

CHAPTER XV.

LOCAL GOVERNMENT.

§ 1. Introduction.

1. **General.**—The statistics on 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 only 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 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 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 929, 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 corporation areas and district council areas; 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. There are also some municipal units within shires known as urban areas. In Western Australia there are local health boards, whose personnel in most cases coincides with those of municipalities and road boards. Apart from the more thinly populated parts of New South Wales and South Australia and the Federal 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.

A description of the various systems of municipal governments in the different States, and their development from the earliest date, was published in 1919 by this Bureau in a separate work entitled *Local Government in Australia*. In this publication the systems in force at that time are examined, the development of local government in Australia is traced since its inception, and all available statistical information is collected.

3. **Semi-Governmental Authorities.**—In addition to local government authorities, there is a large number of authorities set up to control specific activities, whose forms of activity 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 V.—Transport and Communication contains information on municipal transport services, while particulars of electricity and gas undertakings, although not shown separately, are included in the relevant sections in Chapter XXIV.—Manufacturing Industry. A special article on the generation and distribution of electricity in Australia is contained in Chapter XXV. of this issue.

§ 2. Local Government Authorities.

1. **Area, Population, Dwellings and Value of Ratable Property.**—(i) *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 1949 the area incorporated was 184,000 square miles, or nearly three-fifths of the total area of the State.

The Local Government (Areas) Act 1948 repealed the Sydney Corporation Act 1932 which had regulated the operations of the Capital City. It unites the City of Sydney and certain areas, constituting the united area as a city; unites certain other areas or areas and parts of areas, constituting them as municipalities; and reconstitutes the Sydney County Council. All local government authorities in the State are now 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 33 county councils and the Grafton and South Grafton Water Board at 30th June, 1950.

The area, population, dwellings and value of ratable property in the incorporated areas for the year ended 31st December, 1949 are shown in the table below. The valuations relate to ratable property only and exclude Government and other non-ratable property, whose value is not inconsiderable in the aggregate. In this table, particulars of dwellings 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, NEW SOUTH WALES : AREA, POPULATION, DWELLINGS AND VALUE OF RATABLE PROPERTY, 1949.

Local Bodies.	Number. (a)	Area.	Popu- lation.	Dwellings.(b)		Value of Ratable Property.		
				Occu- pied.	Unoccu- pied.	Unim- proved Capital Value.	Im- proved Capital Value.	Assessed Annual Value. (c)
		'000 acres.	'000	No.	No.	£'000.	£'000.	£'000.
Metropolitan— Capital City	1	7	212	51,934	539	68,341	233,219	11,903
Other	26	148	1,322	324,120	2,229	113,184	401,734	30,593
Total	27	155	1,534	376,054	2,768	181,525	634,953	42,496
Outside Metropolitan Area	219	117,622	1,619	366,882	14,387	215,317	(d)	(d)
Grand Total	246	117,777	3,153	742,936	17,155	396,842	(d)	(d)

(a) From 1st January, 1949, the Local Government (Areas) Act 1948 amalgamated eight suburban municipalities with the Capital City. This, with other amalgamations, reduced the number of local government areas in the County of Cumberland from 66 to 39. (b) As at Census, 30th June, 1947. (c) Nine-tenths annual rental value of land with improvements thereon. (d) Not available.

(ii) *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 city of Nunawading, the borough of Ringwood, the Broadmeadows and Campbellfield ridings of the shire of Broadmeadows, the Doutta Galla riding of the shire of Keilor and the shire of Mulgrave.

The area, population, dwellings and estimated value of ratable property in the incorporated areas for the year ended 30th September, 1950 are shown on the next page.

**LOCAL GOVERNMENT AUTHORITIES, VICTORIA: AREA, POPULATION,
DWELLINGS AND VALUE OF RATABLE PROPERTY, 1949-50.**

Local Bodies.	Number.	Area.	Popu- lation.	Dwellings.(a)		Value of Ratable Property.	
				Occupied.	Un- occupied.	Improved Capital Value.	Net Annual Value.
				No.	No.	£'000.	£'000.
Metropolitan— Capital City	1	'000 acres. 8	'000 101	24,081	5	111,693	5,585
Other (b)	33	341	1,233	314,139	1	428,614	22,253
Total	34	349	1,334	338,220	6	540,307	27,838
Outside Metropolitan Area(c)	164	55,844	886	234,696	101	407,871	20,448
Grand Total	198	56,193	2,220	572,916	107	948,178	48,286

(a) Particulars of occupied and unoccupied dwellings are based on returns furnished by municipalities. These figures refer to number of units in all habitable buildings. They differ in basis from the figures published in the previous issue of the Year Book, which were derived from Census returns. (b) Includes the whole of the city of Heidelberg, the borough of Ringwood, and the whole of the shires of Braybrook, Broadmeadows and Kellor, whose parts do not all lie within the Metropolitan Area. (c) Excludes Yallourn area under the jurisdiction of the State Electricity Commission of Victoria.

Particulars of the unimproved capital value are not available.

(iii) *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. The following table shows particulars of the area, population, dwellings and value of ratable property in the incorporated areas for the year ended 30th June, 1950:—

**LOCAL GOVERNMENT AUTHORITIES, QUEENSLAND: AREA, POPULATION,
DWELLINGS AND VALUE OF RATABLE PROPERTY, 1949-50.**

Local Bodies.	Number.	Area.	Population. (a)	Dwellings.(a)		Un- improved Capital Value of Ratable Property.
				Occupied.	Un- occupied.	
				No.	No.	
Capital City (b)	1	'000 acres. 246	'000. 402	99,771	1,475	24,622
Outside Metropolitan Area	133	428,874	697	171,400	8,071	69,694
Total	134	429,120	1,099	271,171	9,546	94,316

(a) As at Census, 30th June, 1947.

(b) City of Greater Brisbane.

Particulars of improved capital value and annual value are not available.

(iv) *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.

The following table shows the area, population, dwellings and value of ratable property in incorporated areas for the year ended 30th June, 1950.

LOCAL GOVERNMENT AUTHORITIES, SOUTH AUSTRALIA : AREA, POPULATION, DWELLINGS AND VALUE OF RATABLE PROPERTY, 1949-50.

Local Bodies.	Number.	Area.	Popu- lation.	Occu- pied Dwell- ings.	Value of Ratable Property.		
					Unim- proved Capital Value.	Im- proved Capital Value.	Annual Value.
		'000 Acres.	'000.	No.	£'000.	£'000.	£'000.
Metropolitan—							
Capital City	1	4	35	8,199	12,084	36,000	1,823
Other	20	99	385	101,369	(b)	106,000	5,302
Total	21	103	420	109,568	(b)	142,000	7,125
Outside Metropolitan Area	122	34,402	265	69,055	(b)	109,000	5,442
Grand Total	143	34,505	685	178,623	(b)	251,000	12,567

(a) Particulars of unoccupied dwellings are not available.

(b) Not available.

(v) *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, coincides with those of the municipalities and district road boards. The following table shows particulars of the area, population, dwellings and value of ratable property in incorporated areas for the year ended 31st October, 1950 for municipalities, and the year ended 30th June, 1950 for district road boards.

LOCAL GOVERNMENT AUTHORITIES, WESTERN AUSTRALIA : AREA, POPULATION, DWELLINGS AND VALUE OF RATABLE PROPERTY, 1949-50.

Local Bodies.	Number.	Area.	Popu- lation.	Occu- pied Dwell- ings. (a)	Value of Ratable Property.		
					Unim- proved Capital Value.	Im- proved Capital Value.	Annual Value.
		'000. Acres.	'000.	No.	£'000.	£'000.	£'000.
Municipalities—							
Metropolitan—							
Capital City	1	14	104	24,622	(b)	44,000	1,809
Other	8	11	75	18,961	(b)	16,454	851
Total	9	25	179	43,583	(b)	60,454	2,660
Outside Metropolitan Area	12	42	58	13,992	(b)	12,200	617
Total	21	67	237	57,575	(b)	72,654	3,277
District Road Boards—							
Other Metropolitan (c)	11	96	127	30,795	5,596	(b)	13
Outside Metropolitan Area	117	624,426	185	48,766	20,360	(b)	541
Total	128	624,522	312	79,561	25,956	(b)	554
All Authorities—							
Metropolitan—							
Capital City	1	14	104	24,622	(b)	44,000	1,809
Other	19	107	202	49,756	(b)	49,756	864
Total	20	121	306	74,378	(b)	(b)	2,673
Outside Metropolitan Area	129	624,468	243	62,758	(b)	(b)	1,158
Grand Total	149	624,589	549	137,136	(b)	(b)	3,831

(a) Particulars of unoccupied dwellings are not available. (b) Not available. (c) Includes part only (8,064 acres) of Swan River District situated in Metropolitan Area.

The method of valuation is not identical in the case of all district road boards, as in some the assessment is based on the unimproved capital value and in others partly on the unimproved capital value and partly on the annual value. The amounts shown are the totals for the areas rated on each valuation, and are not a function of each other.

(vi) *Tasmania*. The whole State is divided into municipal districts, Hobart and Launceston being incorporated under separate Acts. The following table shows particulars of the area, population, dwellings and value of ratable property in incorporated areas for the year ended 30th June, 1950.

LOCAL GOVERNMENT AUTHORITIES, TASMANIA: AREA, POPULATION, DWELLINGS AND VALUE OF RATABLE PROPERTY, 1949-50.

Local Bodies.	Number.	Area.	Popu- lation.	Dwellings.(a)		Value of Ratable Property.		
				Occu- pied.	Unoccu- pied.	Unim- proved Capital Value.	Im- proved Capital Value.	Annual Value.
				No.	No.	£'000.	£'000.	£'000.
Metropolitan—		'000	'000.					
Capital City ..	1	18	58	13,597	56	5,413	17,510	1,284
Other (b) ..	2	99	25	4,560	331	1,413	4,519	345
Total ..	3	117	83	18,157	387	6,826	22,029	1,629
Outside Metropolitan Area ..	46	16,661	194	44,327	1,964	18,537	45,320	2,882
Grand Total ..	49	16,778	277	62,484	2,351	25,363	67,349	4,511

(a) As at Census, 30th June, 1947.

(b) Comprises the whole of the Municipalities of Clarence and Glenorchy.

2. **Finances.**—(i) *General*. The following tables show the latest available financial statistics for Local Government Authorities. The figures relate to the year 1949-50, except for New South Wales where they relate to the year 1949.

(ii) *Ordinary Services*. (a) *Details, 1949-50*. In the returns of revenue and expenditure for 1949-50 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, 1949-50.

Particulars.	N.S.W. (a)	Vic. (b)	Q'land. (c)	S. Aust. (c)	W. Aust. (d)	Tas. (e)	Total.
Number of Local Government Authorities ..	(e) 246	198	134	143	149	49	919

REVENUE (EXCLUDING LOAN RECEIPTS).
(£.)

Taxation—							
Rates (net)	9,681,981	6,437,476	4,848,715	1,623,847	109,606	667,782	24,428,515
Penalties	50,396	21,980					
Licences	224,339	66,372						49,780	34,943	27,050	9,721	412,205
Total	9,956,716	6,525,828	4,898,495	1,658,790	1,123,145	677,846	24,840,820
Public Works and Services—							
Sanitary and Garbage Services	1,098,163	373,096	921,329	53,918	192,410	44,099	2,663,015
Council Properties	1,068,454	767,994	726,276	162,301	329,706	92,265	3,146,996
Street Construction	441,532	311,850	53,733	131,305	60,270	2,246	1,000,716
Other	(f) 885,221	680,242	32,343	56,358	62,457	31,963	1,748,584
Total	3,493,370	2,133,182	1,733,681	403,662	644,843	170,573	8,579,311
Government Grants—							
Roads	1,766,051	133,267	800,527	730,614	298,402	115,002	3,843,863
Other	1,077,174	246,886	(i) 432,069	17,267	11,813	9,769	1,794,978
Total	2,843,225	380,153	1,232,596	747,881	310,215	124,771	5,638,841
Profits from Business Undertakings .. ..	..	269,784	15,730	..	51,077	..	336,591
Fees and Fines .. ..	..	29,169	..	..	638,209	..	638,209
All Other .. ..	..	116,639	411,458	43,406	90,658	77,749	1,471,155
Total, Revenue	16,293,311	9,454,755	8,291,960	2,917,606	2,858,147	1,050,939	40,866,718

EXPENDITURE (EXCLUDING LOAN EXPENDITURE).
(£.)

