage and Drainage Board and the Hunter District Water Board for each of the services of water supply, sewerage and drainage during 1952-53 and for the three services combined during the years 1938-39 and 1948-49 to 1951-52.

WATER SUPPLY, SEWERAGE AND DRAINAGE, SYDNEY AND NEWCASTLE : FINANCES.

(£.)

Year.	Capital Debt at 30th June.	Revenue.	Expenditure.				Surplus (+) or Deficit (-).
			Working Expenses. (a)	Interest and Exchange.	Debt Redemption.	Total.	
SYDNEY.(b)							
1952-53—							
Water ..	52,261,715	4,122,413	1,976,777	1,772,926	372,378	4,122,081	+ 332
Sewerage ..	23,590,491	2,430,471	1,448,778	802,863	174,254	2,425,895	+ 4,576
Drainage ..	1,265,460	119,693	68,909	42,841	7,803	119,553	+ 140
Total, 1952-53	77,117,666	6,672,577	3,494,461	2,618,630	554,435	6,667,529	+ 5,048
1951-52	70,670,899	6,199,094	3,313,807	2,343,923	540,680	6,198,410	+ 684
1950-51	64,350,326	5,410,637	2,740,266	2,190,333	475,552	5,406,171	+ 4,516
1949-50	59,918,417	5,051,876	2,488,623	2,092,890	435,660	5,017,173	+ 34,703
1948-49	54,796,901	4,653,312	2,199,159	2,025,395	403,465	4,628,019	+ 25,293
1938-39	43,769,741	2,926,694	957,422	1,727,708	241,564	2,926,694	..

NEWCASTLE.

1952-53—							
Water ..	6,507,534	746,080	491,579	196,452	40,953	728,984	+ 17,096
Sewerage ..	2,775,720	348,139	219,556	93,411	17,622	330,589	+ 17,550
Drainage ..	148,115	25,556	15,002	4,006	1,172	21,080	+ 4,476
Total, 1952-53	9,431,369	1,119,775	726,137	294,769	59,747	1,080,653	+ 39,122
1951-52	8,794,710	858,729	572,382	278,211	55,888	906,481	- 47,752
1950-51	8,139,512	765,790	442,239	275,875	52,479	770,593	- 4,803
1949-50	7,767,366	695,548	359,508	285,145	50,766	695,419	+ 129
1948-49	7,529,877	648,869	325,657	277,879	47,811	651,347	- 2,478
1938-39	4,574,880	385,732	167,620	188,185	20,886	376,691	+ 9,041

(a) Includes provision for renewals, long service leave, loss on exchange, etc. (b) Includes part of South Coast. (c) Excludes non-interest bearing capital in respect of stormwater drains transferred from Public Works Department—£2,199,223 at 30th June, 1953.

(v) *Country Water Supply and Sewerage Systems.* At 31st December, 1951, country water supply services were conducted or under construction by 65 municipalities, 58 shires and 6 county councils, and country sewerage services by 58 municipalities and 17 shires. The capital indebtedness of these schemes was £10,911,069 at 31st December, 1951, namely, £7,387,317 for water and £3,523,752 for sewerage. Of the foregoing amounts, Government advances amounted to £376,814. Debt of the municipalities amounted to £6,902,640, shires to £1,953,431 and county councils to £2,054,998. Aggregate income and expenditure, respectively, amounted to £1,707,206 and £1,393,280 in 1951.

(vi) *Other Water Supply and Sewerage Systems.* The water supply and sewerage services for Broken Hill are operated by a statutory board, the Broken Hill Water Board. Its capital indebtedness at 31st December, 1952 was £2,723,963. Income and expenditure, respectively, amounted to £126,487 and £568,327 in 1952. The abnormal expenditure incurred in 1952 was due to the necessity to rail water from the Darling River for the first four months of the year.

The following country water supply systems—South-West Tablelands, Junee and Fish River—are administered by the Department of Public Works. These supply water in bulk to municipalities and shires, the Railways Department, and other large consumers; only a small quantity is sold directly to private consumers. The capital indebtedness of these systems was £2,838,800 at 31st December, 1952.

There are also the Mulwala Water Supply and Sewerage Service constructed as an urgent war-time work for the Commonwealth, and the Bethungra Water Supply System administered by the Department of Public Works in conjunction with the Junee supply.

2. *Victoria.*—(i) *Melbourne and Metropolitan Board of Works—to 30th June, 1953.*

(a) *General.* The metropolis, for water supply, sewerage and drainage and river improvement purposes, comprises all that land within a radius of 13 miles of the Post Office at the corner of Bourke and Elizabeth Streets, Melbourne, and the remaining portions of the Cities of Moorabbin, Mordialloc, and Nunawading and the Shire of Mulgrave and certain portions of the remainder of the Shires of Eltham, Doncaster and Templestowe, and Dandenong, but excludes a portion of the Shire of Werribee within such radius. This territory has an area of 450 square miles and comprises 27 cities and one shire and parts of one other city and 9 other shires. The Board comprises 48 members, including the chairman, who is elected every four years by the other members. These members, or commissioners, are from time to time elected by the councils of the municipal districts wholly or partly within the metropolis. The principal functions of the Board are to control and manage the metropolitan water supply system; to provide the metropolis with an efficient system of main and general sewerage; to deal with main drains and main drainage works; and to control and manage the rivers, creeks and watercourses within the metropolis.

(b) *Water Supply.* There are five storage reservoirs serving the metropolitan area—Yan Yean, 7,234 million gallons (available for consumption, 6,605 million gallons); Toorourrong, 60 million gallons; Maroondah, 6,274 million gallons (4,855 million gallons); O'Shannassy, 930 million gallons; Silvan, 8,853 million gallons (8,823 million gallons); total 23,351 million gallons (21,273 million gallons). Service reservoirs number 25, with a total capacity of 262 million gallons. Two major projects are under construction. One is a 23-mile conduit to carry water from the Upper Yarra catchment to the Silvan Reservoir and its estimated cost is £2,697,000. At 30th June, 1953, the laying of the pipeline was almost complete. The other project, approved by the Board in 1946, consists of a dam, 293 feet high, which will impound 44,000 million gallons of water, on the River Yarra, immediately upstream from the confluence of the Yarra and Doctors Creek, and work on the project is proceeding. This work is estimated to cost £12,628,000.

The water rate levied by the Board in 1952–53 was 7d. in the £1 on the net annual value of the property served, and from 1st July, 1950, the charge for water supplied by measure in excess of the quantity which, at 1s. per 1,000 gallons, would produce an amount equal to the water rate payable on the property, was increased from 1s. to 1s. 3d. The following table shows particulars of Melbourne metropolitan water supply services for the years 1938–39 and 1948–49 to 1952–53.

WATER SUPPLY, MELBOURNE : SERVICES.

Year.	Number of Houses Supplied.	Estimated Population Supplied.	Average Daily Consumption.	Total Consumption for the Year.	Average Daily Consumption.		Length of Aqueducts, etc., Mains and Reticulation.	Number of Meters.
					Per House.	Per Head of Estimated Population.		
			Mill. gals.	Mill. gals.	Gallons.	Gallons.	Miles.	
1938–39 ..	285,408	1,133,000	66.9	24,408	234	59.0	3,234	189,617
1948–49 ..	328,843	1,307,000	93.9	34,280	286	71.9	3,771	224,352
1949–50 ..	342,742	1,363,000	91.7	33,452	267	67.3	3,875	229,238
1950–51 ..	354,415	1,409,000	102.0	37,225	288	72.4	3,966	236,883
1951–52 ..	364,248	1,488,000	107.4	39,293	295	74.2	4,075	256,462
1952–53 ..	378,439	1,505,000	102.6	37,471	271	68.2	4,134	264,916

(c) *Sewerage and Drainage.* Particulars of sewerage and drainage services for 1938-39 and 1948-49 to 1952-53 are shown below. The rate levied in 1952-53 in respect of sewerage was 1s. 1d. in the £1 on the net annual value of the property served. The drainage rate was 1d. in the £1.

SEWERAGE AND DRAINAGE, MELBOURNE : SERVICES.

