

CHAPTER 22

LOCAL GOVERNMENT

This chapter includes, in addition to information on the operation of local government authorities, information on the operation of certain semi-governmental authorities. The latter information is not comprehensive for this type of authority, and is included partly because of the association of the functions performed with those of local government authorities, and partly for convenience in preparation. Particulars of the activities of other semi-governmental authorities, e.g. transport, electricity and gas, and banking undertakings, for which only some financial statistics are given in this chapter, are included in the chapters relevant to those subjects.

Coverage

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 cover such matters as the construction and maintenance 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 many which may be performed by a local government authority either with or without the consent of the ratepayers or the Governor-in-Council. These include transport facilities, electricity, gas, and other business undertakings, hospitals, charitable institutions, recreation grounds, parks, baths, libraries, museums, etc.

The system is based on the principle of a grant of specific powers by the State legislatures to the local authorities, their autonomy, however, being more or less limited by the provision for general supervision by a department of the central government or by the Governor-in-Council. Otherwise, within the scope of the Acts under which they are constituted or which they have to administer, they are responsible only to the ratepayers. While the broad pattern of local government throughout the States of Australia is similar, the range of activities, election of officers, methods of valuation and rating powers, etc. differ considerably.

The areas over which local government bodies exercise general control, numbering 902, 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 cities, corporate towns and district council areas; in Western Australia as cities, towns and shires; and in Tasmania as cities and municipalities. In New South Wales some local government authorities in an area have combined to provide services such as electricity, water, sewerage and drainage—e.g. the county councils. Within shires there are also some municipal units known as urban areas. Apart from the more thinly populated parts of New South Wales and South Australia, and the Commonwealth Territories (except for the City of Darwin), practically the whole of Australia comes within local government jurisdiction.

The financial statistics in the following section 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.

Semi-governmental authorities

In addition to local government authorities, a large number of authorities have been set up to control specific activities, which are often identical with some of those performed by either, or both, of the other classes of public authority—central government and local government—and a complete picture of any field of activity for a State or Australia as a whole cannot be obtained without reference to each class operating in that particular field. These semi-governmental authorities differ primarily from local government authorities in that their operations are restricted to the specific activity for which they were constituted—e.g. roads and bridges, water and sewerage, electricity and irrigation, harbours, or tramways, etc.—i.e. each dispenses a specific service throughout an area as distinct from the general services of the local authority. In the sections which deal with debt, roads and bridges, water supply and sewerage, harbours, and fire brigades particulars are included of the more important of these authorities which operate within the range covered by this chapter.

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, reconstruction 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. Owing to difficulty in obtaining complete particulars of receipts and expenditure of the various local governing bodies in respect of roads under their control, the details of receipts and expenditure given on pages 837-44 are those of central governments only, relating either to the supervisory board or commission in the State or to direct activities of a department. However, estimates of the aggregate net expenditure of all public authorities concerned with roads and bridges in Australia are given on page 846 of that section. On pages 829-30 some information is given of the revenue and expenditure of local government authorities in respect of roads.

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.

Harbours

The majority of the harbours in Australia are managed by boards, the members of which are either elected by persons interested, or appointed by the government. In some instances, however, they are directly controlled by the government.

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.

Local government authorities**New South Wales**

For purposes of local government the whole of the Eastern and Central land divisions and more than two-thirds of the sparsely populated Western division have been divided into cities, municipalities (most principal towns) and shires (mainly large rural areas, some of which include important towns). At the end of 1965 the area incorporated was 272,000 square miles, or nearly nine-tenths of the total area of the State. All local government authorities in the State are subject to the general provisions of the Local Government Act. Municipalities and shires may combine to form county councils for the establishment and conduct of services of joint benefit, e.g. electricity, water, gas, abattoirs. At 31 December 1965 there were fifty-three county councils, including the Sydney County Council.