General Administration ..	1,179,688	1,373,038	678,318	277,888	297,319	120,227	3,296,478
Debt Services (excluding Business Undertakings)—							
Interest	675,130	379,219	669,250	29,310	74,041	26,573	1,853,523
Redemption	1,321,096	560,589	857,162	151,186	155,187	54,668	3,099,888
Exchange	21,560	..	160,456	..	2,277	508	184,801
Other .. ..	..	5,538	7,761	1,480	722	..	15,501
Total	2,017,786	945,346	1,694,629	181,976	232,227	81,749	5,153,713
Public Works and Services—							
Roads, Streets and Bridges	7,094,869	3,205,093	3,312,277	1,704,725	911,168	470,357	16,518,399
Health Administration	306,549	379,020	139,671	150,238	79,745	33,461	1,088,684
Sanitary and Garbage Services	1,467,943	730,047	767,653	178,080	248,281	53,152	3,445,156
Street Lighting	482,275	106,675	120,547	81,213	58,538	33,509	974,757
Council Properties	2,216,100	1,488,218	1,023,546	286,524	439,748	134,694	5,590,830
Other	590,948	662,703	515,550	95,239	348,720	22,697	2,235,866
Total	12,158,684	6,661,666	5,791,253	2,496,019	2,086,200	747,870	29,851,692
Grants—							
Fire Brigades	225,561	202,643	95,152	(t)	36,729	12,005	572,090
Hospitals and Ambulances	63,183	59,197	1,778	(k)	2,492	2,736	140,659
Other Charities .. ..	..	..	852	5,612	2,070	2,739	..
Other	(l) 255,513	444,605	88,777	4,362	5,458	2,478	801,193
Total	544,257	706,445	186,559	9,974	46,749	19,958	1,513,942
All Other	393,628	50,759	118,816	..	145,558	80,157	788,918
Total, Expenditure	16,294,043	9,737,254	8,379,575	2,965,857	2,808,053	1,049,961	41,234,743
less	(m) 370,078	..	..	..	..	..	370,078
Total	15,923,965	9,737,254	8,379,575	2,965,857	2,808,053	1,049,961	40,864,665

(a) Figures for New South Wales relate to the year ended 31st December, 1949, 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, 1950. (c) Year ended 30th June, 1950. (d) Municipalities—Year ended 31st October, 1950; Road Districts—Year ended 30th June, 1950. (e) As from 1st January, 1949, the Local Government (Areas) Act 1948 amalgamated eight suburban municipalities with the Capital City. This, with other amalgamations, reduced the number of local government areas in the County of Cumberland from 66 to 39. (f) Includes interest from sinking fund investments for debt redemption, £161,137, and sales of residue lands, £18,844, previously credited direct to sinking funds. (g) Includes £291,274 plant hire. (h) Includes £17,879 reimbursements from Highways Department for work done. (i) Includes £178,431 for sewerage and drainage. (j) Includes £210,098 for sewerage, mosquito control and drainage. (k) Compulsory contributions included under Public Works and Services. (l) To Main Roads Department. (m) Includes £190,304 to Country Roads Board. (n) This deduction offsets duplications caused by the inclusion above of particulars of expenditure on (i) the purchase from revenue of assets and the depreciation of those assets, and (ii) the depreciation of assets purchased from loans and the repayment of those loans. The amount deducted cannot be apportioned according to the various headings.

(b) Years 1938-39 and 1945-46 to 1949-50. The following table shows the revenue and expenditure (excluding loan) of local government authority ordinary services for the years 1938-39 and 1945-46 to 1949-50.

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
1945-46 ..	9,256,534	5,904,597	4,874,703	1,554,280	1,441,370	597,945	23,629,429
1946-47 ..	10,562,205	6,476,264	5,480,877	1,835,326	1,720,290	680,549	26,755,511
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	1,050,939	40,866,718
EXPENDITURE (EXCLUDING LOAN EXPENDITURE).							
1938-39 ..	10,790,273	6,192,859	4,334,634	1,558,169	1,489,079	506,976	24,871,900
1945-46 ..	9,260,781	6,218,046	5,267,540	1,932,714	1,594,069	622,311	24,595,461
1946-47 ..	11,095,211	6,986,748	5,839,506	2,015,592	1,832,800	722,074	28,491,931
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	40,864,605

(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.* (a) *Details, 1949-50.* The table hereunder shows, for 1949-50, 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, 1949-50.

(£.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
REVENUE (EXCLUDING LOAN RECEIPTS).							
Water Supply and Sewerage—							
Rates ..	810,079		13,324	..	3,972	230,932	3,643,597
Charges for Services and Sales of Products ..	216,326	94,288	168,021	1,304	4,237	67,791	
Other (including Grants) ..	(a) 265,612		224,223	..	163	26,127	
Total ..	1,292,017	94,288	1,917,766	1,304	13,372	324,850	3,643,597
Electricity and Gas—							
Rates ..	83,316	4,088,630	8,144	..	..	..	21,524,363
Charges for Services and Sales of Products ..	13,727,854		2,432,697	249,327	486,791	..	
Other (including Grants) ..	357,995		77,166	2,438	10,005	..	
Total ..	14,169,165	4,088,630	2,518,007	251,765	496,796	..	21,524,363
Railways, Tramways and Omnibuses—							
Rates ..	..	..	..	..	..	11,509	2,572,036
Charges for Services and Sales of Products ..	..	9,992	204,020	..	..	426,076	
Other (including Grants) ..	..		77,882	..	..	6,373	
Total ..	..	9,992	2,118,086	..	..	443,958	2,572,036
Other—							
Rates ..	(b)	(c)	(d)	(e)	(f)	(g)	1,319,190
Charges for Services and Sales of Products ..	870,362	327,846	42,075	18,388	12,992	26,220	
Other (including Grants) ..	6,325		12,675	912	494	810	
Total ..	876,687	327,846	54,750	19,300	13,486	27,121	1,319,190
Grand Total ..	16,337,869	4,520,756	6,608,609	272,369	523,654	795,929	29,059,186

NOTE.—See next page for notes.

LOCAL GOVERNMENT AUTHORITIES: BUSINESS UNDERTAKINGS—
REVENUE AND EXPENDITURE, 1949-50—continued.

(£.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
EXPENDITURE (EXCLUDING LOAN EXPENDITURE).							
Water Supply and Sewerage—							
Working Expenses ..	605,748	} 91,578	{ 806,412	1,289	6,071	133,693	} 3,184,562
Depreciation ..	(h) 35,680						
Debt Charges ..	462,212						
Other (including Transfers to General Revenue and Construction) ..	..					
Total	1,032,280						
Electricity and Gas—							
Working Expenses ..	12,279,521	} 404,728 1	{ 2238249	230,763	403,478	..	} 22272100
Depreciation ..	(h) 887,258						
Debt Charges ..	1,601,397						
Other (including Transfers to General Revenue and Construction) ..	..					
Total	14,768,176						
Railways, Tramways and Omnibuses—							
Working Expenses	} 11,893	{ 1818398	363,317	} 2,663,436
Depreciation ..	..					
Debt Charges ..	..					
Other (including Transfers to General Revenue and Construction) ..	..					
Total .. ..	..					
Other—							
Working Expenses ..	(b) 836,051	} 343,376	{ (d) 48,265	(e) 19,314	(f) 13,541	(g) 18,043	} 1,315,038
Depreciation ..	(h) 2,315						
Debt Charges ..	21,138						
Other (including Transfers to General Revenue and Construction) ..	..					
Total	859,504						
Grand Total	16,659,960	4,494,128	6,655,637	292,237	535,287	797,887	29,435,136

(a) Includes Government grant, £191,796, for part of cost of new works borne by Government.
 (b) Abattoirs and ice-works. (c) Abattoirs, hydraulic power undertaking and quarries.
 (d) Municipal markets, ice-works, amusement park accommodation, hostel 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.—Minus sign (–) indicates an excess of credits.

(b) Years 1938-39 and 1945-46 to 1949-50. This table shows the revenue and expenditure, other than loan, of local government business undertakings for the years 1938-39 and 1945-46 to 1949-50.

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.(c)	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
1945-46 ..	9,583,012	2,691,167	4,725,507	182,867	1,259,405	603,329	19,045,287
1946-47 ..	10,328,170	2,797,375	4,310,696	196,279	1,382,813	621,597	19,636,930
1947-48 ..	11,929,432	3,270,875	4,694,268	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	4,520,756	6,608,609	272,369	523,654	795,929	29,059,186
EXPENDITURE (EXCLUDING LOAN EXPENDITURE).							
1938-39 ..	5,556,123	1,802,972	3,256,263	123,356	935,052	513,666	12,187,432
1945-46 ..	9,068,181	2,668,730	4,723,246	162,937	1,177,146	593,503	18,393,743
1946-47 ..	9,846,851	2,734,143	4,327,861	198,325	1,327,648	634,890	19,069,718
1947-48 ..	11,704,990	3,272,629	4,869,383	229,604	1,452,802	698,264	22,227,672
1948-49 ..	14,394,453	3,597,041	5,701,314	258,702	(e) 755,793	736,647	25,443,950
1949-50 ..	16,659,960	4,494,128	6,655,637	292,237	535,287	797,887	29,435,136

(a)-(d) See notes to corresponding table on Ordinary Services. (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.* (a) *Details, 1949-50.* The table below shows particulars for 1949-50 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, 1949-50.

(£.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
ORDINARY SERVICES.							
Roads, Bridges, Streets, Footpaths, Drainage and Sewerage	1,064,747	431,454	1,705,309	329,780	252,638	} 315,439	7,579,808
Council Properties ..	574,805	169,000	} 370,784	215	51,983		
Parks, Gardens and Recrea- tional Reserves	217,021	52,522		..	23,126		
Other	(a)913,423	271,654	661,698	1,052	173,158		
Total	2,769,996	924,630	2,737,791	331,047	500,905			315,439	7,579,808
BUSINESS UNDERTAKINGS.							
Water Supply	545,647	..	617,360	..	..	} 396,297	10,323,643
Sewerage	249,760	..	581,820	..	..
Electricity and Gas ..	5,399,545	642,133	1,226,194	8,044	71,005		
Railways, Tramways and Omnibuses .. .. .	..	..	385,064	..	..
Other	191,155	38,348	1,271	..	..
Total	6,356,107	680,481	2,811,709	8,044	71,005	396,297	10,323,643
Grand Total	9,126,103	1,605,111	5,549,500	339,091	571,910	711,736	17,903,451

(a) Includes advances for homes £197,787.

(b) Years 1938-39 and 1945-46 to 1949-50. The following table shows the loan expenditure on works connected with local government ordinary services and business undertakings during the years 1938-39 and 1945-46 to 1949-50.

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

Year.	N.S.W.(a)	Victoria.(b)	Q'land.(c)	S. Aust.(e)	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
1945-46 ..	144,568	114,821	247,023	44,382	25,346	25,141	601,281
1946-47 ..	646,887	286,135	1,027,810	104,890	124,661	84,548	2,274,931
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	500,905	315,439	7,579,808
BUSINESS UNDERTAKINGS.							
1938-39 ..	1,431,484	452,374	941,911	9,542	76,280	232,687	3,194,278
1945-46 ..	425,386	211,305	507,780	..	2,500	43,978	1,191,509
1946-47 ..	904,005	228,263	974,396	..	47,050	117,815	2,328,529
1947-48 ..	1,342,304	418,186	1,327,630	..	58,782	95,664	3,742,566
1948-49 ..	4,038,922	654,619	2,109,248	10,900	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

(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 1946-47 to 1949-50 are given in the following paragraphs. Because of difficulties created by the war these statistics were not collected for the years 1941-42 to 1945-46. The information given covers all Local Government Authorities and those Semi-Governmental authorities responsible for the provision of the following services, viz. :—

New South Wales. Water Supply and Sewerage, Electricity Supply, Fire Brigades and Banking (including County Councils).

Victoria. Water Supply and Sewerage, Irrigation and Drainage, Harbours, Tramways, Electricity Supply, Fire Brigades, Marketing (Buying and Selling), Grain Elevators, Banking and 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 Improvement and Miscellaneous.

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

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

Tasmania. Harbours.

A detailed list of the authorities included is shown in *Finance Bulletin* No. 42, 1950-51, and the previous issue of the Year Book contained a list as at 30th June, 1947.

2. **Local and Semi-Governmental Authorities' Debt.**—(i) *Year 1949-50.* 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, 1950. For greater detail see *Finance Bulletin* No. 42, 1950-51, published by this Bureau.

**LOCAL AND SEMI-GOVERNMENTAL AUTHORITIES : NEW MONEY LOAN
RAISINGS, REDEMPTION, DEBT AND INTEREST PAYABLE, 1949-50.**

(£'000.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
LOCAL GOVERNMENT AUTHORITIES.							
New Money Loan Raisings—							
From Government ..	192	12	962	312	20	..	1,498
From Public ..	5,724	1,621	5,142	67	589	700	13,843
Total ..	5,916	1,633	6,104	379	609	700	15,341
Funds Provided for Redemption—							
Government Loans ..	47	9	330	113	1	7	507
Loans due to Public ..	1,781	738	1,185	53	188	217	4,162
Total ..	1,828	747	1,515	166	189	224	4,669
Accumulated Sinking Fund Balance ..	5,613	1,582	1,524	1	263	351	9,334
Debt—							
Due to Government ..	742	247	8,319	570	32	122	10,032
Due to Banks (Net Overdraft) ..	70	332	56	37	3	39	537
Due to Public Creditor (a) ..	34,407	12,231	31,044	550	2,184	3,492	83,908
Total (a) ..	35,219	12,810	39,419	1,157	2,219	3,653	94,477
Maturing Overseas (a)(b) ..	1,812	..	2,826	..	..	200	4,838
Annual Interest Payable (a) ..	(c)	477	1,444	27	85	133	(c)

SEMI-GOVERNMENTAL AND OTHER PUBLIC AUTHORITIES.

New Money Loan Raisings—							
From Government ..	2	6,753	1,465	4,764	2,765	..	15,749
From Public(a) ..	9,329	20,002	3,074	10	9	250	32,674
Total ..	9,331	26,755	4,539	4,774	2,774	250	48,423
Funds Provided for Redemption—							
Government Loans ..	253	200	326	218	67	11	1,075
Loans due to Public ..	2,065	2,780	418	1	58	20	5,342
Total ..	2,318	2,980	744	219	125	31	6,417
Accumulated Sinking Fund Balance ..	8,440	4,754	8	249	9	2	13,462
Debt—							
Due to Government ..	20,376	27,759	13,047	17,275	11,340	122	89,919
Due to Banks (Net Overdraft) ..	1,852	1,165	321	65	20	..	3,423
Due to Public Creditor (a) ..	93,722	85,798	10,880	11,348	394	1,057	203,199
Total (a) ..	115,950	114,722	24,248	28,688	11,754	1,179	296,541
Maturing Overseas (a)(b) ..	8,658	3,566	..	767	..	..	12,991
Annual Interest Payable (a) ..	(c)	3,778	860	971	454	43	(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.