Year.	Number of Houses for which Sewers are Provided.	Estimated Population for which Sewers are Provided.	Average Daily Pumping.	Total Sewage Pumped for the Year.	Average Daily Pumping.		Length of Sewers, etc.	Length of Main Drains.
					Per House.	Per Head of Estimated Population.		
			Mill. gals.	Mill. gals.	Gallons.	Gallons.	Miles.	Miles.
1938-39 ..	269,411	1,070,000	48.2	17,601	179.0	45.1	2,586	97
1948-49 ..	308,772	1,228,000	62.5	22,801	202.4	50.9	2,844	125
1949-50 ..	320,006	1,272,000	66.4	24,251	207.5	52.2	2,880	126
1950-51 ..	321,548	1,278,000	67.1	24,491	208.7	52.5	2,927	128
1951-52 ..	329,872	1,311,000	67.1	24,490	203.4	51.2	2,958	128
1952-53 ..	338,314	1,345,000	73.1	26,692	216.1	54.3	2,989	131

The metropolitan sewerage system consists of the Main system (serving an area of 67,433 acres) and three subsidiary systems—the Sunshine system (serving an area of 941 acres), the Kew system (serving an area of 103 acres) and the South-eastern system (serving an area of 2,292 acres in Cheltenham, Parkdale, Mentone and Mordialloc). The Metropolitan Sewage Farm, 26,073 acres in extent and situated about 24 miles south-west of Melbourne beyond the township of Werribee, serves to purify and dispose of approximately 95 per cent. of the sewage flow of the metropolis before its discharge into Port Phillip Bay. The total capital cost (less depreciation) of the Farm to 30th June, 1953 was £2,455,509. Revenue during 1952-53 (1951-52 in parentheses) amounted to £95,751 (£110,976), cost of sewage disposal £179,347 (£150,514), trading expenses £88,155 (£91,157), interest £91,243 (£83,977), and net cost of sewerage purification £262,994 (£214,672). These financial particulars are included in the sewerage items of the summary below.

(d) *Finances.* The following table provides a summary, for the years 1951-52 and 1952-53 of the financial operations of the three services conducted by the Melbourne and Metropolitan Board of Works.

MELBOURNE AND METROPOLITAN BOARD OF WORKS : FINANCES, 1951-52 and 1952-53.

(£.)

Service, etc.	Capital Cost at 30th June. (a)	Revenue.	Expenditure.				Surplus (+) or Deficit (-).
			Working Expenses.	Interest and Exchange.	Debt Redemption.	Total.	
1951-52.							
Water ..	21,250,124	1,674,096	814,230	747,038	..	1,561,268	+ 112,828
Sewerage ..	19,178,003	1,783,727	858,069	723,027	..	1,581,096	+ 202,631
Drainage ..	2,678,578	132,748	47,459	69,944	..	117,403	+ 15,345
General (b) ..	..	..	291,507	9,000	93,398	393,905	- 393,905
Total ..	43,106,705	3,590,571	2,011,265	1,549,009	93,398	3,653,672	- 63,101
1952-53.							
Water ..	23,256,444	1,741,760	897,690	843,347	..	1,741,037	+ 723
Sewerage ..	20,048,442	1,968,281	972,435	757,097	..	1,729,532	+ 238,749
Drainage ..	3,408,207	152,007	59,798	82,289	..	142,087	+ 9,920
General (b) ..	..	..	300,508	8,880	101,564	410,952	- 410,952
Total ..	46,713,093	3,862,048	2,230,431	1,691,613	101,564	4,023,608	- 161,560

(a) Includes depreciation, £408,031. Total loan indebtedness—1951-52, £37,359,220; 1952-53, £41,458,570.

(b) Statutory and general expenditure not distributed over Services.

The following table shows the financial operations of the Melbourne and Metropolitan Board of Works (all services combined) for the years 1938-39 and 1948-49 to 1952-53:—

MELBOURNE AND METROPOLITAN BOARD OF WORKS: FINANCES.

(£.)

Year.	Capital Cost at 30th June.	Revenue.	Expenditure.				Surplus (+) or Deficit (-).
			Working Expenses.	Interest and Exchange.	Debt Redemption.	Total.	
1938-39	27,598,603	2,214,295	762,558	1,316,603	64,269	2,143,430	+ 70,865
1948-49	34,312,587	2,713,926	1,432,727	1,268,743	69,840	2,771,310	- 57,384
1949-50	36,453,892	2,921,329	1,616,903	1,324,342	73,785	3,015,030	- 90,701
1950-51	39,244,030	3,278,641	1,782,356	1,422,196	81,607	3,286,159	- 75,18
1951-52	43,106,705	3,590,571	2,011,265	1,549,009	93,398	3,653,672	- 63,101
1952-53	46,713,093	3,862,048	2,230,431	1,691,613	101,564	4,023,608	- 161,560

(ii) *Geelong Waterworks and Sewerage Trust.* (a) *General.* The Geelong Waterworks and Sewerage Trust was constituted in 1908 and reconstituted under the Geelong Waterworks and Sewerage Act in 1910. It was further reconstituted in September, 1950 to include a Government nominee (Chairman) and provision was made for a commissioner to be elected by the ratepayers of the Shire of Corio, making a total of seven commissioners instead of five as formerly. The amount of loan money which may be raised is limited to £1,500,000 for water supply undertakings, £1,250,000 for sewerage undertakings, and £270,000 for sewerage installation to properties under the deferred payment system. The population supplied is estimated by the Trust at 72,100. This and other general information relates to 30th June, 1953.

(b) *Water Supply.* The catchment area is about 16,000 acres. There are five storage reservoirs and nine service basins whose total storage capacity is 2,746 million gallons. The length of water mains and reticulation is 380 miles. In addition, the State Rivers and Water Supply Commission has made available a supplementary supply of a minimum quantity of 545 million gallons of water per annum from the Bellarine Peninsula System. The total expenditure on water supply to 30th June, 1953 was £1,86,761. Expenditure for 1952-53 (1951-52 in parentheses) comprised £67,776 (£61,035) for working expenses and £61,212 (£47,540) for interest, redemption and reserves, while revenue amounted to £135,979 (£115,344). The sinking fund appropriations at June, 1953 amounted to £135,338 (£128,179 at June, 1952). The replacement and contingencies reserve amounted to £215,569 (£196,727 at June, 1952). There is a water rate of rs. 5d. in the £1 (with minima of 5s. for unbuilt-on land and £1 for tenements) on the net annual value of ratable properties.

(c) *Sewerage Works.* The sewerage scheme consists of a main outfall sewer to the ocean at Black Rock, about 9 miles from Geelong, and 177 miles of main and reticulation sewers. The sewerage area is 9,638 acres, and the number of buildings within the sewered areas is 15,062 of which 14,971 have been connected. The number of buildings within the drainage area is 16,345. The total expenditure to 30th June, 1953 on sewerage works was £821,918, and on the cost of sewerage installation under deferred payment conditions £259,511, of which £547 was outstanding. The revenue in 1952-53 (1951-52 in parentheses) amounted to £83,620 (£69,658) and the expenditure comprised £38,628 (£30,736) on working expenses and £40,051 (£38,497) on interest, redemption and reserves. Sinking fund appropriations at June, 1953 were £116,947 (£112,472 at June, 1952). Replacement and contingencies reserve amounted to £184,054 (£167,611 at June, 1952). A general rate of rs. 4d. in the £1 is levied on the net annual value of ratable properties.

(iii) *The Ballarat Water Commission and the Ballarat Sewerage Authority.* (a) *General.* The Ballarat Water Commission was constituted on 1st July, 1880, and the Ballarat Sewerage Authority on 30th November, 1920. The members of the Water Commission constitute the Sewerage Authority. The Commissioners number eight, three (one of whom is chairman) being appointed by the Government, four being elected by the Council of the City of Ballarat and one being elected by the Councils of the Borough of Sebastopol and the Shires of Ballarat, Bungaree, Bunninyong and Grenville. General information is at 31st December, 1953, and financial information is given for the years 1952 and 1953.

(b) *Water Supply.* The Water Supply District embraces an area of about 65 square miles, containing a population of about 50,000. The total storage capacity of the seven reservoirs is 5,520 million gallons and the catchment area is 18,695 acres.

The capital cost of construction of the waterworks was £2,041,956 to 31st December, 1953. The liabilities amounted to £1,087,938 at 31st December, 1953 including loans due to the Government totalling £1,067,938. The revenue for the year 1953 was £106,217 (£91,267 in 1952). Working expenses during 1953 amounted to £55,471 (£39,546 in 1952) and interest and other charges to £50,229 (£50,700 in 1952). A rate of 1s. 3d. in the £1 is levied on the net annual value of all ratable properties, with a minimum of £1 per annum for land on which there is a building or water supply.

(c) *Sewerage.* The Ballarat sewerage district embraces the City of Ballarat and parts of the Shires of Ballarat and Bungaree and the Borough of Sebastopol. Work was commenced in 1922 and up to 31st December, 1953 the Authority had constructed a disposals works, a nightsoil depot, an ejector station and more than 100 miles of sewers. The capital cost of sewerage construction works to 31st December, 1953 was £627,410. The method of sewage disposal is by sedimentation, oxidation and sludge digestion. One hundred and twenty-nine sewered areas had been declared as at 31st December, 1953. Assessments in the sewerage district numbered 14,709, while those in sewered areas numbered 11,346. There were 10,020 buildings connected.

The scheme is financed by debenture-issue loans from various financial institutions. The liabilities on account of loans secured for construction at 31st December, 1953, amounted to £490,058, redemption payments at that date totalling £192,041. An expenditure of £157,122 was incurred for house connexions, the whole of which has been redeemed. Revenue during 1953 (1952 in parentheses) amounted to £63,679 (£54,943) and expenditure, including £27,888 (£27,212) on interest and redemption, to £59,182 (£52,966).