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 (41,600 acres) in Westernport Bay, Lady Julia Percy Island (652 acres) off Port Fairy, Bass Strait Islands (966 acres), part of Gippsland Lakes (81,920 acres), and Tower Hill (1,460 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.

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 of 1902*' and its amendments.

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.

Western Australia

Local government is established throughout the State, the divisions being cities, towns and shires.

Tasmania

The whole State is divided into municipal districts, Hobart and Launceston being incorporated as cities under separate Acts.

Area, population, dwellings, and value of ratable property

The area, population, dwellings, and value of ratable property in the incorporated areas of each State are shown for the year 1963-64 in the following table. The valuations relate to ratable property only and exclude government and other non-ratable property, whose value in the aggregate is considerable. In some cases councils rate on annual value, or unimproved capital value, or improved capital value, or partly on each of these bases of valuation. The amounts stated are the totals for the areas rated according to each basis of valuation. In this table particulars of dwellings are in accordance with the definition used in the 1961 Census, and are compiled from information collected on the Census Schedules. For the purpose of the Census a dwelling was defined as any habitation occupied by a household group living together as a domestic unit, whether comprising the whole or only part of a building. The term has, therefore, a very wide reference and includes, in addition to houses and flats, a great variety of dwellings ranging from a single-roomed shack to a multi-roomed hotel or institution. Unoccupied dwellings include vacant dwellings available for sale and renting, 'week-end' and holiday dwellings, and other dwellings temporarily unoccupied on the night of the Census. Dwellings being built are not included.

LOCAL GOVERNMENT AUTHORITIES: AREA, POPULATION, DWELLINGS, AND VALUE OF RATABLE PROPERTY, STATES, 1963-64

Location	Number	Area '000 acres	Popula- tion '000 (a)	Dwellings		Value of ratable property		
				Occu- pied	Unoccu- pied	Unim- proved capital value	Im- proved capital value	Annual value
				No. (b)	No. (b)	\$'000	\$'000	\$'000
New South Wales(c)—								
Metropolitan—								
Capital city	1	7	168	48,599	2,311	536,784	1,218,121	89,808
Other	34	702	2,179	570,916	22,825	2,505,179	6,559,834	400,495
Outside metropolitan area	190	173,648	1,757	441,537	47,267	1,461,177	n.a.	n.a.
<i>Total, New South Wales</i>	<i>225</i>	<i>174,357</i>	<i>4,103</i>	<i>1,061,052</i>	<i>72,403</i>	<i>4,503,140</i>	<i>n.a.</i>	<i>n.a.</i>
Victoria(d)—								
Metropolitan—								
Capital city	1	8	76	18,971	740	n.a.	704,236	35,212
Other	45	715	1,986	505,637	16,093	n.a.	4,073,446	206,437
Outside metropolitan area(e).	164	55,387	1,060	264,769	30,469	n.a.	3,008,984	151,813
<i>Total, Victoria</i>	<i>210</i>	<i>56,110</i>	<i>3,122</i>	<i>789,377</i>	<i>47,302</i>	<i>n.a.</i>	<i>7,786,666</i>	<i>393,462</i>
Queensland(a)—								
Capital city	1	246	632	160,588	5,441	394,438	n.a.	n.a.
Other(f)	130	425,980	953	236,845	28,475	545,583	n.a.	n.a.
<i>Total, Queensland</i>	<i>131</i>	<i>426,226</i>	<i>1,584</i>	<i>397,433</i>	<i>33,916</i>	<i>940,021</i>	<i>n.a.</i>	<i>n.a.</i>
South Australia(a)—								
Metropolitan—								
Capital city	1	4	21	5,846	437	121,278	302,000	15,050
Other	20	100	587	158,054	5,157	n.a.	1,132,000	56,626
Outside metropolitan area	120	36,857	406	95,205	11,208	n.a.	920,000	45,976
<i>Total, South Australia</i>	<i>141</i>	<i>36,961</i>	<i>1,014</i>	<i>259,105</i>	<i>16,802</i>	<i>n.a.</i>	<i>2,354,000</i>	<i>117,652</i>
Western Australia(a)—								
Metropolitan—								
Capital city	1	16	96	26,845	1,001	5,837	n.a.	13,254
Other	16	107	361	88,003	2,688	107,054	n.a.	9,560
Outside metropolitan area	129	624,466	330	79,469	10,016	168,443	n.a.	4,334
<i>Total, Western Australia</i>	<i>146</i>	<i>624,589</i>	<i>787</i>	<i>194,317</i>	<i>13,705</i>	<i>281,333</i>	<i>n.a.</i>	<i>27,149</i>