(ii) *Years 1938-39 and 1946-47 to 1949-50.* 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 1946-47 to 1949-50.

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

(£'000.)

Particulars.	1938-39.	1946-47.	1947-48.	1948-49.	1949-50.
LOCAL GOVERNMENT AUTHORITIES.					
New Money Loan Raisings—					
From Government	371	285	680	841	1,498
From Public	7,060	6,260	8,502	11,242	13,843
Total	7,431	6,545	9,182	12,083	15,341
Funds provided for Redemption—					
Government Loans	2,141	440	499	675	507
Loans due to Public	2,995	3,162	3,514	3,749	4,162
Total	5,136	3,602	4,013	4,424	4,669
Accumulated Sinking Fund Balance	(a)	10,510	10,376	9,950	9,334
Debt—					
Due to Government	13,207	8,876	9,029	9,951	10,032
Due to Banks (Net Overdraft)	1,544	259	337	435	537
Due to Public Creditor(b)	76,582	61,512	66,734	73,766	83,908
Total(b)	91,333	70,647	76,100	83,252	94,477
Maturing Overseas(b)(c)	17,893	7,807	7,326	6,775	4,838
SEMI-GOVERNMENTAL AUTHORITIES.					
New Money Loan Raisings—					
From Government	1,524	7,013	8,084	10,740	15,749
From Public	7,038	17,968	11,118	18,046	32,674
Total	8,562	24,981	19,202	28,786	48,423
Funds provided for Redemption—					
Government Loans	699	862	1,034	1,239	1,075
Loans due to Public	1,146	2,253	2,437	5,101	5,342
Total	1,845	3,115	3,471	6,340	6,417
Accumulated Sinking Fund Balance	(a)	12,109	12,755	13,139	13,462
Debt—					
Due to Government	(d)44,817	57,880	64,747	76,055	89,919
Due to Banks (Net Overdraft)	2,006	923	1,495	2,793	3,423
Due to Public Creditor(b)	118,506	150,844	159,895	173,768	203,199
Total(b)	165,329	209,647	226,137	252,616	296,541
Maturing Overseas(b)(c)	12,088	16,740	16,665	14,655	12,991

(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 Federal and Commonwealth Aid Roads and Works Acts, for road construction, maintenance, repair and other works connected with transport during the years 1938–39 and 1945–46 to 1949–50. Allocations for the construction and maintenance of strategic roads and for the promotion of road safety practices made in the years 1947–48 to 1949–50 are excluded. The aggregate amounts payable under the relevant acts from 1922–23 to 1949–50 for the purposes outlined above are also shown. Further particulars of these grants appear in Chapter XVII.—Public Finance.

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 (a)	1,199	747	815	474	819	213	4,267
1946 (a)	935	582	636	309	639	167	3,328
1947 (a)	1,350	841	918	533	923	240	4,805
1948 (b)	2,017	998	1,102	631	1,102	287	6,137
1949 (b)	2,003	1,236	1,363	781	1,363	355	7,101
1950 (b)	2,472	1,526	1,683	965	1,683	438	8,767
Aggregate, years 1922–23 to 1949–50	22,341	14,089	15,203	8,924	15,339	3,995	79,891

(a) Under Federal Aid Roads and Works Acts. (b) Under Commonwealth Aid Roads and Works Acts, except for £398,830 to New South Wales in 1947–48 under Federal Aid Roads and Works Acts, representing amounts not drawn by that State during 1943–44.

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, 1950 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 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 New South Wales Transport and Highways Commission was constituted in 1950 for the purpose of securing an efficient and integrated system of public transport by rail, road, air, sea and inland waterways within the State. Among others, the Commissioner for Main Roads, who is one of the eight members of the Commission, is subject to control and direction by the Commission in the exercise of any of his powers, authorities, duties and functions.

The general system of road communication throughout the State is made up of main roads classified as follows :—

State Highways—the principal avenues of communication between the coast and the interior or throughout the State, connecting with such avenues in other States.

Trunk Roads—forming with the State highways the framework of the general system of intercommunication throughout the State.

Ordinary Main Roads—used principally by through traffic as a means of intercommunication between towns or important centres of population. 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.

In addition, there are :—

Secondary Roads—in the metropolitan area of Sydney, carrying a substantial amount of through traffic and relieving neighbouring main roads of traffic which they would otherwise have to bear.

Developmental Roads—serving to develop a district or area of land by improving or providing access to a railway station or a shipping wharf, or to a road leading to a railway station or a shipping wharf.

(ii) *Length of Roads.* (a) *Proclaimed Roads.* The following table shows lengths of proclaimed roads at 30th June, 1950, according to class of road :—

PROCLAIMED ROADS, NEW SOUTH WALES : LENGTHS, 30th JUNE, 1950.
(Miles.)

Division.	Main Roads.				Secondary Roads.	Developmental Roads.	Total.
	State Highways.	Trunk Roads.	Ordinary Main Roads.	Total.			
Eastern and Central	5,204	2,672	9,701	17,577	(a) 68	2,783	20,428
Western	1,309	1,359	2,927	5,595	..	..	(b) 5,595
Total	6,513	4,031	12,628	23,172	68	2,783	26,023

(a) Metropolitan area.
Department.

(b) Excludes 2,617 miles of unclassified roads, the responsibility of the

During 1949-50 the following roads were proclaimed or declared :—294 miles of new main roads and extensions of existing main roads, and 85 miles of new developmental roads.

The length of main and secondary roads maintained by the Department of Main Roads at 30th June, 1950 (excluding the Western Division) was 2,538 miles (14 per cent.), while the length maintained by Councils was 15,107 miles (86 per cent.). The proportions of the several classes of main roads maintained by Department and Councils respectively were :—State highways, 37 per cent., 63 per cent. ; trunk roads, 2 per cent., 98 per cent. ; ordinary main roads, 6 per cent., 94 per cent. ; secondary roads, 13 per cent., 87 per cent. In the County of Cumberland the Department maintained 58 per cent. of the roads (523 miles).

(b) *Composition of Roads.* In 1948 the total length of all roads in New South Wales was estimated at 126,272 miles, including 7,730 miles in the Western Division. The lengths of roads, according to their composition or nature, were as follows :—cement concrete, 386 miles ; asphaltic concrete, 195 miles ; tar or bituminous macadam, 4,178 miles ; surface water-bound macadam, 3,849 miles ; water-bound macadam, 2,367 miles ; gravel or crushed rock, 31,693 miles ; formed only, 27,454 miles ; cleared or natural surface only, 56,150 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 County of Cumberland. This plan has been included in the Cumberland County Council planning scheme for the development and improvement of the County of Cumberland. 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.

An investigation into the extent and classification of country main roads in the light of present and future traffic needs was completed during 1949-50.

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

During 1949-50, 25 new bridges were completed on main roads by the Department and councils. Important work which has been continued included work on a steel and concrete bridge over Iron Cove between Balmain and Drummoyne, Sydney (length 1,536 feet) and on a reinforced concrete bridge over a diversion of Cook's River (length 566 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 Federal and 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 par. 1 of this section, page 658, 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 1946-47 to 1949-50 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)	1946-47.	1947-48.	1948-49.	1949-50.
RECEIPTS.					
Motor Vehicle Taxation, and Registration and Licence Fees	2,018,556	2,081,870	2,266,351	2,516,423	2,744,617
Federal and Commonwealth Aid Roads and Works Acts ..	1,176,039	1,310,459	1,851,324	1,436,815	1,777,469
Councils' Contributions ..	250,679	244,043	249,674	237,598	285,478
Consolidated Revenue (State) ..	..	..	..	10,000	..
Loans from State Government ..	302,643	400,000	300,000	..	..
Grants and Contributions from State Government and Departments, etc. ..	13,549	10,117	53,095	63,295	9,909
Commonwealth Funds for Defence and Other Works ..	..	26,127	38,633	55,365	142,031
Hire of Plant and Motor Vehicles	..	191,400	269,018	314,006	340,016
Suspense Accounts ..	..	2,694	3,574	62,826	1,080
Other ..	54,782	132,528	107,576	111,719	149,415
Total ..	3,816,248	4,399,238	5,139,239	4,808,047	6,450,015
PAYMENTS.					
Roads and Bridges in New South Wales—					
Construction ..	1,736,898	1,082,087	1,402,546	1,851,985	2,303,637
Maintenance ..	1,519,929	2,222,637	2,483,366	2,371,632	2,856,508
Roads and Bridges outside New South Wales ..	..	— 1,551	2,232	— 57	..
Other Works ..	..	82,822	14,708	13,087	9,134
Debt Charges—					
Interest, Exchange, etc. ..	152,469	161,794	138,124	126,964	121,895
Sinking Fund and Repayments	200,591	99,907	(d) 776,444	95,697	40,861
Repairs and Expenses, Plant and Motor Vehicles ..	..	138,538	122,077	183,004	220,007
Purchase of Assets ..	..	268,581	148,059	98,538	292,084
Suspense Accounts ..	..	..	108,359	2	19,538
Administration, etc. ..	100,583	170,990	185,179	220,939	246,226
Other ..	914	37,177	38,670	37,613	97,600
Total ..	3,711,384	4,263,042	5,419,704	4,999,404	6,207,490

(a) Income and expenditure. (b) Includes £398,830 not drawn by State during 1943-44. (c) Excludes £500,000 transferred from the County of Cumberland Main Roads Fund to the Country Main Roads Fund. (d) Includes £696,096 to liquidate certain outstanding liabilities before due dates.

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, 1950

receipts amounted to £97,127,266 and payments to £95,619,042. Particulars of the individual funds are—County of Cumberland, receipts £26,985,763, payments £25,635,993; County, £66,474,431, £66,441,844: Developmental, £3,667,072, £3,541,205.

The total expenditure on roads, streets and bridges in the State by all authorities during the years 1938–39 and 1946–47 to 1949–50 was, respectively, £8,894,099, £7,201,401, £8,934,403, £10,479,716 and £12,569,525. 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. During 1949–50 the number of toll lanes was increased from six to twelve by the construction of a new toll barrier, thus relieving traffic congestion. The capital cost of the bridge to the 30th June, 1950, was £9,743,252, but this amount will be reduced by approximately £273,000 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 to 30th June, 1950 showed a deficiency of £151,448. The following table shows income and expenditure for the years 1938–39 and 1946–47 to 1949–50:—

SYDNEY HARBOUR BRIDGE, NEW SOUTH WALES: INCOME AND EXPENDITURE.

(£.)

Item.	1938–39.	1946–47.	1947–48.	1948–49.	1949–50.
INCOME.					
Road Tolls	278,297	321,496	352,488	380,795	438,898
Railway Passenger Tolls	103,697	130,561	130,460	132,662	130,729
Tram and Omnibus Passenger Tolls	38,738	26,607	26,380	26,996	27,394
Other	8,366	9,224	9,801	11,349	12,915
Total	429,098	487,888	519,129	551,802	609,936
EXPENDITURE.					
Maintenance and Improvement ..	36,739	52,936	56,139	66,475	73,934
Interest, Exchange, etc.	334,797	303,381	288,357	274,057	270,061
Sinking Fund	40,564	65,531	66,272	67,887	68,949
Other	12,194	15,939	23,064	26,615	55,365
Total	424,294	437,787	433,832	435,034	468,309

During 1949–50, 23,136,000 rail travellers, 25,001,000 tram and omnibus travellers, and 20,600,000 road travellers in 11,841,000 road vehicles crossed the bridge, contributing respectively, 22 per cent., 5 per cent., and 73 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, 1950, was 14,303 miles, classified as follows:—State highways, 3,849 miles; main roads, 9,710 miles; tourists' roads, 402 miles; forest roads, 342 miles. The total length of the surface treated (black) system included in the foregoing totals was 6,468 miles or 45.2 per cent.

(b) *Composition of Roads.* It is estimated that, in addition to the 14,303 miles of classified roads as above, there were about 50,000 miles of more important unclassified roads. 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 1948-49 and 1949-50, respectively, 784 miles and 885 miles of declared roads under the Board's control were treated with bitumen. In addition, 43 miles (1948-49) and 53 miles (1949-50) 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 82 miles and 80 miles respectively. The total mileages of bitumen treatment carried out were 909 miles in 1948-49 and 1,018 in 1949-50. Of the work on the roads under the Board's control, 306 miles in 1948-49 related to State highways and 365 miles in 1949-50

During 1949-50, 135 bridge projects of a total value of £221,037 were initiated. Of these new projects, 42 of a total value of £114,813 were supervised by the Board and 93 of a total value of £106,224, were supervised by municipalities. Bridge construction work carried out during the year was below that necessary to strengthen or renew the bridges throughout the State within a reasonable period.

Despite delays occasioned by labour difficulties continuous progress was maintained during the year on the Swan street Bridge, Melbourne, for which the Country Roads Board is the constructing authority.

(b) *Receipts and Payments.* Funds created under the Act were the Country Roads Board Fund, the Loan Account and the Developmental Roads Loan Account. Particulars of the operations of these funds, together with those of the Federal and Commonwealth Aid Roads and Works Account, are given hereunder:—

Country Roads Board Fund. All fees (other than fees for licences to drive motor cars prior to 1949-50) and fines under the Motor Car Act, and all registration fees and fines for traction engines, less cost of collection of such fees and fines are credited to this fund. Particulars of receipts and payments connected with the Federal and Commonwealth Aid Roads and Works Acts, Commonwealth Defence Works and several other funds are not included therein (see next page for particulars). Receipts and payments for the years 1938-39 and 1946-47 to 1949-50 were as follows:—

COUNTRY ROADS BOARD FUND, VICTORIA : RECEIPTS AND PAYMENTS.