A sewerage rate of 1s. 5d. in the £1, with a minimum rate of £2 4s., is levied on the net annual value of any ratable sewered property on which there is a building and £1 on any ratable sewered property on which there is no building.

(iv) *Sewerage Authorities.* At 30th June, 1953, 59 sewerage authorities had been constituted under the provisions of the Sewerage Districts Acts in districts outside the areas under the control of the Melbourne and Metropolitan Board of Works and the Geelong Waterworks and Sewerage Trust, and systems were in operation in 30 districts (including five partly operating) serving a population of 188,100 persons.

In addition, sewerage authorities were constituted in a further 29 districts at this date, but their operations had either been suspended or had not commenced.

(v) *Water Supply in Country Towns and Districts.* Most of the country waterworks are controlled by the State Rivers and Water Supply Commission, but in some instances the control is by waterworks trusts or by municipal corporations.

The waterworks controlled by the State Rivers and Water Supply Commission at 30th June, 1953, included 37 large reservoirs and 241 subsidiary reservoirs and service basins with a total storage capacity of 646,234 million gallons (2,373,680 acre feet). Length of channels was 14,906 miles (irrigation, 4,789 miles, domestic and stock 8,031 miles, drainage and flood protection, 2,086 miles) and of pipe lines 1,198 miles. The quantity of water delivered to water users during 1952-53 was 771,286 acre feet (748,702 acre feet in 1951-52). The Commission administered 64 rural districts during 1952-53 (28 irrigation districts, 31 waterworks districts, 4 flood protection districts and 1 drainage district), and the reticulated pipe supplies for domestic and industrial purposes in 130 urban districts. In addition, 123 urban districts were administered by waterworks trusts and 15 by local governing bodies. The population served in these groups of urban districts numbered, respectively, 162,040, 295,140 and 88,200 persons. The table below is a summary of the Commission's finances for operations in districts under its control for the years 1938-39 and 1948-49 to 1952-53.

STATE RIVERS AND WATER SUPPLY COMMISSION, VICTORIA : FINANCES.(a)
(£.)

Year.	Total Loan Capital Expenditure to 30th June.	Receipts.	Payments.				
			Operating Expenses.	Interest on Capital Allotted.	Depreciation.	Debt Redemption.	Total.
1938-39 ..	24,223,037	560,680	476,085	145,105	27,553	4,922	653,665
1948-49 ..	31,226,345	1,186,313	1,319,291	39,208	60,553	1,989	1,421,041
1949-50 ..	35,041,827	1,433,561	1,519,659	38,117	66,441	3,055	1,627,272
1950-51 ..	41,318,382	1,592,333	1,810,264	37,950	97,425	1,383	1,947,022
1951-52 ..	51,082,707	1,871,810	2,292,995	47,547	92,573	1,497	2,434,612
1952-53 ..	57,464,776	1,989,289	2,669,419	26,555	90,024	3,284	2,789,282

(a) Excludes waterworks and river improvement trusts and local governing bodies.

The total loan capital expenditure of waterworks and river improvement trusts and local governing bodies at 30th June, 1953 was £7,944,414, making a grand total of £65,409,190 when added to the figure for works under the control of the Commission. The net loan capital after redemption payments of £1,920,711 was £63,488,479.

The financial operations of the State Rivers and Water Supply Commission form part of the Consolidated Revenue Fund, but are included in this section for convenience. The major proportion of the interest payable is borne by the State and is additional to that shown above. The net expenditure borne by the State during 1952-53 was £2,551,960 (£2,118,132 in 1951-52).

3. Queensland.—(i) *Brisbane City Council—to 30th June, 1952.* (a) *General.* This organization conducts the water supply and sewerage systems of the City of Greater Brisbane. Prior to 1928, water and sewerage activities had been controlled by the Metropolitan Water and Sewerage Board, but were then absorbed by the Brisbane City Council, which also supplies, in bulk, the whole of the water used by the City of Ipswich and the Town of Redcliffe.

(b) *Water Supply.* Water storage facilities comprise the following (available capacities are shown in parentheses):—Somerset Reservoir, 32,000 million gallons (32,000 million gallons); Lake Manchester, 5,806 million gallons (5,725 million gallons); Brisbane River, 543 million gallons (484 million gallons); Pure Water Reservoir, Holt's Hill, 8.3 million gallons (8.3 million gallons); Enoggera Reservoir, 1,000 million gallons (631 million gallons); Gold Creek Reservoir, 407 million gallons (400 million gallons). There are eleven service reservoirs with a capacity of approximately 35.8 million gallons. The Somerset reservoir is under the control of Stanley River Works Board and is a dual purpose project with a designed total holding capacity of 200,000 million gallons, 55,000 million gallons to be for water storage and 145,000 million gallons for flood mitigation. Water rating at 30th June, 1952 was 5d. in the £1 of unimproved capital value for improved properties, and 3d. in the £1 for vacant lands, with a minimum of £3 10s. and £2 6s. 8d. respectively. The following table is a summary of operations of the complete Brisbane City Council system (metropolitan area, Ipswich and Redcliffe) for the years 1938-39 and 1947-48 to 1951-52 :—

WATER SUPPLY, BRISBANE(a) : SERVICES.

Year.	Services Connected.	Estimated Population Supplied.	Average Daily Consumption.	Total Consumption for the Year.	Average Daily Consumption.		Length of Trunk and Reticulation Mains.	Number of Meters.
					Per Service.	Per Head of Estimated Population.		
	No.		Mill. gals.	Mill. gals.	Gallons.	Gallons.	Miles.	(b)
1938-39 ..	81,389	345,903	15.9	5,791	195	45.9	1,169	
1947-48 ..	103,846	425,769	22.9	8,365	220	53.7	1,330	52,699
1948-49 ..	108,671	445,551	24.2	8,826	223	54.3	1,344	52,755
1949-50 ..	111,363	445,897	26.1	9,540	235	58.6	1,376	52,807
1950-51 ..	117,904	472,145	27.9	10,193	237	60.8	1,429	52,691
1951-52 ..	124,992	489,266	32.4	11,860	259	66.2	1,479	52,496

(a) Includes Ipswich and Redcliffe.

(b) Not available.

(c) *Sewerage.* The sewage treatment works are situated at Luggage Point on the north bank at the entrance to the Brisbane River. The treatment plan is the activated sludge system, but this has not been put into operation, and since the commencement of pumping operations in 1923 a sedimentation plant only has been used. Sewerage rating at 30th June, 1952 was 4½d. in the £1 of unimproved capital value for improved properties, and 3½d. in the £1 for vacant lands, with a minimum of £3 15s. and £3 5s. respectively. The following table is a summary of operations of the Brisbane sewerage scheme for the years 1938-39 and 1947-48 to 1951-52 :—

SEWERAGE, BRISBANE : SERVICES.

Year.	Premises Connected.	Estimated Population Served.	Total Sewage Pumped for the Year.	Length of Main, Branch, Reticulation, etc., Sewers.
	No.		Mill. gals.	Miles.
1938-39	33,248	149,616	(a)	484
1947-48	43,485	178,289	4,696	567
1948-49	44,901	184,094	4,697	580
1949-50	46,330	189,953	4,967	590
1950-51	47,808	196,013	5,351	608
1951-52	49,368	197,472	4,663	615

(a) Not available.

(d) *Finances.* The following table shows particulars of the finances of the water supply and sewerage undertakings of the Brisbane City Council for the years 1938-39 and 1947-48 to 1951-52 :—

WATER SUPPLY AND SEWERAGE, BRISBANE : FINANCES.

(£.)

Service and Year.	Gross Capital Cost at 30th June.	Revenue.	Expenditure.			Surplus (+) or Deficit(—).
			Working Expenses.	Interest Redemption, etc. Charges.	Total.	
Water Supply—						
1938-39	4,849,732	606,244	129,219	280,827	422,366	+ 183,878
1947-48	7,156,116	765,936	255,430	335,307	633,982	+ 131,954
1948-49	7,356,335	815,673	307,130	338,963	703,092	+ 112,581
1949-50	7,579,798	866,366	353,805	276,796	700,237	+ 166,129
1950-51	8,116,654	926,954	383,700	333,210	805,903	+ 121,051
1951-52	8,915,401	1,036,944	494,136	347,000	979,916	+ 57,028
Sewerage—						
1938-39	5,992,936	240,963	52,792	403,386	485,974	— 245,011
1947-48	7,048,086	254,777	63,998	246,983	343,259	— 88,482
1948-49	7,526,302	285,194	76,098	248,341	346,120	— 60,926
1949-50	8,117,835	412,833	87,100	264,972	379,299	+ 33,534
1950-51	8,821,671	483,854	105,928	313,308	472,725	+ 11,129
1951-52	9,794,052	499,935	127,417	302,252	467,774	+ 32,161

(ii) *Country Towns.* (a) *Water Supply.* In addition to the City of Brisbane there were, at 30th June, 1952, 103 cities and towns in Queensland provided with water supply systems controlled by municipal and shire councils.