For footnotes see next page.

CORRIGENDUM

page 828

add to text preceding table:

In the following table 'Metropolitan Areas' include the whole of some shires and municipalities *part only* of which is regarded as metropolitan for Census and other purposes. This is because the financial activity of such areas cannot be split between the 'metropolitan' and 'other' sections. The Areas should not be compared with Census Metropolitan Areas.



LOCAL GOVERNMENT AUTHORITIES: AREA, POPULATION, DWELLINGS, AND VALUE OF RATABLE PROPERTY, STATES, 1963-64—continued

Location	Number	Area '000 acres	Popula- tion '000 (a)	Dwellings		Value of ratable property		
				Occu- pied	Unoccu- pied	Unim- proved capital value \$'000	Im- proved capital value \$'000	Annual value \$'000
				No. (b)	No. (b)			
Tasmania(a)—								
Metropolitan—								
Capital city	1	20	54	15,281	507	96,721	176,814	16,996
Other	2	92	66	14,483	795	35,678	120,956	8,074
Outside metropolitan area	46	16,774	244	61,494	7,280	139,231	505,689	32,442
<i>Total, Tasmania</i>	49	16,885	364	91,258	8,582	271,629	803,459	57,512

(a) Year ended 30 June 1964. (b) Particulars of dwellings as at Census 30 June 1961. (c) Year ended 31 December 1963. (d) Year ended 30 September 1964. (e) Excludes Yallourn Works Area under the jurisdiction of the State Electricity Commission. (f) Includes City of Redcliffe and that part of Pine Rivers Shire within the Metropolitan Area of Brisbane but outside the Brisbane City Area.

Local government finances

The following tables show the latest available financial statistics for local government authorities. The figures relate to the year 1963-64 except for New South Wales, where they relate to the year 1963. For further detail on local government finances see *State, Territory and Local Government Authorities' Finance and Government Securities*, Bulletin No. 3, 1964-65, issued by this Bureau.

Ordinary services. In the returns of revenue and expenditure for 1963-64 in the following tables the proceeds from loans and expenditure thereof have been excluded. The financial operations of business undertakings controlled by the various local government authorities are given in the next paragraph. 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, STATES, 1963-64

	N.S.W. (a)	Vic. (b)	Qld (c)	S.A. (c)	W.A. (c)	Tas. (c)	Total	
REVENUE (EXCLUDING LOAN RECEIPTS) (\$'000)								
Taxation—								
Rates (net)	99,584	58,350	34,301	16,968	11,189	} 6,196	227,853	
Penalties	1,013	251	408	205	211		77	3,447
Licences	2,054	491
<i>Total, taxation</i>	102,652	59,092	34,710	17,173	11,400	6,273	231,300	
Public works and services—								
Sanitary and garbage services	9,100	3,675	6,435	166	1,063	318	20,757	
Council properties	8,837	(d)11,907	1,703	1,253	3,469	721	27,890	
Street construction	6,379	4,589	..	(e) 8,532	1,550	12	21,062	
Other	9,911	2,626	971	246	596	562	14,911	
<i>Total, public works, etc.</i>	34,228	22,797	9,108	10,196	6,678	1,614	84,620	
Governments grants—								
Roads	28,093	521	4,982	3,880	5,716	1,267	44,459	
Other	4,158	3,918	672	437	248	825	10,257	
<i>Total, government grants</i>	32,251	4,439	5,654	4,317	5,964	2,092	54,716	
Profits from business under- takings . . . . .	..	950	..	..	..	..	950
Fees and fines . . . . .	..	778	..	..	170	..	947
All other . . . . .	..	968	(f)14,916	150	4,005	499	20,538
<i>Total revenue</i>	169,130	89,023	64,388	31,836	28,217	10,478	393,072	

For footnotes see next page.