(£.)

Item.	1938-39.	1946-47.	1947-48.	1948-49.	1949-50.
RECEIPTS.					
Motor Vehicle Registration Fees ..	1,690,962	1,762,796	1,963,555	2,133,717	2,555,812
Drivers' Licence Fees ..	..	..	..	..	131,678
Municipalities' Payments ..	318,878	276,477	302,905	336,470	313,743
Stores and Materials ..	233,104	411,750	598,080	376,696	571,015
Hire of Plant ..	..	53,724	181,936	230,982	230,976
Other ..	117,341	206,004	241,210	277,475	296,440
Total ..	2,414,009	2,838,963	3,336,732	3,355,334	4,244,407

COUNTRY ROADS BOARD FUND, VICTORIA: RECEIPTS AND PAYMENTS—continued.

(£.)

Item.	1938-39.	1946-47.	1947-48.	1948-49.	1949-50.
PAYMENTS.					
Maintenance of Roads and Murray River Bridges and Punts ..	1,205,069	1,416,659	1,770,918	927,718	1,851,969
Relief to Municipalities ..	240,170	220,704	220,682	210,579	201,328
Interest, Sinking Fund, etc.—Recoup to Consolidated Revenue—					
Interest, etc.	282,484	294,471	296,076	296,964	} 340,224
Sinking Fund	25,704	25,091	25,262	24,489	
Municipalities' Repayments, etc.	119,167	105,546	104,295	103,290	102,587
Plant, Stores and Materials ..	310,332	817,797	1,043,506	797,367	868,561
Other (including Administration)	230,125	369,930	520,811	598,539	985,930
Total	2,413,141	3,250,198	3,981,550	2,958,946	4,350,599

Country Roads Board Loan Account. Loans have been authorized from time to time under the Country Roads Acts for permanent works on main roads and State highways. During the years ended 30th June, 1949 and 1950, respectively, receipts amounted to £437,529 and £391,867, and payments to £407,304 and £343,953. The total expenditure to 30th June, 1950 was £5,823,539.

Developmental Roads Loan Account. This fund was created for the purpose of constructing and maintaining subsidiary or developmental roads. Loan moneys raised were exhausted at 30th June, 1937, the total expenditure at that date being £6,425,758.

Federal and Commonwealth Aid Roads and Works Account. Revenue and expenditure in respect of the Federal and Commonwealth Aid Roads and Works Account, particulars of which are not included above, were as follows :—

(£.)

Item.	1938-39.	1946-47.	1947-48.	1948-49.	1949-50.
Revenue	716,019	813,024	993,144	1,201,971	1,540,233
Expenditure(a)	767,767	554,682	1,338,301	1,300,818	994,400

(a) Excludes amounts spent on maintenance and repairs of public roads adjoining, or of approach to, Commonwealth properties in Victoria (*see* table following).

Total Expenditure. The total expenditure by the Board on road construction and maintenance during each of the five years 1938-39 and 1946-47 to 1949-50 was as follows :—

COUNTRY ROADS BOARD, VICTORIA: EXPENDITURE ON ROADS.

(£.)

Item.	1938-39.	1946-47.	1947-48.	1948-49.	1949-50.
State Highways—Maintenance, etc. (a)	453,708	597,180	1,181,382	894,600	1,340,588
Main Roads—Construction(a) ..	224,290	95,168	75,743	12,304	5,801
Maintenance(a)	802,920	905,344	1,283,619	1,087,120	1,217,829
Developmental Roads—Construction, etc. (a)	468,122	252,946	436,467	458,473	378,179
Tourists' Roads—Construction, etc. (a)	77,694	96,302	98,662	117,477	149,841
Forest Roads—Maintenance, etc. ..	..	19,770	29,342	22,150	44,174
Murray River Bridges and Punts—Maintenance	4,067	4,630	4,004	5,946	6,022
Roads adjoining Commonwealth Areas—Maintenance, etc. ..	13,321	4,888	3,407	3,247	735
Unemployment Relief Works ..	54,662	9,979	..	..	..
Swan-street Bridge .. ..	..	..	15,178	37,769	41,867
Total	2,098,784	1,986,207	3,127,804	2,639,086	3,185,036

(a) Includes amounts contributed by the Commonwealth Government under the provisions of the Federal and Commonwealth Aid Roads and Works Acts.

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 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, 1950 was 20,607 miles, comprising State highways, 7,610 miles; main roads, 10,876 miles; developmental roads, 245 miles; secondary roads, 627 miles; mining access roads, 686 miles; farmers' roads, 276 miles; tourist roads, 285 miles; tourist tracks, 2 miles. During 1949-50, 592 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 1920-1943 to 30th June, 1950 was 9,414 miles (46 per cent.). At that date, also, 1,462 miles of new road construction and 947 miles of stage construction work were proceeding.

(b) *Composition of Roads*. The total length of roads and streets in Queensland at 30th June, 1950 was:—Concrete, 90 miles; bitumen, 4,113 miles; macadam, 9,288 miles; other formed, 44,977 miles; unconstructed, 76,107 miles; total, 134,575 miles.

(iii) *Main Roads Commission*. (a) *General*. During 1949-50 (1948-49 in parentheses) the Commission completed 346 miles (225 miles) of roads including new construction and stage construction. Bridges of all types to a length of 3,943 (3,008) linear feet were constructed during 1949-50 (1948-49), bringing the total constructed by the Commission at 30th June, 1950 to 151,373 feet, approximately 29 miles. In addition, at 30th June, 1950, 5,451 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 is a joint operation being carried out by the Main Roads Commission and the Rockhampton City Council. The design provides for a bridge 1,210 feet long, at a total estimated cost, including approaches, of approximately £426,000, one half being financed under the terms of the Main Roads Act. The total expenditure to 30th June, 1950 was approximately £345,000. The bulk of the work completed to 30th June, 1950 has been on pier foundations and approaches. The second project is a combined road and rail bridge over the Burdekin River, with an overall length, including approaches, of 3,620 feet, estimated to cost about £1,900,000. This work, the largest single post-war project actually under construction in Queensland, had been advanced to a stage at 30th June, 1950, where six of the nine caissons designed for the river bed had been sunk to foundation level.

During 1949-50, construction was seriously impeded by heavy rains and floods; this affected costs, which at the end of the financial year totalled approximately £729,000.

(b) *Receipts and Payments*. The funds of the Main Roads Commission are obtained chiefly from motor vehicle registration and collections, fees, etc., under the Transport Acts, contributions under the Federal and 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 1946-47 to 1949-50 are shown below:—

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

Item.	1938-39.	1946-47.	1947-48.	1948-49.	1949-50.
RECEIPTS.					
Motor Vehicle Registration, Transport Acts Collections, Fees, etc.	938,227	915,192	967,817	1,056,813	1,165,888
Loans from State Government ..	392,225	321,250	300,000	600,000	700,000
Grants, Advances, Refunds, etc. from State Government ..	579,775	230,231	590,708	687,630	594,471
Federal and Commonwealth Aid Roads and Works Acts ..	806,218	893,622	1,088,756	1,316,311	1,693,567
Commonwealth and Allied Works and Services ..	..	-29,051	..	..	..
Maintenance Repayments—Local Authorities ..	98,154	167,229	189,010	184,853	258,673
Hire, Rent, Sales of Plant, etc. ..	} 288,330	{ 65,823	{ 58,169	{ 65,321	{ 81,169
Other ..		{ 82,452	{ 114,317	{ 112,208	{ 125,469
Total	3,102,929	2,646,748	3,308,777	4,023,136	4,619,237
PAYMENTS.					
Permanent Road Works and Surveys	2,045,900	1,635,542	1,972,304	1,719,632	2,146,692
Maintenance of Roads	331,734	936,158	1,066,543	986,667	1,063,255
Port Development Works .. ..	..	15,096	4,885	..	..
Plant, Machinery, Buildings, etc. (including Plant Maintenance)	73,632	381,061	509,203	350,679	402,744
Loans—Interest	38,861	171,407	178,518	182,377	189,836
Redemption	78,153	148,413	165,553	169,447	183,406
Payments to State Consolidated Revenue	340,244	39,810	..	..	..
Payments to Local Authorities ..	7,418	41,541	..	1,807	1,769
Commonwealth and Allied Works and Services .. ..	..	17,039	-16,943	32,930	12,313
Other Works and Services .. ..	..	14,404	654	19,516	4,000
Administration, etc.	149,950	303,990	342,768	417,733	458,730
Other	1,750	14,528	19,560	16,178	25,173
Total	3,087,642	3,718,989	4,243,045	3,896,966	4,487,918

STATE LIBRARY OF VICTORIA

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 Federal and 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, 1948 (the latest date for which this information is available), was as follows:—Within District Council and Corporation Boundaries.—Blocks (wood or stone), 8 miles; bituminous concrete (asphalt and premix), 393 miles; cement concrete and cement penetration, 2 miles; penetration or surface dressed (bitumen or tar), 4,283 miles; metalled (gravelled or rubbled), 13,429 miles; formed, but little or no metal, 8,742 miles; surveyed, used by traffic, but little or no improvement, 25,220 miles; total, 52,077 miles; Outside Districts (main roads only), 565 miles; Grand total, 52,642 miles. Lengths of main roads within district council and corporation boundaries aggregated 7,556 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 1949-50, when approximately 14,000 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 41,000 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 1946-47 to 1949-50, of funds controlled by the Highways and Local Government Department. Wholly comparable figures for 1938-39 are not available.

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

(£)

Item.	1938-39. (a)	1946-47.	1947-48.	1948-49.	1949-50.
RECEIPTS.					
Motor Vehicle Registration, Licences, Fees, Fines, etc. ..	690,849	681,573	718,951	1,010,539	1,144,454
Commonwealth and Federal Aid Roads and Works Acts ..	479,922	526,686	637,520	769,807	1,009,574
Loans from State Government ..	200,000	..	100,000	..	..
Recoups—Local and Semi- governmental Authorities ..	}	2,827	19,779	11,642	4,646
Other	1,531	9,373	32,434	68,261	115,386
Total	1,372,302	1,220,459	1,508,684	1,860,249	2,274,060

(a) Figures for 1938-39 are not completely comparable with those for following years.

HIGHWAYS AND LOCAL GOVERNMENT DEPARTMENT, SOUTH AUSTRALIA :
RECEIPTS AND PAYMENTS—*continued.*

(£.)

Item.	1938-39. (a)	1946-47.	1947-48.	1948-49.	1949-50.
PAYMENTS.					
Construction and Reconstruction of Roads and Bridges ..	1,150,082	387,264	524,507	606,615	1,018,157
Maintenance .. .. .						145,066	168,003	221,730	298,550
Purchase of Road Construction Plant, etc.	(b)	(b)	145,179	120,155	71,435.
Recoups to Consolidated Revenue Fund—Interest, Sinking Fund and Exchange	(c) 178,273	171,142	167,376	158,803	141,783
Grants and Advances to Local and Semi-governmental Authorities Administration	(b)	318,222	621,553	670,686	750,043
Stores, Machinery, Suspense Accounts, etc. .. .. .						57,362	69,848	90,810	100,938
Other	45,753	227,167	3,951	2,261	126,713
Total	1,374,108	1,308,014	1,700,417	1,871,060	2,520,579

(a) Figures for 1938-39 are not completely comparable with those for following years. (b) Not separately available; included elsewhere. (c) Interest and sinking fund payments.

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 1946-47 to 1949-50 was, respectively, £1,966,000, £1,930,000, £2,341,000, £2,605,000 and £3,058,000.

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 Federal and Commonwealth Aid Roads and Works Acts.

(ii) *Length of Roads and Streets.* The total known length of streets and roads in existence in the various municipalities at 31st October, 1950, and in road districts at 30th June, 1950, was as follows:—Concrete, 4 miles; bituminous, 3,642 miles; granite, limestone, etc., waterbound, 280 miles; gravel waterbound, 9,358 miles; other constructed surfaces, 2,711 miles; formed only, 28,334 miles; unprepared, 31,916 miles (incomplete); total, 76,245 miles.

The lengths of declared roads at 30th June, 1950, were:—Main roads, 3,154 miles; developmental roads, 12,819 miles; other classified roads, 24 miles; total, 15,997 miles. No new main roads were declared during the years 1948-49 and 1949-50.

(iii) *Main Roads Department.* During the year 1949-50 (1948-49 in parentheses) the activities of the Department included :—clearing, 778 miles (962 miles) ; forming, 1,016 miles (1,269 miles) ; gravelling, 613 miles (693 miles) ; metalling, 1 mile (6 miles) ; reconditioning, 1,707 miles (2,514 miles) ; sanding, 56 miles (80 miles) ; side drains, 55 miles (92 miles). In addition, lengths of tar and bitumen work performed aggregated 296 miles (287 miles.) Bridges constructed numbered 20 (14). Work progressed on the causeway over the Swan River which involves the construction of two bridges. During 1949-50, construction was confined mainly to the Victoria Park end bridge where the pier system was almost completed. Work on the superstructure was commenced. During the year the construction of the Marble Bar-Port Hedland Road was commenced and a proposed route between Wyndham and Nicholson surveyed.

(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, the Transport Co-ordination Trust Account (up to the end of 1946-47) and the Federal and Commonwealth Aid Roads and Works Trust Accounts during the years ended 30th June, 1939 and 1947 to 1950.

ROAD FUNDS, WESTERN AUSTRALIA : RECEIPTS AND PAYMENTS.

(£.)