(b) *Sewerage Systems.* At 30th June, 1952, there were 13 cities and towns outside the metropolitan area—Bundaberg, Charleville, Cunnamulla, Goondiwindi, Hughenden, Ipswich, Mackay, Maryborough, Quilpie, Rockhampton, Toowoomba, Townsville and Warwick—with sewerage systems. A sewerage system was in course of construction in Mt. Isa.

(c) *Finances.* The receipts (other than loan) of water undertakings controlled by the cities and towns referred to above amounted to £1,007,940 in 1951-52. Expenditure amounted to £1,048,302, including £270,024 for debt charges. In addition, loan expenditure amounted to £658,726.

Finances of sewerage undertakings are incorporated in council general funds and are not available separately.

4. *South Australia.*—(i) *General.* The water supply and sewerage systems in this State were constructed and are maintained by the Engineering and Water Supply Department under the control of the Minister of Works. The works controlled comprise the Adelaide, Barossa, Baroota Creek, Beetaloo, Bundaleer, Tod River, Warren and other country water districts systems, the Morgan-Whyalla water supply system, the Adelaide metropolitan sewerage system, the Murray River Weirs, water conservation, and the Metropolitan Flood Waters Scheme.

(ii) *South Australian Waterworks.* (a) *Services.* The table hereunder shows particulars of the area, capacity, etc. of combined metropolitan and country waterworks for the years 1938-39 and 1948-49 to 1952-53 :—

WATERWORKS, SOUTH AUSTRALIA : SERVICES.

Year.	Assessments.(a)		Area of Districts Supplied. (a)	Capacity of Reservoirs, Tanks, etc.	Length of Mains.	Number of Meters.
	Number.	Annual Value.				
		£	Acres.	Mill. gals.	Miles.	
1938-39 ..	185,625	6,302,445	11,857,968	23,814	6,384	97,074
1948-49 ..	206,904	7,694,428	11,953,235	23,941	7,056	104,649
1949-50 ..	210,808	8,113,905	11,956,885	23,942	7,125	107,092
1950-51 ..	216,989	8,556,078	11,968,452	23,943	7,203	109,433
1951-52 ..	227,082	12,202,222	11,974,297	23,984	7,368	114,222
1952-53 ..	234,269	13,366,875	11,976,503	24,009	7,478	119,349

(a) Excludes Morgan-Whyalla Water Supply—water sold by measure.

(b) *Finances.* Figures for 1938-39 and 1948-49 to 1952-53 are shown in the following table.

WATERWORKS, SOUTH AUSTRALIA : FINANCES.

(£.)

Year.	Invested Capital at 30th June.	Revenue.	Expenditure.			Deficit.
			Working Expenses.	Interest and Debt Redemption.	Total.	
1938-39 ..	14,649,052	654,688	242,528	651,972	894,500	239,812
1948-49 ..	20,399,213	978,339	670,447	695,547	1,365,994	387,655
1949-50 ..	21,247,004	1,016,078	817,696	705,700	1,523,396	507,318
1950-51 ..	22,591,460	1,098,360	1,068,102	720,250	1,788,352	689,992
1951-52 ..	25,718,681	1,301,075	1,279,742	747,386	2,027,128	726,053
1952-53 ..	28,573,826	1,415,713	1,377,212	789,517	2,166,729	751,016

(iii) *Adelaide Waterworks.* At 30th June, 1953 the Adelaide waterworks supplied a district of 144,480 acres. The capacity of its five reservoirs was 14,466 million gallons and there were 1,792 miles of mains.

Two major projects are in hand—(i) the construction of a large reservoir on the South Para River to provide additional storage to serve the lower northern areas of the State and to make some additional provision for the metropolitan area, and (ii) bringing River Murray water into Adelaide to supplement the metropolitan and Warren system areas and to serve country areas en route. The capacity of the new reservoir will be about 10,000 million gallons and the pipeline from the Murray near Mannum will deliver about 12,000 million gallons per annum.

Particulars of finances for the years 1938-39 and 1948-49 to 1952-53 are shown below :—

ADELAIDE WATERWORKS : FINANCES.

(£.)

Year.	Invested Capital at 30th June.	Revenue.	Expenditure.			Surplus
			Working Expenses.	Interest and Debt Redemption.	Total.	
1938-39 ..	4,676,110	446,459	111,347	202,279	313,626	132,833
1948-49 ..	6,248,465	607,718	246,951	210,898	457,849	149,869
1949-50 ..	6,665,805	630,765	310,382	218,737	529,119	101,646
1950-51 ..	7,814,093	680,275	400,600	230,821	631,421	48,854
1951-52 ..	10,101,923	860,492	507,444	260,752	768,196	92,296
1952-53 ..	11,849,046	908,177	534,074	313,252	847,326	60,851

(iv) *Adelaide Metropolitan Sewerage.* The Adelaide metropolitan sewerage system, comprising the Adelaide, Glenelg and Port Adelaide areas, with drainage areas of 100 square miles in all, includes a sewage farm, and treatment works at Glenelg and Port Adelaide. The total quantity of sewage pumped by the various stations was 3,990 million gallons during 1952-53. Other particulars for 1938-39 and 1948-49 to 1952-53 are shown hereunder :—

ADELAIDE METROPOLITAN SEWERAGE : SUMMARY.

Year.	Length of Sewers.	Number of Con-nexions.	Invested Capital at 30th June.	Revenue.	Expenditure.			Surplus (+) or Deficit (-).
					Working Expenses.	Interest and Debt Redemption.	Total.	
	Miles.		£	£	£	£	£	£
1938-39 ..	923	80,745	3,361,034	268,880	77,023	150,273	227,296	+ 41,584
1948-49 ..	1,048	98,948	4,324,787	333,572	182,874	148,754	331,628	+ 1,944
1949-50 ..	1,092	102,782	4,629,510	352,631	209,410	154,959	364,369	- 11,738
1950-51 ..	1,133	107,634	4,855,351	371,835	255,000	160,253	415,262	- 43,427
1951-52 ..	1,163	113,432	5,372,988	515,303	358,002	161,780	519,782	- 4,479
1952-53 ..	1,206	120,510	5,860,255	551,843	399,327	162,015	561,342	- 9,499

(v) *Country Water Supply.* Water district systems outside Adelaide at 30th June, 1953 comprised an area of 11,832,023 acres, and the capacity of the reservoirs was 10,540 million gallons. These figures exclude the Morgan-Whyalla supply system, which obtains its water from the River Murray. The storage tanks of this system had a capacity of 44 million gallons.

Construction work is proceeding on the scheme for the augmentation of the Tod River District supplies, and for the supply of other areas not already served, by utilizing water from the Uley-Wanilla sub-artesian basin. During 1952-53, 249 million gallons were pumped from the basin, meeting all the needs of Port Lincoln and augmenting the reservoir. At 30th June, 1953, £4,555,918 had been invested in the Tod River District.

At the request of the Commonwealth, the Engineering and Water Supply Department undertook the construction above ground of a 10-in. pipeline, together with service reservoirs, pumping stations, etc., from Port Augusta to the Guided Missile Range at Woomera, a distance of about 110 miles. This project was completed in June, 1949.

To bring a permanent supply of water to the Yorke Peninsula, contracts were let for 76 miles of steel pipes for the enlargement of the main between the Bundaleer and Clinton Reservoirs, but shortage of steel plate has delayed progress.

The following table gives financial information on country waterworks for 1938-39 and 1948-49 to 1952-53 :—

COUNTRY WATERWORKS, SOUTH AUSTRALIA : FINANCES.(a)
(£.)

Year.	Invested Capital at 30th June.	Revenue.	Expenditure.			Deficit.
			Working Expenses.	Interest.	Total.	
1938-39 ..	10,015,613	207,569	130,523	449,691	580,214	372,645
1948-49 ..	11,616,857	286,646	395,717	402,809	798,526	511,880
1949-50 ..	12,056,803	298,256	508,759	405,355	914,114	615,858
1950-51 ..	12,289,918	319,396	647,994	407,810	1,055,804	736,408
1951-52 ..	13,123,855	339,155	727,174	405,334	1,132,508	793,353
1952-53 ..	14,018,673	407,944	757,727	394,750	1,152,477	744,533

(a) Excludes Morgan-Whyalla system.

(vi) *Morgan-Whyalla Water Supply Scheme.* This scheme, which involved the laying of 223 miles of main, was officially opened on 31st March, 1944, the capital invested to 30th June, 1953 being £2,510,572. Particulars of this scheme, where applicable, are included in the tables of the combined waterworks in (ii) above. During 1952-53 the water used from the system between Hanson and Whyalla amounted to 1,289 million gallons. Revenue for the year 1952-53 was £192,114, working expenses, etc. £177,933, interest charges, £81,515 and deficit, £67,334. Corresponding figures for 1951-52 were, respectively, £193,886, £138,388, £81,300, and £25,802.