Item.	1938-39. (a)	1946-47.	1947-48. (b)	1948-49. (b)	1949-50. (b)
RECEIPTS.					
Motor Vehicle Registration, Licences, Fees, Fines, etc. . .	218,962	221,010	354,946	303,838	346,246
Federal and Commonwealth Aid Roads and Works Acts . . .	823,162	893,401	1,098,758	1,404,448	1,740,482
Recoups from Local Authorities, etc.					
Other	1,958	16,667	15,529	18,810	110,370
		7,575	51,315	6	29
Total	1,044,082	1,138,653	1,520,548	1,727,102	2,197,127
PAYMENTS.					
Construction and Reconstruction of Roads and Bridges	922,756	541,377	920,255	1,256,351	1,507,873
Maintenance			97,436	109,936	137,061	133,474
Other Road Works, etc.		10,252	39,821		
Other Works			54,840		
Grants to Local Authorities, etc. . .	143,544	141,580	142,000	220,246	230,492
Transfer to State Consolidated Revenue		37,739	67,003	59,234	67,711
Interest, Sinking Fund and Exchange—State Consolidated Revenue		7,616	7,399	7,391	5,555
Administration, Plant, etc.		52,176	71,077	36,469	31,178
Other		19,181	4,601		
Total	1,145,273	911,461	1,377,715	1,709,625	1,986,772

(a) Figures not completely comparable with those for following years.

(b) Excludes 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 Federal and 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. Municipal councils bear the cost of maintaining country roads and a proportion of the cost of main and secondary roads, except in special cases. 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 1949–50 on roads, tracks and bridges amounted to £907,021, of which £763,507 was charged to road funds, £67,000 to revenue, £76,328 to loan and £186 to Crown lands funds.

(ii) *Length of Roads.* (a) *Classified Roads.* The mileages of classified roads in Tasmania at 30th June, 1950 were as follows :—State highways, 1,165 miles; main roads, 660 miles; secondary roads, 189 miles; tourist roads, 46 miles; developmental roads, 49 miles; subsidized roads, 78 miles; total 2,187 miles. Country roads totalled more than 10,000 miles. The mileages of sealed roads, and their proportions to the respective totals, were :—State highways, 545 miles (47 per cent.); main roads, 148 miles (22 per cent.); secondary roads, 9 miles (5 per cent.); total, 702 miles (32 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, 1951 was as follows :—Sheet asphalt on concrete base, 1 mile; other bituminous, 914 miles; concrete, 8 miles; granite, limestone, etc., waterbound, 8,559 miles; surfaces of lower grade, 2,787 miles; total, 12,269 miles.

(iii) *Transport Commission.* The principal construction work carried out during 1949–50 was the completion of the North-South Bruny Road which effectively linked for the first time the northern and southern halves of Bruny Island. Expenditure from loans from the State Treasury amounting to £23,163 was incurred for this project. An amount of £112,966 was spent on the resealing of classified roads, as compared with £100,476 in 1948–49 and £181,806 in 1947–48.

(iv) *Receipts and Payments—Combined Road Funds.* The table hereunder shows particulars of the receipts and payments of combined Road Funds and Federal and Commonwealth Aid Roads and Works Funds under the control of the Transport Commission for the years 1939-40 and 1946-47 to 1949-50 :—

ROAD FUNDS, TASMANIA : RECEIPTS AND PAYMENTS.
(£.)

Item.	1939-40. (a)	1946-47.	1947-48.	1948-49.	1949-50.
RECEIPTS.					
Motor Vehicle Taxation and Registration, Licences, Fees, Fines, etc.	193,165	241,438	264,780	297,503	327,475
Federal and Commonwealth Aid Roads and Works Acts	220,241	232,944	286,158	348,733	450,930
Recoups from Local Authorities, etc. . . . .	..	7,365	8,660	9,636	8,966
State Loan Fund . . . . .	..	..	28,795	66,399	60,689
Other	719	30,448	37,470	110,716	(b) 417,380
Total	414,125	512,195	625,863	832,987	1,265,440
PAYMENTS.					
Construction and Reconstruction of Roads and Bridges	127,929	284,283	379,050	268,998	219,118
Maintenance	113,199	257,145	254,056	270,102	549,241
Jetties, etc.	22,467	4,658	4,682	10,415	..
Other Road Works	2,995	13,589	23,724	53,265	10,920
Other works connected with Transport	5,748		13,163	18,060	20,988
Grants to Local Authorities, etc. . . . .	..	6,451	258	325	2,037
Administration	15,053	47,836	52,199	55,659	67,726
Other	31,894	58,720	54,572	195,394	(c) 383,961
Total	319,285	672,682	781,704	872,218	1,253,991

(a) First year of operation of Transport Commission. Figures not completely comparable with those for following years. (b) Includes £237,899 hire of plant. (c) Includes £192,619 hire and maintenance of road construction plant, etc.

(v) *Hobart Bridge.* Under the Hobart Bridge (Acquisition and Administration) Act 1944 the Transport Commission is responsible for the administration, control and management of the Hobart Bridge and transport services. Tolls on the Hobart Bridge were abolished as from 31st December, 1948.

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, 1950. 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, the following points are, in general, amongst the more important of those to be considered :—(a) the funds available or likely

to be available for main roads ; (b) whether the road is, or will be, the main trunk route connecting any large producing district with its market or point of shipment ; (c) whether the road is, or will be, the main trunk route of intercommunication between two or more such districts or between two or more large centres of population ; (d) whether the road is, or will be, the main trunk route between the capital of the State and any large producing district or any large centre of population ; (e) whether the road is, or will be, the main trunk route between the capitals of two or more States ; (f) whether the district concerned 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, 1950.

(Miles.)

Class of Road.	N.S.W.	Vic.	Q'land.	S. Aust. (a)	W. Aust.	Tas.	Total.
State highways	6,513	3,849	7,610.	} 8,122	3,154	} 1,165 660	} 68,318
Trunk roads	4,031	} 9,710	10,876				
Ordinary main roads	12,628						
Total Main Roads	23,172	13,559	18,486	8,122	3,154	1,825	68,318
Secondary roads	68	..	627	..	..	189	884
Developmental roads	2,783	..	245	..	12,319	49	15,896
Tourist roads .. .. .	..	402	285	..	..	46	733
Other roads .. .. .	..	(b) 342	(c) 964	..	24	(d) 78	1,408
Total Other Roads	2,851	744	2,121	..	12,843	362	18,921
Grand Total	26,023	14,303	20,607	8,122	15,997	2,187	87,239

(a) At 30th June, 1948. (b) Forest roads. (c) Includes mining access roads, 686 miles ; farmers' roads, 276 miles ; tourist tracks, 2 miles. (d) 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 ; gravel water-bound ; gravel or crushed rock ; metallised (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.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Terr.	A.C.T.	Total.
	1948.	30th Sept., 1948.	30th June, 1950.	30th June, 1948.	1950. (a)	30th June, 1951.	1949.	30th June, 1951.	
1. Wood or stone	..	62	..	8	..	..	..	..	70
2. Concrete ..	581	352	90	395	4	9	..	3	1,434
3. Bituminous ..	8,027	10,241	4,113	4,283	3,642	914	1,287	143	32,650
4. Macadam and other ..	34,060	28,418	9,288	13,429	12,349	8,559	213	121	106,437
5. Formed only	27,454	23,901	44,977	9,307	28,334	(b) 994	5,982	203	141,152
6. Cleared, or natural surface, only ..	56,150	38,437	76,107	25,220	31,916	(b) 1,793	2,316	..	231,939
Total ..	126,272	101,411	134,575	52,642	76,245	12,269	9,798	470	513,682

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

(b) Estimated dissection.

It will be seen from the foregoing table that a little more than one-quarter of the road lengths of Australia has 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, 0.28 ; Group 3, 6.36 ; Group 4, 20.72 ; Group 5, 27.48 ; Group 6, 45.15. The percentage of constructed lengths to total length in each State is as follows :—New South Wales, 33 ; Victoria, 39 ; Queensland, 10 ; South Australia, 34 ; Western Australia, 21 ; Tasmania, 77 ; Northern Territory, 15 ; Australian Capital Territory, 57. 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 at present can be undertaken.

The two paragraphs following therefore represent only: (i) aggregate expenditure from the various State road funds referred to in the foregoing pages, and (ii) loan fund expenditure by State Governments. No direct expenditure by local government bodies is included. Sub-section 2. Finances, of § 2. Local Government Authorities, contains some particulars of local government revenue and expenditure in connexion with roads, streets and bridges (*see* pages 651 and 654).

(ii) *Aggregate Expenditure from State Road Funds.* The following table shows the expenditure on the construction and maintenance of roads, including payments to local government bodies, by each State during the years 1938-39 and 1945-46 to 1949-50, 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	2,099	2,405	692	1,067	(b) 272	9,792
1946 ..	4,373	1,971	1,341	605	433	331	6,154
1947 ..	3,305	1,976	2,613	851	791	566	10,102
1948 ..	3,886	3,113	3,039	1,314	1,212	675	13,239
1949 ..	4,224	2,601	2,706	1,499	1,614	621	13,265
1950 ..	5,160	3,143	3,210	2,067	1,872	802	16,254

(a) Excludes Sydney Harbour Bridge.

(b) Year 1939-40.

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 (i) State Government expenditure from revenue and loan, and (ii) local government expenditure from revenue and loan, while, on the other hand, allowances must be made for inter-fund payments. (*See* par. (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 on their financial operations in the foregoing sections, while, on the other hand, it must be supplemented by expenditure from State revenue. Gross loan expenditure by all State Governments during each of the years 1948-49 and 1949-50 amounted to more than £1,000,000, and net expenditure to considerably less. Aggregate net loan expenditure on roads and bridges in each State to 30th June, 1950 amounted to the following approximate sums:—New South Wales, £21,000,000; Victoria, £13,000,000; Queensland, £8,000,000; South Australia, £4,000,000; Western Australia, £3,000,000; Tasmania, £6,000,000; total, £55,000,000.

§ 5. Water Supply, Sewerage and Drainage.

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

I. New South Wales.—(i) *General.* The largest two 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, 1950.* (a) *Metropolitan.* The storage reservoirs of the metropolitan system, with a combined available capacity of 125,144 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 343 feet), giving a safe draught of 263 million gallons per day. The existing temporary storage is supplied by a weir 50 feet high with a maximum storage of 579 million gallons. At 30th June, 1950 there were 95 service reservoirs in use with a combined capacity of 541.3 million gallons. Rating for water for 1949–50 was 9½d. in the £1 of assessed annual value and the charge for water measured by meters 1s. 6d. 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 1949–50 was 1s. 3d. in the £1 on assessed annual value. The price of water to domestic and industrial consumers is 1s. 6d. 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 1945–46 to 1949–50:—

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
1945–46	378,277	1,628,000	121.7	44,437	322	74.8	4,657	153,211
1946–47	387,980	1,718,000	131.2	47,874	338	77.1	4,743	160,169
1947–48	400,615	1,774,000	122.1	44,682	305	69.6	4,817	170,124
1948–49	414,893	1,800,000	131.3	47,925	316	73.5	4,894	182,566
1949–50	428,392	1,870,000	130.8	47,735	305	72.1	4,993	196,121

(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	8,270	193,480	11.9	4,331	245	61.3	936
1945-46	3,775	223,650	17.6	6,413	319	80.1	1,098
1946-47	56,804	231,600	18.9	6,900	333	83.9	1,134
1947-48	58,660	241,036	18.5	6,774	316	79.9	1,169
1948-49	61,215	247,992	19.0	6,951	310	79.0	1,202
1949-50	63,289		19.7	7,176	311	79.3	1,215

(iii) *Sewerage and Drainage*—to 30th June, 1950. (a) *Metropolitan*. The Sydney sewerage system consists mainly of outfall systems discharging into the Pacific Ocean. At 30th June, 1950 there were six outfalls and six treatment works, serving a population of 1,306,000 over a length of sewers of 2,899 miles.

Stormwater drainage channels under the Metropolitan Water, Sewerage and Drainage Board's control at the same date were 154 miles long. Sewerage rating for 1949-50 was 9½d. in the £1 of assessed annual value and drainage from ½d. to 3d.

(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 1949-50 were 1s. 3d. 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 1946 to 1950.

SEWERAGE AND DRAINAGE, SYDNEY(a) : SERVICES.

At 30th June—				Improved Properties for which Sewer Available.	Estimated Population Served.	Total Sewage Pumped for the Year.	Length of Sewers.	Length of Storm- water Channels.
	No.				Mill. gals.	Miles.	Miles.	
1939	254,632	1,066,000	8,299	2,561	87			
1946	283,364	1,161,000	9,439	2,780	99			
1947	287,098	1,198,000	9,604	2,805	117			
1948	291,069	1,263,000	9,894	2,829	129			
1949	294,822	1,282,000	10,621	2,855	153			
1950	298,996	1,306,000	12,200	2,899	154			

(a) Includes part of South Coast.

At 30th June, 1950 (at 30th June, 1949 in parentheses) 44,168 (42,838) 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 608 (601) miles, and the length of drains over 24 inches diameter was 38 (38) miles.

(iv) *Finances, Sydney and Newcastle Systems.* (a) *Details, 1948-49 and 1949-50.* The following statement shows the debt, revenue and expenditure on account of the services of water supply, sewerage and drainage by the Metropolitan Water, Sewerage and Drainage Board and the Hunter District Water Board during 1948-49 and 1949-50.

WATER SUPPLY, SEWERAGE AND DRAINAGE, SYDNEY(a) AND NEWCASTLE :
FINANCES, 1948-49 AND 1949-50.

(£.)

Service.	Capital Debt.	Revenue.	Expenditure.				Surplus(+) or Deficit(-).
			Working Expenses. (b)	Interest and Exchange.	Sinking Fund and Loan Repayment.	Total.	
1948-49.							
Sydney (a)—							
Water ..	35,302,110	2,878,023	1,351,349	1,263,048	261,209	2,875,606	+ 2,417
Sewerage ..	18,561,111	1,691,343	809,234	723,568	136,609	1,669,461	+ 21,882
Drainage ..	(c) 933,680	83,946	38,526	38,779	5,647	82,952	+ 994
Total ..	54,796,901	4,653,312	2,199,159	2,025,395	403,465	4,628,019	+ 25,293
Newcastle—							
Water ..	4,946,032	421,849	210,615	178,785	31,990	421,390	+ 459
Sewerage ..	2,449,838	212,145	106,245	94,262	14,845	215,352	- 3,207
Drainage ..	134,007	14,875	8,797	4,832	976	14,605	+ 270
Total ..	7,529,877	648,869	325,657	277,879	47,811	651,347	- 2,478
1949-50.							
Sydney (a)—							
Water ..	38,687,480	3,141,905	1,525,602	1,325,696	286,152	3,137,450	+ 4,455
Sewerage ..	20,212,977	1,793,660	903,281	729,127	143,763	1,776,171	+ 17,489
Drainage ..	e 1,017,960	116,311	59,740	38,067	5,745	103,552	+ 12,759
Total ..	59,918,417	5,051,876	2,488,623	2,092,890	435,660	5,017,173	+ 34,703
Newcastle—							
Water ..	5,155,670	447,212	228,420	184,539	34,058	447,017	+ 195
Sewerage ..	2,307,941	232,349	121,377	95,599	15,624	232,600	- 231
Drainage ..	143,955	15,985	9,712	5,007	1,084	15,803	+ 183
Total ..	7,807,566	695,547	359,509	285,145	50,766	695,420	+ 127

(a) Includes part of South Coast. (b) Includes provision for renewals, long service leave, loss on exchange, etc. (c) Excludes non-interest bearing capital in respect of stormwater drains transferred from Public Works Department—£1,906,217 at 30th June, 1949, and £1,875,341 at 30th June, 1950.

(b) *Summary, 1938-39 and 1945-46 to 1949-50.* The following table shows the total debt, revenue and expenditure on account of the combined services of water supply, sewerage and drainage by the Metropolitan Water, Sewerage and Drainage Board and the Hunter District Water Board for the years 1938-39 and 1945-46 to 1949-50

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

(£.)

Year.	Capital Debt.	Revenue.	Expenditure.				Surplus (+) or Deficit (-).
			Working Expenses.	Interest and Exchange.	Sinking Fund and Loan Repayment.	Total.	
SYDNEY.							
1938-39	43,769,741	2,926,694	957,422	1,727,708	241,564	2,926,694	..
1945-46	47,124,380	3,852,167	1,611,108	1,887,256	343,034	3,841,398	+ 10,769
1946-47	48,786,655	4,031,572	1,763,014	1,917,607	350,352	4,030,973	+ 599
1947-48	51,185,095	4,198,786	1,847,321	1,962,324	375,936	4,185,581	+ 13,205
1948-49	54,796,901	4,653,312	2,199,159	2,025,395	403,465	4,628,019	+ 25,293
1949-50	59,918,417	5,051,876	2,488,623	2,092,890	435,660	5,017,173	+ 34,703
NEWCASTLE.							
1938-39	4,574,880	385,732	167,620	188,185	20,886	376,691	+ 9,041
1945-46	6,794,717	522,573	212,055	263,292	40,625	515,972	+ 6,601
1946-47	7,038,765	548,190	236,132	266,124	41,840	544,096	+ 4,094
1947-48	7,294,868	576,072	257,659	276,329	44,643	572,831	+ 4,741
1948-49	7,529,877	648,869	323,657	277,879	47,811	651,347	- 2,478
1949-50	7,807,566	695,547	359,509	285,145	50,766	695,420	+ 127

NOTE.—See footnotes to previous table.

(v) *Country Water Supply and Sewerage Systems.* At 31st December, 1947, country water supply services were conducted or under construction by 72 municipalities, 45 shires and 4 county councils, and country sewerage services by 52 municipalities and 12 shires. The capital indebtedness of these schemes was £7,475,597 at 31st December, 1947, namely, £4,772,662 for water and £2,702,935 for sewerage. Of the foregoing amounts, Government advances amounted to £570,523. Debt of the municipalities amounted to £5,451,053, shires to £1,017,339 and county councils to £1,007,205. Aggregate income and expenditure, respectively, amounted to £1,018,671 and £899,588 in 1947, and to £1,000,152 and £852,687 during 1946.

(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, 1950 was £1,094,776. Income and expenditure, respectively, were £117,977 and £134,482 for 1950 and £98,484 and £119,822 for 1949.

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 £2,418,508 at 31st December, 1950.

There are also the Mulwala Water Supply and Sewerage Service constructed as an urgent war-time work for the Commonwealth, and the Bethunga 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, 1950.*

(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); Tporourrong, 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 new 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. Up to 30th June, 1950, about one-third of the length of the pipe-line had been laid. The other project, approved by the Board in 1946, consists of a dam which will impound 30,000 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. In 1950 it was estimated to cost £7,800,000.

The water rate levied by the Board in 1949-50 was 7d. in the £1 on the net annual value of the property served, and there was a charge of 1s. per 1,000 gallons of water supplied by meter. 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 1945-46 to 1949-50.

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 Aque-ducts, 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
1945-46 ..	308,731	1,226,000	78.4	28,611	254	64.0	3,539	216,373
1946-47 ..	312,735	1,242,000	87.9	32,092	281	70.8	3,594	218,744
1947-48 ..	320,798	1,275,000	91.9	33,651	287	72.1	3,691	220,992
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	33,458	267	67.3	3,875	229,238

(c) *Sewerage and Drainage.* Particulars of sewerage and drainage services for 1938-39 and 1945-46 to 1949-50 are shown below. The rate levied in 1949-50 in respect of sewerage was 1s. 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.		Average Daily Pumping.		Length of Sewers, etc.	Length of Main Drains.
			Average Daily Pumping.	Total Sewage Pumped for the Year.	Per House.	Per Head of Estimated Population.		
1938-39 ..	269,411	1,070,000	48.2	17,601	179.0	45.1	2,586	97
1945-46 ..	291,536	1,157,000	56.4	20,582	193.5	48.7	2,749	115
1946-47 ..	294,343	1,169,000	59.1	21,570	200.8	50.6	2,773	117
1947-48 ..	302,433	1,202,000	61.6	22,551	203.8	51.3	2,814	122
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

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 in the Shire of Braybrook, including the township of Sunshine), the Kew system (serving an area of 103 acres in Kew) and the South-eastern system (serving an area of 2,292 acres in Cheltenham, Parkdale, Mentone and Mordialloc). The Metropolitan Sewage Farm, 26,056 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) to 30th June, 1950 was £1,885,231. Revenue during 1949-50 (1948-49 in parentheses) amounted to £79,166 (£77,690), cost of sewage disposal £99,413 (£95,749), trading expenses £66,690 (£58,469), interest £67,901 (£63,661), and net cost of sewage purification £154,838 (£140,189). These financial particulars are included in the sewerage items of the summary below.

At 30th June, 1950, the Melbourne and Metropolitan Board of Works had 126 miles of main drains under its control—105 miles of underground, 12 miles of constructed open drains, and 9 miles of natural watercourses and unlined open drains.

(d) *Finances—Details, 1948-49 and 1949-50.* The following table provides a summary, for the years 1948-49 and 1949-50, of the financial operations of the three services conducted by the Melbourne and Metropolitan Board of Works:—

MELBOURNE AND METROPOLITAN BOARD OF WORKS : FINANCES, 1948-49 AND 1949-50.

(£.)

Service, etc.	Capital Cost. (a)	Revenue.	Expenditure.				Surplus (+) or Deficit (-).
			Working Expenses, etc.	Interest and Exchange.	Sinking Fund.	Total.	
1948-49.							
Water ..	15,492,433	1,294,558	686,301	568,151	..	1,254,452	+ 40,106
Sewerage ..	16,710,110	1,307,373	509,888	627,423	..	1,137,311	+ 170,062
Drainage ..	2,110,044	111,995	25,801	64,169	..	89,970	+ 22,025
General(b) ..	..	..	210,737	9,000	69,840	289,577	- 289,577
Total ..	34,312,587	2,713,926	1,432,727	1,268,743	69,840	2,771,310	- 57,384
1949-50.							
Water ..	16,876,293	1,323,236	791,743	603,068	..	1,394,811	- 71,575
Sewerage ..	17,364,821	1,484,545	571,962	644,768	..	1,219,730	+ 264,815
Drainage ..	2,212,778	116,548	26,896	67,506	..	94,402	+ 22,146
General(b) ..	..	..	223,302	9,000	73,785	306,087	- 306,087
Total ..	36,453,892	2,924,329	1,616,903	1,324,342	73,785	3,015,030	- 90,701

(a) Includes depreciation, £395,525. Total loan indebtedness—1948-49, £27,936,165; 1949-50 £29,513,785.

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

(e) *Finances, 1938-39 and 1945-46 to 1949-50.* The following table shows the financial operations of the Melbourne and Metropolitan Board of Works (all services combined) for the years 1938-39 and 1945-46 to 1949-50 :—

MELBOURNE AND METROPOLITAN BOARD OF WORKS : FINANCES.

(£.)

Year.	Capital Cost.	Revenue.	Expenditure.				Surplus(+) or Deficit(-).
			Working Expenses.	Interest and Exchange.	Sinking Fund.	Total.	
1938-39	27,598,603	2,214,295	762,558	1,316,603	64,269	2,143,430	+ 70,865
1945-46	30,614,713	2,309,505	1,010,713	1,263,123	64,928	2,338,764	- 29,259
1946-47	31,443,217	2,389,947	1,230,293	1,236,099	65,090	2,531,482	- 141,535
1947-48	32,749,852	2,521,366	1,253,728	1,239,372	67,340	2,560,440	- 39,074
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	2,924,329	1,616,903	1,324,342	73,785	3,015,030	- 90,701

(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 £900,000 for water supply undertaking, £760,000 for sewerage undertaking, and £270,000 for sewerage installation to properties under the deferred payment system. The population supplied is estimated by the Trust at 57,800. This and other general information relates to 30th June, 1950.

(b) *Water Supply.* The catchment area is about 16,000 acres. There are five storage reservoirs and seven service basins whose total storage capacity is 2,746 million gallons. 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, 1950 was £888,167. Expenditure for 1949-50 comprised £37,268 (£34,905 in 1948-49) on working expenses and £45,865 (£43,028 in 1948-49) on interest, sinking fund and reserves, and the revenue for the year 1949-50 was £84,410 (£82,844 in 1948-49). The sinking fund appropriations at June, 1950 amounted to £117,807. The replacement and contingencies reserve amounted to £166,274. There is a water rate of 1s. 3d. 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 150 miles of main and reticulation sewers. The sewerage area is 9,571 acres, and the number of buildings within the sewered areas is 13,682 of which 13,040 have been connected. The number of buildings within the drainage area is 13,900. The total expenditure to 30th June, 1950 on sewerage works was £674,242, and on the cost of sewerage installation under deferred payment conditions £258,344, of which £515 was outstanding. The revenue in 1949-50 amounted to £55,831 (55,523 in 1948-49) and the expenditure comprised £16,465 (£15,882 in 1948-49) on working expenses and £35,831 (£35,814 in 1948-49) on interest, sinking fund and reserves. Sinking fund appropriations at June, 1950 were £104,838. Replacement and contingencies reserve amounted to £140,899. A general rate of 1s. 3d. 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 seven, three (one of whom is chairman) being appointed by the Government, and four being elected by the Council of the City of Ballarat. General information is as at 31st December, 1949 and financial information is given for the years 1949 and 1950.

(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 six reservoirs is 2,332 million gallons and the catchment area is 17,545 acres.

The capital cost of construction of the waterworks was £1,347,090 to 31st December, 1949. The liabilities are loans due to the Government, amounting to £827,890 at 31st December, 1949. The revenue for the year 1950 was £75,596 (£67,985 in 1949). Working expenses during 1950 amounted to £32,216 (£29,324 in 1949) and interest and other charges to £42,867 (£36,015 in 1949). A rate of 1s. 3d. in the £1 is levied on the net annual value of all ratable properties, with a minimum of 15s. 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 part of the Shire of Ballarat. Work was commenced in 1922 and up to 31st December, 1950 the Authority had constructed a disposals works, 1 mile of outfall sewer, 2.1 miles of main sewer, 14.7 miles of sub-mains and 90 miles of reticulation. The capital cost of sewerage construction works to 31st December, 1950 was £554,188. The method of sewage disposal is by sedimentation, oxidation and sludge digestion. One hundred and nineteen sewered areas had been declared as at 31st December, 1950. Assessments in the sewerage district numbered 13,603, while those in sewered areas numbered 11,175. There were 9,591 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, 1950 amounted to £461,701, redemption payments at that date totalling £158,967. An expenditure of £157,122 was incurred for house connexions, the whole of which has been redeemed. Revenue during 1950 (1949 in parentheses) amounted to £42,098 (£44,324) and expenditure, including £25,912 (£26,262) on interest and redemption, to £42,634 (£50,636).

A general rate of 1s. 5d. in the £1 is levied on the net annual value of all properties within the drainage area.

(iv) *Sewerage Authorities.* At 30th June, 1950, 54 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 28 districts (including three partly operating) serving a population of 182,400 persons.

In addition, sewerage authorities were constituted in a further 26 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, 1950 included 35 large reservoirs and 234 subsidiary reservoirs and service basins with a total storage capacity of 537,490 million gallons (1,974,260 acre feet).