5. *Western Australia.*—(i) *General.* The water supply and sewerage systems of Western Australia are principally under the management of Government Departments, and are divided into the following categories :—(a) Metropolitan Water Supply, Sewerage and Drainage, covering Perth, Fremantle, Claremont, Guildford, Midland Junction and Armadale District; (b) Country Areas (previously Goldfields) Water Supply; (c) Water Supply of other towns, etc.; (d) Agricultural Water Supply, and (e) Artesian and sub-artesian waters.

(ii) *Metropolitan Water Supply, Sewerage and Drainage.* (a) *General.* The sources of the metropolitan water supply are the Canning Dam, Churchman's Brook, Wongong Brook, Victoria Reservoir, Armadale Pipe Head Dam and Well, and certain bores. The largest reservoir, the Canning Dam, has a capacity of 20,550 million gallons, about 5,000 million gallons more than that of the Mundaring Reservoir to which it is linked by a pipeline.

The sewage treatment works of Perth and suburbs consist of primary sedimentation with separate sludge digestion and discharge of all effluent direct to the ocean. Fremantle treatment works consist of septic tanks with ocean outfall for effluent. There are three treatment works, situated at West Subiaco, Swanbourne and Fremantle.

(b) *Water Supply.* The following table shows particulars of water supply services for 1938-39 and 1948-49 to 1952-53 :—

METROPOLITAN WATER SUPPLY, WESTERN AUSTRALIA : SERVICES.

Year.	Number of Services.	Estimated Population Supplied.	Average Daily Consumption.	Total Consumption for Year.	Average Daily Consumption.		Length of Mains.	Number of Meters.
					Per Service.	Per Head of Estimated Population.		
			Mill. gals.	Mill. gals.	Gallons.	Gallons.	Miles.	
1938-39 ..	61,467	248,248	14.1	5,147	229	56.8	953	40,014
1948-49 ..	76,562	290,962	27.2	9,918	355	93.5	1,173	47,073
1949-50 ..	79,835	297,123	29.1	10,618	364	97.9	1,224	49,370
1950-51 ..	84,926	303,422	28.4	10,354	334	93.5	1,271	52,277
1951-52 ..	90,436	309,854	31.0	11,337	343	100.0	1,327	61,146
1952-53 ..	96,155	316,423	30.7	11,201	319	97.0	1,422	69,262

Water rating for 1952-53 was 1s. 6d. in the £1 on annual valuation, with a minimum of 10s.

(c) *Sewerage and Drainage.* Some particulars of the metropolitan sewerage and drainage services for 1938-39 and 1948-49 to 1952-53 are shown below :—

METROPOLITAN SEWERAGE AND DRAINAGE, WESTERN AUSTRALIA : SERVICES.

Year.	Houses Connected.	Estimated Population Served.	Sewage Pumped for the Year.(a)	Length of Sewers.	Length of Stormwater Drains.
			Mill. gals.	Miles.	Miles.
1938-39.. ..	36,652	162,457	1,030	444	31
1948-49.. ..	47,446	199,273	2,273	569	34
1949-50.. ..	48,909	205,418	2,326	588	34
1950-51.. ..	50,480	212,016	3,809	605	34
1951-52.. ..	52,171	224,000	3,080	626	34
1952-53.. ..	54,467	229,700	3,333	648	34

(a) Aggregate of quantities pumped by the various stations.

Sewerage rating for 1952-53 was 1s. 6d. in the £1 on annual valuation, with a minimum of 7s. 6d. Stormwater drainage rating was 5d. with a minimum of 2s. 6d.

(d) *Finances.* The following table shows particulars of the finances of the Western Australian Metropolitan Water Supply, Sewerage and Drainage Department for the years 1938-39 and 1948-49 to 1952-53 :—

METROPOLITAN WATER SUPPLY AND SEWERAGE AND DRAINAGE, WESTERN AUSTRALIA : FINANCES.
(£.)

Service and Year.	Capital Cost at 30th June.	Revenue.	Expenditure.			Surplus (+) or Deficit (-).
			Working Expenses.	Interest and Debt Redemption.	Total.	
Water Supply—						
1938-39	4,898,167	285,313	50,975	228,527	279,502	+ 5,811
1948-49	5,899,578	416,817	136,499	253,244	389,743	+ 27,074
1949-50	6,200,980	452,956	186,219	224,958	411,177	+ 41,779
1950-51	6,771,509	488,396	228,442	243,807	472,249	+ 16,147
1951-52	7,665,863	543,872	288,525	284,820	573,345	- 29,473
1952-53	8,817,351	618,603	364,638	324,107	688,745	- 70,142
Sewerage and Drainage—						
1938-39	3,497,938	174,950	30,630	149,714	180,344	- 5,394
1948-49	4,359,547	259,597	59,182	206,264	265,446	- 5,849
1949-50	4,567,278	274,113	84,988	196,234	281,222	- 7,109
1950-51	4,884,224	288,598	119,125	206,701	325,826	- 37,228
1951-52	5,169,227	339,917	156,507	238,599	395,106	- 55,189
1952-53	5,449,248	402,808	182,184	252,256	434,440	- 31,632

(iii) *Country Areas Water Supply (Previously Goldfields Water Supply).* The source of supply for Kalgoorlie, Coolgardie and adjacent goldfields, as well as for the towns and districts on or near the pipeline, is the Mundaring Reservoir, whose capacity is 15,100 million gallons. This scheme is linked by pipeline with the Canning Dam.

Work is proceeding for a comprehensively reticulated water scheme at an estimated cost of approximately £4,300,000 to serve an area of about 4,500,000 acres of farm lands and some 23 agricultural towns, including the principal towns on the Great Southern Railway. The supply to the Eastern Goldfields will be increased to permit expansion of the gold-mining industry, the already increased capacity of the Mundaring Reservoir being part of this scheme. It is also planned to increase the storage capacity of the Wellington Dam to 38,000 million gallons. Financing of the scheme is being shared by the Commonwealth and the State Governments on a £1 for £1 basis. Expenditure on this work to 30th June, 1953 totalled £1,664,456.

The following table shows details of the Country Areas Water Supply for 1938-39 and 1948-49 to 1952-53 :—

COUNTRY AREAS WATER SUPPLY(a), WESTERN AUSTRALIA : SUMMARY.

Year.	Number of Services.	Total Consumption.	Length of Water Mains.	Number of Meters.	Capital Cost.	Revenue.	Expenditure. (b)	Surplus (+) or Deficit (-).
		Mill. gals.	Miles.		£	£	£	£
1938-39 ..	13,670	1,735	1,720	10,872	5,527,890	331,457	298,531	+ 32,926
1948-49 ..	15,669	2,131	1,773	13,639	6,614,390	341,052	533,851	- 192,799
1949-50 ..	16,063	2,208	1,777	13,991	6,803,271	346,660	566,614	- 219,954
1950-51 ..	16,229	2,162	1,793	14,180	7,461,331	359,468	673,318	- 313,850
1951-52 ..	16,598	2,314	1,802	14,640	7,916,564	366,755	806,398	- 439,643
1952-53 ..	17,124	2,374	1,810	15,289	8,314,816	398,057	1,010,036	- 611,979

(a) Previously Goldfields Water Supply.

(b) Includes interest and debt redemption.

(iv) *Water Supply of Other Towns, etc.* (a) *Controlled by Public Works Department.* During 1952-53 (1951-52 in parentheses) water supplied to other towns and districts, excluding minor water supplies, amounted to 884 (795) million gallons, including service to adjacent mines, 15 (11) million gallons, and railways 61 (64) million gallons. Estimated population served numbered 54,111 (50,918).

(b) *Controlled by Commonwealth and State Government Railways.* Consumption for the year ended 30th June, 1953 (1951-52 in parentheses) was 213 (308) million gallons. In addition, 344 (397) million gallons were obtained from other sources, mainly the Country Areas Water Supply and the Metropolitan Water Supply.

(c) *Water Boards not Controlled by Government.* During 1952-53 (1951-52 in parentheses) approximately 390 (323) million gallons of water were supplied to an estimated population of 17,010 (15,598).

(v) *Agricultural Water Supply.* During the forty-nine years from 1st July, 1904 to 30th June, 1953, 584 tanks were built, 1,159 wells sunk, and 5,149 bores put down. Of the bores put down, 785 yielded fresh, and 452 stock, water.

(vi) *Artesian and Sub-artesian Waters.* Up to 30th June, 1953 the total number of bores put down in search of artesian or sub-artesian water and in which water was struck (inclusive of operations by Defence Services) was 455 ranging in depth from 21 to 4,006 feet.