Length of channels was 15,221 miles (irrigation, 4,643 miles, domestic and stock, 8,505 miles, drainage and flood protection, 2,073 miles) and of pipe lines 1,160 miles. The quantity of water delivered to water users during 1949-50 was 526,875 acre feet (720,427 acre feet in 1948-49). The Commission administered 69 rural districts during 1949-50 (29 irrigation districts, 35 waterworks districts, 4 flood protection districts and 1 drainage district), and the reticulated pipe supplies for domestic and industrial purposes in 129 urban districts. In addition, 120 urban districts were administered by waterworks trusts and 15 by local governing bodies. The populations served in these groups of urban districts numbered, respectively, 148,140, 243,200 and 78,950 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 1945-46 to 1949-50 :—

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

(£.)

Year.	Total Loan Capital Expenditure to 30th June.	Receipts.	Payments.				Total.
			Operating Expenses.	Interest on Capital Allotted.	Depreciation.	Redemption.	
1938-39 ..	24,223,037	560,680	476,085	145,105	27,553	4,922	653,665
1945-46 ..	26,417,497	773,423	1,110,170	41,864	48,420	1,767	1,202,221
1946-47 ..	27,632,136	919,347	1,084,841	39,961	118,701	1,678	1,245,181
1947-48 ..	29,223,673	1,050,528	1,199,552	39,836	55,303	1,660	1,296,351
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

(a) Excludes Waterworks Trusts and Local Governing Bodies.

The total loan capital expenditure of waterworks trusts and local governing bodies at 30th June, 1950 was £5,638,471, making a grand total of £40,680,298 when added to the figure for works under the control of the Commission. The net loan capital after redemption payments of £1,646,520 was £39,033,778.

The financial operations of the State Rivers and Water Supply Commission form part of 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 1949-50 was £1,370,333 (£1,342,708 in 1948-49).

3. **Queensland.**—(i) *Brisbane City Council*—to 30th June, 1950. (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 35.9 million gallons. The Somerset reservoir is under the control of the 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, 1950 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 1945-46 to 1949-50 :—

WATER SUPPLY, BRISBANE (a) : SERVICES.

Year.	Services Connected.	Estimated Population Supplied.	Average Daily Consumption.	Total Consumption for year.	Average Daily Consumption.		Length of Trunk and Reticulation Mains.	Number of Meters.
					Per Service.	Per Head of Estimated Population.		
			Mill. gals.	Mill. gals.	Gallons.	Gallons.	Miles.	
1938-39 ..	81,389	345,903	15.9	5,791	195	45.9	1,169	(b)
1945-46 ..	94,032	385,531	22.5	8,206	239	58.3	1,275	52,620
1946-47 ..	98,803	405,093	22.8	8,317	231	56.3	1,299	52,645
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

(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, 1950 was 4d. 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 £3 respectively. The following table is a summary of operations of the Brisbane sewerage scheme for the years 1938-39 and 1945-46 to 1949-50 :—

SEWERAGE, BRISBANE : SERVICES.

Year.	Premises Connected.	Estimated Population Served.	Total Sewage Pumped for the Year.	Length of Main, Branch, Reticulation, etc. Sewers.
			Mill. gals.	Miles.
1938-39 ..	33,248	149,616	(a)	484
1945-46 ..	41,381	169,662	4,632	533
1946-47 ..	42,246	173,209	4,539	549
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

(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 1945-46 to 1949-50 :—

WATER SUPPLY AND SEWERAGE, BRISBANE : FINANCES.

(£.)

Service and Year.	Gross Capital Cost.	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
1945-46	6,637,459	754,521	210,718	301,609	550,605	+ 203,916
1946-47	6,906,676	744,989	225,343	315,595	596,948	+ 148,041
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
Sewerage—						
1938-39	5,992,936	240,963	52,792	403,386	485,974	- 245,011
1945-46	6,540,181	234,731	57,135	335,308	410,801	- 176,070
1946-47	6,763,448	234,032	57,600	224,194	312,152	- 78,120
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

(ii) *Country Towns.* (a) *Water Supply.* In addition to the City of Brisbane, there were, at 30th June, 1950, 95 cities and towns in Queensland provided with water supply systems controlled by municipal and shire councils.

(b) *Sewerage Systems.* At 30th June, 1950, there were 12 cities or towns outside the metropolitan area—Bundaberg, Charleville, Cunnamulla, Goondiwindi, 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 £636,990 in 1949-50 (£564,146 in 1948-49). Expenditure amounted to £633,488, including £208,900 for debt charges (£576,429 and £208,135 in 1948-49). In addition, loan expenditure amounted to £349,183 (£209,980 in 1948-49).

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 1945-46 to 1949-50 :—

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
1945-46 ..	196,021	7,035,516	11,901,977	23,910	6,845	103,462
1946-47 ..	198,952	7,190,146	11,932,461	23,920	6,927	103,514
1947-48 ..	203,422	7,405,970	11,953,022	23,927	6,997	104,726
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	7,126	107,092

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

(b) *Finances.* Figures for 1938-39 and 1945-46 to 1949-50 are shown in the following table.

WATERWORKS, SOUTH AUSTRALIA : FINANCES.

(£.)

Year.	Invested Capital.	Revenue.	Expenditure.			Surplus (+) or Deficit (-).
			Working Expenses.	Interest and Sinking Fund.	Total.	
1938-39 ..	14,649,052	654,688	242,528	651,972	894,500	— 239,812
1945-46 ..	18,712,037	853,406	520,078	685,615	1,205,693	— 352,287
1946-47 ..	19,577,522	856,733	542,203	676,604	1,218,807	— 362,074
1947-48 ..	20,229,154	935,693	588,703	680,550	1,269,253	— 333,560
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

(iii) *Adelaide Waterworks.* At 30th June, 1950 the Adelaide waterworks supplied a district of 144,026 acres. The capacity of its five reservoirs was 14,466 million gallons and there were 1,636 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 11,000 million gallons per annum.

Particulars of finances for the years 1938-39 and 1945-46 to 1949-50 are shown below:—

ADELAIDE WATERWORKS : FINANCES.

(£.)

Year.	Invested Capital.	Revenue.	Expenditure.			Surplus (+) or Deficit(-).
			Working Expenses.	Interest and Sinking Fund Charges.	Total.	
1938-39 ..	4,676,110	446,459	111,347	202,279	313,626	+ 132,833
1945-46 ..	5,335,798	517,555	185,603	196,576	382,179	+ 135,376
1946-47 ..	6,018,680	521,962	209,107	200,105	409,212	+ 112,750
1947-48 ..	6,253,146	574,687	211,450	203,510	414,960	+ 159,727
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

(iv) *Adelaide Metropolitan Sewerage.* The Adelaide metropolitan sewerage system, comprising the Adelaide, Glenelg and Port Adelaide areas, with drainage areas of 88 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 2,713 million gallons during 1949-50 as compared with 2,579 million gallons during 1948-49. Other particulars for 1938-39 and 1945-46 to 1949-50 are shown hereunder:—

ADELAIDE METROPOLITAN SEWERAGE : SUMMARY.

Year.	Length of Sewers.	Number of Connections.	Invested Capital.	Revenue.	Expenditure.			Surplus (+) or Deficit(-).
					Working Expenses.	Interest and Sinking Fund.	Total.	
	Miles.		£	£	£	£	£	£
1938-39 ..	923	80,745	3,361,034	268,880	77,023	150,273	227,296	+ 41,584
1945-46 ..	985	91,201	3,874,065	300,207	121,554	148,283	269,837	+ 30,370
1946-47 ..	1,008	93,440	4,034,770	307,215	135,868	144,702	280,570	+ 26,645
1947-48 ..	1,025	96,057	4,176,725	319,078	159,509	145,732	305,241	+ 13,837
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

(v) *Country Water Supply.* Water district systems outside Adelaide at 30th June, 1950 comprised an area of 11,812,939 acres, and the capacity of the reservoirs was 9,476 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. Construction had progressed to the stage, at 30th June, 1950, where 434 million gallons could be pumped from the basin to meet essential requirements.

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 1945-46 to 1949-50 :-

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

Year.	Invested Capital.	Revenue.	Expenditure.			Surplus (+) or Deficit (-).
			Working Expenses.	Interest.	Total.	
1938-39 ..	10,015,613	207,569	130,523	449,691	580,214	- 372,645
1945-46 ..	10,833,353	247,733	304,848	406,127	710,975	- 463,242
1946-47 ..	11,231,493	244,495	307,379	394,392	701,771	- 457,276
1947-48 ..	11,643,730	270,738	337,557	395,246	732,803	- 462,065
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

(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, 1950 being £2,524,396. Particulars of this scheme, where applicable, are included in the tables of the combined waterworks in section (ii) above. The water is sold by measure; hence particulars of assessments and area supplied do not apply. During 1948-49 the water used from the system between Hanson and Whyalla amounted to 965 million gallons and during 1949-50 to 1,015 million gallons. Revenue for the year 1948-49 was £124,818, working expenses, etc. £68,622, interest charges £81,840, net loss £25,644. Corresponding figures for 1949-50 were, respectively, £178,779, £90,277, £81,608 and a surplus of £6,894.

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) 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 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 recently increased Mundaring Reservoir to which it is linked by a pipe line.

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 1945-46 to 1949-50 :-

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
1945-46 ..	68,310	247,090	22.0	8,041	323	89.2	1,054	41,923
1946-47 ..	70,970	279,000	24.7	9,022	348	88.6	1,107	42,968
1947-48 ..	73,601	284,915	26.9	9,338	365	94.4	1,137	44,795
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

Water rating for 1949-50 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 1945-46 to 1949-50 are shown below:—

METROPOLITAN SEWERAGE AND DRAINAGE, WESTERN AUSTRALIA : SERVICES.

Year.	Houses Connected.	Estimated Population Served.	Sewage Pumped for the Year.(b)	Length of Sewers.	Length of Stormwater Drains.
			Mill. gals.	Miles.	Miles.
1938-39.. ..	36,652	162,457	1,030	444	31
1945-46.. ..	43,509	(a)	1,994	529	33
1946-47.. ..	44,638	(a)	2,160	537	33
1947-48.. ..	45,977	193,103	2,263	550	34
1948-49.. ..	47,446	199,273	2,273	569	34
1949-50.. ..	48,909	205,418	2,326	588	34

(a) Revised Census figure not available.

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

Sewerage rating for 1949-50 was 1s. 4d. 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 1945-46 to 1949-50;—

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

(£.)

Service and Year.	Capital Cost.	Revenue.	Expenditure.			Surplus (+) or Deficit (-).
			Working Expenses.	Interest and Sinking Fund Charges.	Total.	
Water Supply—						
1938-39	4,898,167	285,313	50,975	228,527	279,502	+ 5,811
1945-46	5,355,908	360,904	90,279	253,528	343,807	+ 17,097
1946-47	5,516,603	372,168	110,572	236,432	347,004	+ 25,164
1947-48	5,669,761	392,761	117,930	243,613	361,543	+ 31,218
1948-49	5,899,578	416,817	136,499	253,244	389,743	+ 27,074
1949-50	6,200,989	452,955	186,219	224,958	411,177	+ 41,778
Sewerage and Drainage—						
1938-39	3,497,938	174,950	30,630	149,714	180,344	- 5,394
1945-46	3,885,585	214,604	40,457	205,572	246,029	- 31,425
1946-47	3,992,651	219,359	47,401	197,472	237,873	- 18,514
1947-48	4,148,784	223,090	51,119	196,965	248,084	- 24,994
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

(iii) *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 has recently been increased from 4,650 million gallons to 15,100 million gallons (*see below*). This scheme is now linked by pipeline with the Canning Dam. Plans have been formulated by the State Government, assisted financially by the Commonwealth Government, for a comprehensively reticulated water scheme at an estimated cost of approximately £4,000,000 to serve an area of about 4,000,000 acres of farm lands and some 23 agricultural towns, including the principal

towns on the Great Southern Railway, and to increase the supply to the Eastern Goldfields to permit expansion of the gold-mining industry. The scheme involves the raising of the impounding walls of Mundaring Weir and Wellington Dam to increase the storage capacity of these reservoirs to 15,000 million and 38,000 million gallons respectively. The following table shows details for 1938-39 and 1945-46 to 1949-50 :—

GOLDFIELDS WATER SUPPLY, WESTERN AUSTRALIA : SUMMARY.

Year.	Number of Services.	Total Consumption.	Length of Water Mains.	Number of Meters.	Capital Cost.	Revenue.	Expenditure.(a)	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
1945-46 ..	14,528	1,831	1,750	12,699	6,178,682	317,913	405,615	- 87,702
1946-47 ..	15,130	1,975	1,757	13,163	6,283,631	343,500	396,964	- 53,464
1947-48 ..	15,411	2,028	1,768	13,423	6,425,775	338,892	480,571	- 141,679
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

(a) Includes interest and sinking fund.

(iv) *Water Supply of Other Towns, etc.* (a) *Controlled by Public Works Department.* During 1949-50 (1948-49 in parenthesis) water supplied to other towns and districts, excluding minor water supplies, amounted to 651 (564) million gallons, including service to adjacent mines, 18 (20) million gallons, and railways 63 (60) million gallons. Estimated population served numbered 41,865 (37,587).

(b) *Controlled by Commonwealth and State Government Railways.* Consumption for the year ended 30th June, 1950 (1948-49 in parentheses) was 296 (399) million gallons. In addition, 457 (459) million gallons were obtained from other sources, mainly the Goldfields Water Scheme and the Metropolitan Water Supply.

(c) *Water Boards not Controlled by Government.* During 1949-50 (1948-49 in parentheses) approximately 372 (367) million gallons of water were supplied to an estimated population of 17,770 (17,731).