6. *Tasmania.*—(i) *Waterworks.* At the end of 1952-53 (1951-52 in parentheses) there were 38 (37) municipal waterworks in Tasmania. The capacity of the reservoirs was 887 (881) million gallons, the estimated population served was 210,291 (201,281), the number of properties assessed was 66,857 (64,088) and the length of aqueducts, mains and reticulation was 1,199 (1,122) miles. Costs of construction amounted to £3,038,190 (£2,538,256). The largest of these undertakings is Hobart, with a reservoir capacity at the end of 1952-53 of 578 million gallons, and 161 miles of reticulation and 92 miles of aqueduct and main.

(ii) *Sewerage.* Sewerage in Tasmania also is the concern of local authorities.

§ 6. Harbour Boards and Trusts.

NOTE.—The number and net tonnage of all vessels which entered the major ports in each State during the years 1938-39 and 1947-48 to 1950-51 are shown in Chapter VI.—Transport and Communication, A. §3. Shipping at Principal Ports. Particulars of oversea and interstate cargo discharged and shipped during 1950-51 are shown in A. §6 of the same chapter.

1. *New South Wales.*—(i) *Maritime Services Board of New South Wales.* (a) *General.* The Maritime Services Board of New South Wales is a corporate body of five Commissioners, three of whom are full-time members and two, representing shipping and

commercial interests, part-time members. The Board was brought into existence on 1st February, 1936 by the Maritime Services Act 1935 in order to co-ordinate the port and navigation services of the State, which had previously been administered by the Sydney Harbour Trust and by the State Department of Navigation.

The Board exercises general control over intra-state shipping, including the survey and certification of vessels, the licensing of harbour craft and the examination and issue of certificates to officers; is responsible for the provision of pilotage services, lights, beacons, buoys and other port facilities; imposes and collects rates and charges on goods and vessels; and is vested with the general control and management of the navigable waters and ports within the State.

At the Port of Sydney the Board is also responsible for the provision of adequate wharfage and channels, and carries out all construction, maintenance and dredging work. At other ports of New South Wales such work is undertaken by the Department of Public Works on behalf of the Board.

(b) *Port of Sydney.* The entrance to Sydney Harbour, the principal port of New South Wales, is nearly a mile wide, and the depth of its navigable channel is not less than 80 feet. Between the entrance, known as "The Heads", and the Harbour proper, a distance of 4 miles, there are two separate channels, each 700 feet wide, the Western Channel not less than 43 feet deep (low water ordinary spring tides) and the Eastern Channel 40 feet deep. The foreshores, which have been reduced by reclamations, are 152 miles in length and the total area of the port is 13,600 acres, or 21 square miles, of which about one-half has a depth of 30 feet or more at low water ordinary spring tide. The mean range of tides is 3 feet 6 inches.

The wharves are situated in close proximity to the business centre of the city, about four or five miles from the Heads. Excluding ferry wharves and jetties used for private purposes, there are 62,963 feet of wharfage controlled by the Maritime Services Board and 8,710 feet of commercial wharfage privately owned. Ferry berths cover 3,470 feet, and the total for all purposes is 75,143 feet. Depth of water at wharves is up to 40 feet. Some of the principal wharves are leased to shipping companies whose vessels engage regularly in the trade of the port; the remainder are reserved for vessels which visit the port occasionally. Special facilities for the storage and handling of staple products such as wheat, wool, etc., are provided and modern plant has been installed for replenishing ships' bunkers with oil or coal.

The docking facilities comprise five large graving docks, four floating docks and eight patent slips. The Captain Cook Graving Dock, opened in March, 1945, is capable of accommodating the largest vessel afloat.

The following table shows particulars of the finances of the Board in respect of the Port of Sydney for 1938-39 and 1948-49 to 1952-53:—

MARITIME SERVICES BOARD : FINANCES OF THE PORT OF SYDNEY.

(£.)

Year.	Total Capital Debt at 30th June.	Revenue.			Expenditure.			Surplus(+) or Deficit(-).
		Wharfage and Transhipment Rates.	Tonnage Rates and Berthing Charges.	Total.	Administration and Maintenance.	Interest, Debt Redemption, Exchange, etc.	Total. (a)	
1938-39..	11,276,399	773,501	38,180	1,155,627	380,120	536,781	916,901	+238,726
1948-49..	11,334,338	821,376	182,360	1,569,157	923,656	517,715	1,441,371	+127,786
1949-50..	11,571,669	925,144	229,092	1,658,203	957,510	526,171	1,483,681	+174,522
1950-51..	11,779,317	1,032,685	333,902	1,955,073	1,155,004	528,928	1,683,932	+271,141
1951-52..	12,194,585	1,107,933	334,530	2,354,154	1,455,711	533,401	1,989,112	+365,042
1952-53..	12,562,700	971,553	254,637	2,021,121	1,529,050	546,590	2,075,640	- 54,519

(a) Excludes capital expenditure (1938-39, £28,576; 1948-49, £221,227; 1949-50, £287,211; 1950-51, £384,911; 1951-52, £495,443; 1952-53, £465,764) and expenditure on renewals and replacements (1948-49, £123,651; 1949-50, £159,935; 1950-51, £196,102; 1951-52, £291,454; 1952-53, £299,286).

(c) *Port of Newcastle.* Newcastle Harbour is administered by the Maritime Services Board and an Advisory Committee consisting of five members appointed by the Governor. In regard to volume of shipping entered, Newcastle ranks second in importance in New South Wales and fifth in Australia. It is primarily a coal-loading port, and the proximity to the coal field has led to the establishment of important industries, including iron and steel works, in the district. Facilities are available for the shipment of wool, wheat and frozen meat, and a wharf is available for timber.

The area used by shipping is about 570 acres, excluding the entrance to the harbour and the inner basin, which together cover an area of 162 acres. The width of the harbour at the entrance is 1,200 feet, and the navigable channel, with a depth of 25 feet 6 inches at low water, is 350 feet wide. Wharfage accommodation amounts to 19,900 feet, the Maritime Services Board controlling 6,720 feet, the Railways Department 7,000 feet, the Public Works Department 200 feet, and private shipping companies 2,600 feet, while tie-up berths and ferry and depot wharves comprise 3,400 feet.

(d) *Port Kembla.* As from 3rd May, 1948, the Maritime Services Board assumed the administration and navigational control of Port Kembla, which had previously been administered by the New South Wales Department of Public Works. The Department continues however to be the constructing authority in respect of works, dredging and maintenance. In respect of volume of shipping entered, Port Kembla ranks third in the ports of New South Wales, and about seventh in those of Australia. It has an area of approximately 330 acres, with depths ranging from 20 to 50 feet (low water ordinary spring tide), and wharfage accommodation has been provided for large ocean-going vessels. It is the port of the southern coalfields and for the expanding industrial area in and about Wollongong.

(e) *Other Ports.* In addition to the ports of Sydney, Newcastle and Port Kembla, the Board controls 29 outports along the coastline of 609 miles. The shipping trade of these outports is relatively small.

(ii) *Port Charges.* The port charges payable in respect of shipping and ships' cargoes in New South Wales are imposed by the Commonwealth Government in terms of the Lighthouses Act and the Federal Navigation Act, and by the State authorities under the Navigation Act of New South Wales, the Harbour and Tonnage Rates Act, and the Sydney Harbour Trust Act. Since 1st February, 1936, the State enactments have been administered by the Maritime Services Board. The gross collections by the State authorities amounted to £2,966,238 in 1952-53 and to £3,084,378 in 1951-52. These figures include the Port of Sydney revenue (*see* table above) and State navigation service collections (£945,117 in 1952-53 and £730,224 in 1951-52). Commonwealth Government revenue from light dues and navigation receipts, for the whole of Australia, amounted to £221,639 in 1952-53 and to £243,086 in 1951-52.

2. *Victoria.*—(i) *Melbourne Harbor Trust.* (a) *General.* Information regarding the origin and constitution of this Trust, which controls the Port of Melbourne, appears in Official Year Book No. 12, p. 970 *et seq.* At 31st December, 1953, the sheds available for wharfage accommodation had a length of 21,244 feet, covering an area of 1,506,083 square feet. The area of water in the bay and River Yarra under the control of the Trust is approximately 5,327 acres and the total length of wharves, piers and jetties in the port is 62,703 feet, giving an area of over 58 acres of wharfage, and 54,787 feet of effective berthing space. During 1953, work was continued on the new berths at Appleton Dock (ultimately to have eighteen berths), Victoria Dock, South Wharf and at Williamstown. The depth of water (low water ordinary spring tide) of main channels and at principal wharves is about 30 feet, the maximum being about 36 feet.

(b) *Finances.* The following table shows particulars of the financial operations of the Trust during the years 1939 and 1949 to 1953 :—

MELBOURNE HARBOR TRUST : FINANCES.

(£.)

Year.	Gross Loan Indebtedness at 31st December.	Revenue.		Expenditure.				Surplus(+) or Deficit(—).
		Wharfage and Tonnage Rates.	Total.	Administration and Maintenance.	Interest, Debt Redemption, Exchange, etc.	Depreciation, Renewals and Insurance Account.	Total. (a)	
1939 ..	4,018,527	689,100	843,899	282,533	270,650	129,160	837,577	+ 6,322
1949 ..	3,766,678	1,118,059	1,471,221	460,955	190,056	121,798	1,015,421	+455,800
1950 ..	3,972,029	1,293,923	1,771,074	675,839	187,582	162,883	1,301,687	+469,387
1951 ..	5,883,857	1,493,423	2,129,432	1,036,842	235,881	175,263	1,768,105	+361,327
1952 ..	7,914,146	1,256,581	1,941,252	1,204,863	292,485	179,047	1,947,085	— 5,833
1953 ..	9,581,933	1,423,345	2,052,272	1,230,195	381,914	98,182	2,013,554	+ 38,718

(a) Includes statutory payments to Consolidated Revenue and Geelong Harbor Trust :—1939, £155,234; 1949, £242,612; 1950, £275,383; 1951, £320,119; 1952, £270,690; 1953, £303,263. Excludes capital expenditure :—1939, £128,567; 1949, £623,396; 1950, £1,589,392; 1951, £2,058,921; 1952, £2,246,097; 1953, £1,255,613.

(ii) *Geelong Harbor Trust.* The Geelong Harbor Trust was constituted in 1905, and reconstituted in 1934 under the provisions of the Melbourne and Geelong Harbor Trusts Act 1934. The Trust is under the control of three Commissioners appointed by the Governor-in-Council. The port dredging programme was continued during the year and on completion in December, 1954, will provide a minimum depth of water throughout approaches and at all berths of 32 feet (mean low water spring tides).

Revenue for the year 1953 (1952 in parentheses) was £224,601 (£179,488), and revenue expenditure was £210,038 (£180,821). Payments made in respect of capital works amounted to £880,150 in 1953 (£1,434,899 in 1952), and loans outstanding at the end of the year amounted to £2,302,010 (£1,649,044 at the end of 1952).

(iii) *Other Ports.* Portland is the only Victorian port other than Melbourne and Geelong of more than minor importance.

3. *Queensland.*—(i) *General.* The ports of Queensland, except Brisbane and certain minor ports, are administered by Harbour Boards with members representing the towns and districts served by the ports. Brisbane and the minor ports are controlled by the State Treasury through the Department of Harbours and Marine, which supervises the engineering activities of the other ports.

(ii) *Brisbane.* Brisbane accommodates comfortably, in its dredged and improved river, the largest vessels in the Australian trade. The main centres for shipping, although further downstream than formerly, because of the increasing size of vessels, are still within easy access of the city. The maximum depths (low water ordinary spring tide) of the shipping channel decrease from 32 feet in the North-West channel to 20 feet in

the Bulimba Reach to Victoria Bridge section. Depths at wharves vary between 23 and 29 feet. Adequate dry-docking facilities are available. The finances of Brisbane Harbour for the years 1938-39 and 1947-48 to 1951-52 are shown below :—

BRISBANE HARBOUR : FINANCES.

(£'000.)

Year.	Loan Indebtedness at 30th June.	Receipts.		Payments.	
		Harbour Dues.	Total.	Working Expenses.	Total (including Interest and Redemption).
1938-39	1,179	165	173	36	112
1947-48	1,219	153	222	126	209
1948-49	1,256	190	209	162	250
1949-50	1,325	219	299	168	260
1950-51	1,572	221	253	237	329
1951-52	1,862	276	326	348	463

In addition to Brisbane Harbour, the Department of Harbours and Marine also controls the Brisbane Dry Dock, the Cairncross Dock, the Brisbane River, and ten smaller harbours not administered by harbour boards.

(iii) *Harbour Boards.* Harbour boards control the ports of Bowen, Bundaberg, Cairns, Gladstone, Mackay, Rockhampton and Townsville. Finances for each port for the year 1952 are shown below, together with a summary for the years 1939 and 1948 to 1952.

HARBOUR BOARDS, QUEENSLAND : FINANCES.

(£.)

Harbour Board.	Loan Indebted- ness at 31st December.	Revenue.		Expenditure (excluding Loan).		Surplus (+) or Deficit (-).
		Wharf- age and Harbour Dues.	Total.	Working Expenses.	Total (including Interest and Redem- ption).	
Bowen	337,265	22,099	27,895	12,470	28,413	— 518
Bundaberg	43,299	4,437	7,943	5,023	9,731	— 1,788
Cairns	186,636	124,933	173,012	149,970	179,474	— 6,462
Gladstone	223,882	22,776	133,345	78,990	110,689	+ 22,656
Mackay	342,735	113,348	125,189	26,760	51,416	+ 73,773
Rockhampton	559,849	38,660	57,346	33,528	45,249	+ 12,097
Townsville	365,414	129,424	188,582	134,043	271,871	— 83,289
Total, 1952	2,059,080	455,677	713,312	440,784	696,843	+ 16,469
" 1951	1,780,774	402,903	599,505	370,040	534,095	+ 65,410
" 1950	1,611,241	378,949	510,719	284,896	408,561	+ 102,158
" 1949	1,523,644	347,843	464,450	307,716	431,359	+ 33,091
" 1948	1,477,076	280,360	371,987	213,700	364,118	+ 7,869
" 1939	1,548,144	249,510	401,439	139,752	343,083	+ 58,356

4. *South Australia.*—*The South Australian Harbours Board.* All South Australian harbours are controlled by the South Australian Harbours Board, which consists of three Commissioners appointed by the Governor for a period of five years and eligible for re-appointment. The Board is responsible to the Minister of Marine for the discharge of its duties and functions. The most important ports are the 5 deep sea ports of Adelaide, Pirie, Wallaroo, Lincoln and Thevenard. At several ports, the wharves or jetties are privately controlled, the principal of these being Whyalla (controlled by the Broken Hill Pty. Co. Ltd. under a Private Act of Parliament) and Augusta (controlled by the Commonwealth Railways) whilst at Ardrossan the Broken Hill Pty. Co. Ltd. has installed a bulk loading plant for handling dolomite and grain. Maximum depths of water (low water ordinary spring tide) at the wharves of the main ports range from 20 to 24 feet at Pirie to 35 feet at Adelaide (Outer Harbour). The following table shows the finances of the Board for 1938-39 and 1948-49 to 1952-53 :—

SOUTH AUSTRALIAN HARBORS BOARD : FINANCES.

(£.)

Year.	Capital at 30th June. (a)	Revenue.	Expenditure from Revenue.				Surplus (+) or Deficit (—)
			Working Expenses.	Interest.	Debt Redemption.	Total.	
1938-39 ..	8,026,441	664,915	205,848	326,719	50,000	582,567	+ 82,348
1948-49 ..	8,281,524	938,797	503,563	281,110	30,356	815,029	+ 123,768
1949-50 ..	8,545,084	1,050,742	583,965	281,691	33,327	898,983	+ 151,759
1950-51 ..	8,896,281	1,141,174	784,191	281,657	..	1,065,848	+ 75,326
1951-52 ..	9,581,786	1,336,504	1,039,801	280,872	..	1,320,673	+ 15,831
1952-53 ..	10,469,523	1,240,679	1,078,507	286,456	..	1,364,963	— 124,284

(a) State Treasurer's Funds and Reserve employed.

5. *Western Australia.*—(i) *Fremantle Harbour Trust.* Fremantle Harbour is controlled by a board of five Commissioners appointed by the Governor-in-Council. Maximum depth of water (low water ordinary spring tide) at the entrance to the harbour is 30 feet, and at the wharves 33 feet. The length of wharf berth accommodation is 10,495 feet.

Gross earnings for the year 1952-53 amounted to £1,815,520, working expenses to £1,430,592, interest £142,006, debt redemption £40,964, renewals fund £2,000, and payment of surplus cash to Consolidated Revenue £19,166. Corresponding figures for 1951-52 were £1,923,402, £1,354,466, £124,592, £36,960, £2,000 and £121,961 respectively. There was also a special loan repayment from revenue during 1952-53 amounting to £201,433. The total amount debited to loan capital account at 30th June, 1953 was £4,035,606.

(ii) *Bunbury Harbour Board.* The Bunbury Harbour Board consists of five members appointed by the Government. The depth of water at the entrance and at the wharf is 27 feet (low water ordinary spring tide). Berthage accommodation is 3,700 feet. Gross earnings in 1952-53 were £29,468, working expenses £60,557, and interest £50,398. Corresponding figures for 1951-52 were £21,159, £49,579, and £40,090. The total amount debited to loan capital account at 30th June, 1953 was £1,332,846.

(iii) *Other Ports.* Only the ports of Fremantle, Bunbury and Albany in Western Australia are under the control of trusts, the remainder are Government operated. Of these, Carnarvon, Geraldton and Onslow have the largest amount of shipping movement.