(v) *Agricultural Water Supply.* During the thirty-eight years from 1st July, 1910 to 30th June, 1950, 574 tanks were built, 387 wells sunk, and 3,940 bores put down to a total depth of 211,779 feet. Of the bores put down, 644 yielded fresh, and 383 stock, water.

(vi) *Artesian and Sub-artesian Waters.* Up to 30th June, 1950 the total number of bores put down in search of artesian or sub-artesian water and in which water was struck (exclusive of operations by Defence Services) was 454, ranging in depth from 21 to 4,006 feet.

6. *Tasmania.*—(i) *Waterworks.* At the end of 1949-50 (1948-49 in parentheses) there were 36 (36) municipal waterworks in Tasmania. The capacity of the reservoirs was about 900 million gallons, the estimated population served was 188,598 (174,856), the number of properties assessed was 58,782 (55,458), and the length of aqueducts, mains and reticulation was about 1,075 miles. Costs of construction amounted to £1,925,902 (£1,927,009). The largest of these undertakings is Hobart, with a reservoir capacity at the end of 1949-50 of 578 million gallons, and 156 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 1946-47 to 1949-50 are shown in Chapter V.—Transport and Communication, § 3. Shipping at Principal Ports. Particulars of oversea and interstate cargo discharged and shipped during 1949-50 are shown in § 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 64,676 feet of wharfage controlled by the Maritime Services Board and 9,928 feet of commercial wharfage privately owned. Ferry berths cover 3,427 feet, and the total for all purposes is 78,031 feet. Depth of water at wharves is up to 40 feet. 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 1945-46 to 1949-50:—

MARITIME SERVICES BOARD : FINANCES OF THE PORT OF SYDNEY.
(£.)

Year.	Total Capital Debt.	Revenue.			Expenditure.			Surplus.
		Wharfage and Transhipment Rates.	Tonnage Rates and Berthing Charges.	Total.	Administration and Maintenance.	Interest, Sinking Fund, Exchange, etc.	Total. (a)	
1938-39..	11,276,399	773,501	38,180	1,155,627	380,120	536,781	916,901	238,726
1945-46..	11,048,854	799,734	170,766	1,420,187	640,703	550,957	1,191,660	228,527
1946-47..	11,097,221	725,903	158,521	1,379,882	702,833	540,240	1,243,073	136,809
1947-48..	11,242,140	759,014	167,406	1,446,779	793,319	530,159	1,323,478	123,301
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

(a) Excludes capital expenditure: 1938-39, £28,576; 1945-46, £77,395; 1946-47, £153,854; 1947-48, £282,345; 1948-49, £221,227; 1949-50, £287,210.

(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 sixth in Australia. It is primarily a coal-loading port, and the proximity of 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 will, however, continue 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 £2,005,371 in 1948-49 and £2,278,369 in 1949-50. These figures include the Port of Sydney revenue (see table above) and State navigation service collections (£436,214 in 1948-49 and £620,166 in 1949-50). Commonwealth Government revenue from light dues and navigation receipts, for the whole of Australia amounted to £202,574 in 1948-49 and £227,759 in 1949-50.

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, 1950, the sheds available for wharfage accommodation had a length of 20,093 feet, covering an area of 1,389,982 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 61,740 feet, giving an area of over 58 acres of wharfage, and 53,109 feet of effective berthing space. During 1950, work commenced on the River Entrance Docks project which provides for the construction of 28 new deep water berths. Other work undertaken during the year provides for new berths at Appleton Dock (ultimately to have eighteen berths), Victoria Dock and South Wharf. The depths of water (low water ordinary spring tide) of main channels and at principal wharves are 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 1946 to 1950 :—

MELBOURNE HARBOR TRUST : FINANCES.

(£.)

Year.	Gross Loan Indebtedness.	Revenue.			Expenditure.			Surplus.
		Wharfage and Tonnage Rates.	Total.	Administration and Maintenance.	Interest, Sinking Fund, Exchange, etc.	Depreciation, Renewals and Insurance Account.	Total. (a) (b)	
1939 ..	4,018,527	689,100	843,899	282,533	270,650	129,160	837,577	6,322
1946 ..	3,973,100	701,591	961,037	424,601	244,890	129,200	958,009	3,028
1947 ..	3,937,709	819,425	1,113,456	399,641	238,084	123,940	944,516	168,940
1948 ..	3,820,203	961,925	1,313,813	471,039	220,463	134,230	1,037,152	276,661
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

(a) Includes statutory payments to Consolidated Revenue and Geelong Harbour Trust:—1939, £155,234; 1946, £159,318; 1947, £182,851; 1948, £211,420; 1949, £242,612; 1950, £275,383. (b) Excludes capital expenditure:—1939, £128,567; 1946, £403,400; 1947, £375,705; 1948, £393,240; 1949, £623,396; 1950, £1,589,392.

(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. Revenue for the years 1949 and 1950 was £152,497 and £193,869 respectively, and revenue expenditure was £134,351 and £162,223. Payments made in respect of capital works amounted to £124,804 in 1949 and £120,000 in 1950, and loans outstanding at the end of each year amounted to £514,896 and £508,459. Depth of water available in Geelong harbour will, upon completion of dredging operations which in 1950 were well advanced, range from 32 to 37 feet (low water ordinary spring tide).

(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 1945-46 to 1949-50 are shown below:—

BRISBANE HARBOUR : FINANCES.
(£'000.)

Year.	Loan Indebtedness.	Revenue.		Expenditure.		Credit Balance.
		Harbour Dues.	Total.	Working Expenses.	Total (including Interest and Redemption).	
1938-39 ..	1,179	165	173	36	112	(a) — 6
1945-46 ..	1,086	146	(b) 247	127	206	173
1946-47 ..	1,163	149	171	133	212	132
1947-48 ..	1,219	153	222	126	209	145
1948-49 ..	1,256	190	209	162	250	104
1949-50 ..	1,325	219	299	168	260	143

(a) Overdraft. (b) Includes accumulated hire charges, etc., for dredging done for the Commonwealth Government.

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 1950 are shown below, together with a summary for the years 1939 and 1946 to 1950.

HARBOUR BOARDS, QUEENSLAND : FINANCES.
(£.)

Harbour Board.	Loan Indebtedness.	Revenue.		Expenditure (excluding Loan).		Surplus (+) or Deficit(-).
		Wharfage and Harbour Dues.	Total.	Working Expenses.	Total (including Interest and Redemption).	
Bowen	293,090	16,851	26,695	11,643	25,876	+ 819
Bundaberg	31,512	1,576	3,342	3,728	5,155	- 1,813
Cairns	163,004	90,702	127,949	97,786	124,384	+ 3,565
Gladstone	105,067	15,574	40,304	22,564	39,355	+ 949
Mackay	354,794	117,810	123,146	23,955	55,053	+ 68,093
Rockhampton	528,637	25,366	32,970	27,510	33,921	- 951
Townsville	135,137	111,070	156,313	97,710	124,817	+ 31,496
Total. 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
.. 1947	1,481,213	234,872	328,464	205,572	330,022	- 1,558
.. 1946	1,489,281	227,931	324,850	175,948	320,078	+ 4,772
.. 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, and controls about 60 ports, but at many of them there is little

or no shipping movement. The more important are Adelaide, Augusta, Lincoln, Pirie, Wallaroo and Whyalla. Maximum depths of water (low water ordinary spring tide) at the wharves of these 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 1945-46 to 1949-50.

SOUTH AUSTRALIAN HARBOURS BOARD : FINANCES.

(£.)

Year.	Capital Expenditure to 30th June.	Revenue.	Expenditure from Revenue.				Surplus (+) or Deficit (-).
			Working Expenses.	Interest.	Sinking Fund.	Total.	
1938-39 ..	7,861,905	664,915	205,848	326,719	50,000	582,567	+ 82,348
1945-46 ..	8,224,568	600,658	322,010	301,583	22,696	646,289	- 45,631
1946-47 ..	8,283,775	747,071	371,749	288,833	25,069	685,651	+ 61,420
1947-48 ..	8,367,780	873,059	386,459	281,517	27,585	695,561	+ 177,498
1948-49 ..	8,456,041	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

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 36 feet, and at the wharves 32 feet. The length of wharf berth accommodation is 10,566 feet.

Gross earnings for the year 1948-49 amounted to £1,030,816, working expenses to £633,175, interest £130,633, sinking fund £30,964, renewals fund £2,000, and payment of surplus cash to Consolidated Revenue £195,880. Corresponding figures for 1949-50 were £1,243,046, £742,596, £117,791, £32,721, £2,000 and £311,468. The total amount debited to loan capital account at 30th June, 1950 was £2,976,677.

(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 1948-49 were £19,669, working expenses £29,083, and interest £28,969 (1947-48, £22,818, £34,815, £28,363). The total amount debited to loan capital account at 30th June, 1949 was £776,646.

(iii) *Other Ports.* Only the ports of Fremantle and Bunbury in Western Australia are under the control of trusts, the remainder are Government operated. Of these, Albany, Carnarvon and 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 1948-49 were £368,751 and expenditures £318,528, including loan charges £56,252. Corresponding figures for 1949-50 were £385,506, £397,469 and £61,973. The total receipts of the Hobart Marine Board during 1948-49 were £147,901, loan charges £2,351 and total expenditure £122,669. Corresponding figures for 1949-50 were £144,914, £6,186, and £141,523. Launceston Marine Board receipts during 1948-49 amounted to £83,927, loan charges to £9,893 and total expenditure to £83,927. The figures for 1949-50 were, respectively, £86,639, £9,893 and £86,639. Loan indebtedness of all Marine Boards and Trusts at 30th June, 1950 was £1,179,480, of which £279,620 was in respect of Hobart and £81,431 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 oversea 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 151 fire districts had been constituted at the end of 1950. The cost of maintenance of fire brigades has been borne in proportions of quarter, quarter, and half 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 ratable 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 ratable 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, 1950 the authorized strength of the Fire Brigade throughout the fire districts of New South Wales was 292 officers and 823 permanent, 2,039 volunteer, and 1,924 reserve firemen. Corresponding figures for the Sydney Fire District were 240, 774, 321 and 778. The revenue for the year 1950 (figures for the year 1949 in parentheses) was £1,096,617 (£929,610), made up as follows:—From the Government, £134,401 (£226,205); municipalities and shires, £134,401 (£226,205); fire insurance companies and firms, £806,406 (£452,410); and from other sources, £21,409 (£24,790). The disbursements for the year were £1,087,606 (£1,030,269).

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. The income of each Board is derived in equal proportions from the Treasury, the municipalities and insurance companies.

(ii) *Metropolitan Fire Brigades Board.* On 30th June, 1950 the Board had under its control 42 stations, 580 permanent staff, 162 special service and clerical, etc. staff, and 20 partially-paid firemen. The total receipts for 1949–50 (1948–49 in parentheses) were £583,867 (£383,702), comprising contributions £470,179 (£279,764), receipts for services £66,419 (£68,350), and interest and sundries £47,269 (£35,588). The expenditure was £525,954 (£373,526).

(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. At 30th June, 1950 there were 171 municipal councils and 126 insurance companies included in the operation of the Act, and 194 urban and 940 rural fire brigades. The effective registered strength of the brigades was 73,717 members.

The receipts for the year 1949–50 (1948–49 in parenthesis) amounted to £135,445 (£115,623). Total expenditure other than loan amounted to £135,069 (£115,574).

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, 1950 there were 63 Fire Brigades Boards. The total number of stations was 105, and full-time staff numbered 463, including 13 administrative, 84 officers and 351 firemen. Workshop staff numbered 15. Part-time staff numbered 571, including 63 administrative, 84 officers and 424 firemen. Volunteers numbered 370. The total revenue for the year 1949–50 (figures for 1948–49 in parentheses) was £396,182 (£308,391), received mainly from the following sources—Government £95,312 (£77,681), local authorities £94,971 (£78,053), insurance companies £142,873 (£117,160), and loans (Government and other) £47,967 (£20,012). The total expenditure for the year was £386,760 (£317,689), the chief items being salaries and wages £233,467 (£212,009), and interest and redemption of loans £34,235 (£24,556).

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, five-ninths by insurance companies, and two-ninths by the municipalities concerned. The contribution of the Treasury, however, is limited to £10,000 and if two-ninths of the expenses and maintenance exceeds this amount, five-sevenths of the excess is contributed by the insurance companies and two-sevenths by the municipalities. At 30th June, 1950 there were altogether 34 fire brigade stations, of which 12 were metropolitan and 22 country.

The authorized strength of the permanent staff was 329, including 233 officers and men and 77 country auxiliary firemen. The total revenue for the years 1948–49 and 1949–50 was £129,312 and £166,783 respectively, the latter figure being made up as follows:—insurance companies £104,310, Treasury £21,144, and municipalities £41,329.

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 27 at 30th June, 1950. The income of the Board is derived 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 52 and 113 respectively. The brigades throughout the State controlled by the Western Australian Fire Brigades Board at 30th September, 1950 numbered 43, with a staff of 1,173, including 210 permanent officers and firemen and 947 volunteer brigade officers and firemen. In addition, there were at 30th June, 1950, 394 registered bush fire brigades sponsored by local authorities under the Bush Fires Act 1937–1950. A Rural Fire Prevention Advisory Committee, acts in an advisory capacity. The revenue for the year ended 30th September, 1949 was £127,395 and the expenditure £134,571. Corresponding figures for the year ended September, 1950 were £156,548 and £149,144.

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 remain on the old basis of one-third each from the Treasury, the municipalities and the insurance companies concerned. The cost for the year 1948–49 amounted to £33,409 and for 1949–50 to £35,953. There were at 30th June, 1950, 27 stations amongst the 22 brigades, and their aggregate staffs numbered 398, including 68 permanent officers and 306 partially-paid firemen, including officers.