6. *Tasmania.*—There are seven marine boards and two harbour trusts in Tasmania. The marine boards control the ports of Hobart, Launceston, Circular Head, Burnie and Table Cape, Devonport, Strahan, and King Island (Currie), and the harbour trusts those of Smithton and Leven. Aggregate receipts of revenue accounts of all these authorities during the year 1952-53 were £712,960 and expenditures £724,393, including loan charges £107,793. Corresponding figures for 1951-52 were £624,470, £571,326 and £87,791. The total receipts of the Hobart Marine Board during 1952-53 were £339,002, loan charges amounted to £34,409 and total expenditure to £358,556.

Corresponding figures for 1951-52 were £302,917, £20,811 and £277,574. Launceston Marine Board receipts during 1952-53 amounted to £163,893, loan charges to £13,948 and total expenditure to £165,177. The figures for 1951-52 were, respectively, £140,421 £9,893 and £114,575. Loan indebtedness of all marine boards and trusts at 30th June, 1953 was £1,992,193, of which £718,311 was in respect of Hobart and £119,526 in respect of Launceston.

Hobart, Launceston, Burnie and Devonport are the principal ports of Tasmania. In addition to their interstate and intra-state traffic, there is also considerable overseas shipping. Depths of water at wharves vary, in general, between 16 and 34 feet (low water ordinary spring tide), but at Hobart there is a depth of water of from 30 to 52 feet.

§ 7. Fire Brigades.

1. *New South Wales.*—(i) *General.* A Board of Fire Commissioners, consisting of eight members, operates under the Fire Brigades Act 1909-1949, and 155 fire districts had been constituted at the end of 1952. Up to the end of 1949, the cost of maintenance of fire brigades was borne in proportions of one quarter, one quarter, and one half respectively by the Government, the municipalities, and the insurance companies concerned, the expenditure so regulated that the proportion payable by the councils in a fire district should not, except in special circumstances, exceed the amount obtainable from $\frac{1}{4}$ d. in the £1 rate on the unimproved capital value of rateable land in the fire district. In June, 1949 legislation was introduced (i) increasing the limit of the Board's borrowing power from £250,000 to £500,000, (ii) providing for the varying of the maximum rate that may be levied by councils, and (iii) altering the basis of contributions so that from 1st January, 1950, local councils and the Government will each pay one-eighth and the insurance companies three-quarters.

Other legislation, introduced in September, 1949 to improve and modernize the law dealing with the prevention of bush fires and to build up the organization of the bush fire-fighting services, provided for the establishment of Fire Regions and a Bush Fire Fighting Fund to be financed from contributions by the Government, councils and insurance companies in the proportion of one-quarter, one-quarter and one-half, respectively. The contribution of any council shall not exceed one-twentieth of a penny in the £1 on the unimproved capital value of rateable land in the area of the council not being land within a fire district constituted under the Fire Brigades Act 1909-1949.

(ii) *Board of Fire Commissioners of New South Wales.* At 31st December, 1953 the authorised strength of the Fire Brigade throughout the fire districts of New South Wales was 294 officers and 823 permanent and 2,203 volunteer firemen. Corresponding figures for the Sydney Fire District were 242, 774 and 345. The revenue for the year 1953 (1952 in parentheses) was £1,864,649 (£1,624,295) made up as follows :—From the Government, £230,009 (£200,654); municipalities and shires, £230,009 (£200,654); fire insurance companies and firms, £1,380,054 (£1,203,924); and from other sources, £24,577 (£19,063). The disbursements for the year were £1,714,591 (£1,629,488).

2. *Victoria.*—(i) *General.* The Fire Brigades Act of 1928 provided for a Metropolitan Fire Brigades Board and a Country Fire Brigades Board each consisting of nine members. In December, 1944 the latter Board was superseded by the Country Fire Authority under an Act of that title, and the number of members was increased to ten.

(ii) *Metropolitan Fire Brigades Board.* Since 1st October, 1952, the Metropolitan Fire Brigades Board has received contributions from the municipalities and the insurance companies in the proportion of one-third and two-thirds respectively. Prior to 1st October, 1952, the Board received contributions in equal proportions from the Treasury, the municipalities and the insurance companies. On 30th June, 1953 the Board had under its control 43 stations, 637 permanent staff, 72 special service and clerical, etc. staff, and 15 part-time firemen. The total receipts for 1952-53 (1951-52 in parentheses) were £1,040,474 (£879,115), comprising contributions, £839,981 (£727,715), receipts for services, £101,787 (£73,859), and interest and sundries, £98,706 (£77,541). The expenditure was £900,725 (£894,242).

(iii) *Country Fire Authority.* This authority, constituted in 1944, is responsible for the prevention and suppression of fires in the "country area of Victoria", which embraces the whole of the State outside the metropolitan fire district, excluding State forests and certain crown lands. The country area has been divided into 24 fire control regions, three of which (Ballarat, Bendigo and Geelong) are wholly urban and the remainder mixed urban and rural. The Country Fire Authority has received contributions in the proportion of two-thirds from the Treasury and one-third from insurance companies as from 1st January, 1951. Prior to that date, contributions were received in equal proportions from the Treasury, municipalities and insurance companies. At 30th June, 1953 there were 145 insurance companies included in the operation of the Act, and 196 urban and 996 rural fire brigades. The effective registered strength of the brigades was 88,119 members.

The receipts for the year 1952-53 (1951-52 in parentheses) amounted to £292,702 (£229,220). Total expenditure other than loan amounted to £279,171 (£231,744).

3. *Queensland.*—(i) *General.* The Acts of 1920-1931 made provision for the retention of existing fire districts, and for the constitution of new districts. For each district there must be a Fire Brigades Board consisting of seven members, and the cost of maintenance of each brigade is proportioned as follows:—The Treasury two-sevenths, insurance companies three-sevenths, and local authorities two-sevenths. All volunteer fire brigades in a district must be registered.

(ii) *Fire Brigades Boards.* At 30th June, 1952, the latest year for which figures are available, there were 67 Fire Brigades Boards. The total number of stations was 109, and full-time staff numbered 456, including 11 administrative, 87 officers and 358 firemen. Workshop staff numbered 17. Part-time staff numbered 601, including 68 administrative, 82 officers and 451 firemen. Volunteers numbered 373. The total revenue for the year 1951-52 was £491,505 received mainly from the following sources—Government £124,790, local authorities £124,790, insurance companies £186,726 and loans (Government and other) £28,604. The total expenditure for the year was £483,130 the chief items being salaries and wages £320,649 and interest and redemption of loans £27,940.

4. *South Australia.*—The Fire Brigades Act 1936-1944 provides for a board of five members, and the expenses and maintenance of brigades are defrayed in the proportion of two-ninths by the Treasury (subject to certain limits when the contribution exceeds £10,000), five-ninths by insurance companies, and two-ninths by the municipalities concerned. At 30th June, 1953 there were altogether 37 fire brigade stations, of which 12 were metropolitan and 25 country.

The authorized strength of the permanent staff was 371, including 267 officers and men and 84 country auxiliary firemen. The total revenue for the year 1952-53 (1951-52 in parentheses) was £296,307 (£279,610), made up as follows:—insurance companies £179,505 (£169,979), Treasury £45,000 (£41,640), and municipalities £71,802 (£67,991). The Treasury contribution includes an additional grant of £33,120 (£30,000).

5. *Western Australia.*—In 1942 certain municipal and road board districts were constituted fire districts under the control of the Western Australian Fire Brigades Board. There were 32 at 30th September, 1953. The contribution to the Board is made in the proportion of two-ninths from the Government, two-ninths from local government authorities, and five-ninths from insurance companies. The number of local government authorities and insurance companies who contributed numbered 56 and 125 respectively. The brigades throughout the State controlled by the Western Australian Fire Brigades Board at 30th September, 1953 numbered 48, with a staff of 1,425, including 208 permanent officers and firemen and 1,191 volunteer brigade officers and firemen. The revenue for the year ended 30th September, 1953 was £260,686 and the expenditure £225,989. Corresponding figures for the year ended 30th September, 1952, were £231,634 and £225,316.

Under the Bush Fires Act a Rural Fires Prevention Advisory Committee, consisting of ten members, four of whom are nominated by the Road Board Association, was set up to advise the Minister for Lands on bush fire control. The Act also provides for the registration of bush fire control officers, who numbered 1,105 at 30th June, 1953 and the establishment of bush fire brigades, the number of which was 523 at 30th June, 1953.

6. *Tasmania*.—The Fire Brigades Act 1945 provided for the creation of the Fire Brigades Commission of Tasmania to co-ordinate the activities of the 22 existing fire brigades boards, while leaving the responsibility for individual control and management with the boards. The Commission consists of five members nominated or elected by the fire brigades boards and one member nominated by the Minister. Contributions towards the cost of operations are on the basis of one-third each from the Treasury the municipalities and the insurance companies concerned. The cost for the year 1951-52 amounted to £78,356, and for 1952-53 to £90,718. There were at 30th June, 1953, 30 stations amongst the 23 brigades, and their aggregate staffs numbered 425, including 86 permanent officers and 321 part-time firemen, including officers.