LOCAL GOVERNMENT AUTHORITIES: ORDINARY SERVICES—REVENUE AND EXPENDITURE, STATES, 1963-64—continued

	N.S.W. (a)	Vic. (b)	Qld (c)	S.A. (c)	W.A. (c)	Tas. (c)	Total
EXPENDITURE (EXCLUDING LOAN EXPENDITURE) (\$'000)							
General administration	10,958	11,800	5,380	2,577	2,538	1,183	34,435
Debt services (excluding business undertakings—							
Interest	6,522	4,926	7,121	1,150	1,852	856	22,426
Redemption	11,424	6,156	7,478	1,852	2,773	847	30,532
Exchange	23	..	215	..	..	..	237
Other . . . . .	..	64	58	..	..	..	122
<i>Total, debt, etc.</i>	<i>17,969</i>	<i>11,146</i>	<i>14,872</i>	<i>3,003</i>	<i>4,625</i>	<i>1,703</i>	<i>53,318</i>
Public works and services—							
Roads, streets and bridges	74,185	29,642	17,125	19,823	8,668	4,160	153,603
Health administration	4,579	964	6,594	585	523	213	36,549
Sanitary and garbage services	11,768	8,739	973	957	1,331	296	8,149
Street lighting	3,897	1,884	973	691	441	264	8,149
Council properties	21,189	(g) 16,002	7,489	2,934	7,502	1,733	56,850
Other	9,158	3,012	331	440	1,964	42	14,946
<i>Total, public works, etc.</i>	<i>124,776</i>	<i>60,242</i>	<i>32,512</i>	<i>25,430</i>	<i>20,430</i>	<i>6,707</i>	<i>270,097</i>
Grants—							
Fire brigades	895	1,327	456	320	296	112	3,406
Hospitals and ambulances	510	260	..	567	21	..	12,062
Other charities . . . . .	..	..	..	26	..	..	..
Other	(h) 4,986	(i) 3,584	1,636	95	122	254	..
<i>Total, grants</i>	<i>6,391</i>	<i>5,171</i>	<i>2,092</i>	<i>1,009</i>	<i>440</i>	<i>366</i>	<i>15,468</i>
All other	5,601	2,179	(j) 9,481	..	637	323	18,221
<i>Total expenditure</i>	<i>165,695</i>	<i>90,538</i>	<i>64,337</i>	<i>32,018</i>	<i>28,669</i>	<i>10,282</i>	<i>391,540</i>

(a) Figures for New South Wales relate to the year ended 31 December 1963, and are on an income and expenditure basis as distinct from those of other States which are on a cash basis. (b) Year ended 30 September 1964. (c) Year ended 30 June 1964. (d) Includes \$5,847,000 plant hire. (e) Includes \$5,526,000 reimbursement from Highways Department. (f) Includes the following reimbursements: \$4,234,000 from Main Roads Department, \$1,306,000 from other State Government Departments, and \$3,934,000 from other sources. (g) Includes \$1,573,000 plant and equipment. (h) To Main Roads Department. (i) Includes \$1,613,000 to Country Roads Board. (j) Includes expenditure on work done for reimbursement: for Main Roads Department \$4,322,000; for other State Government Departments \$1,333,000; other \$3,644,000.

LOCAL GOVERNMENT AUTHORITIES: ORDINARY SERVICES—REVENUE AND EXPENDITURE, STATES, 1960 TO 1964

(\$'000)

Year	N.S.W.(a)	Vic.(b)	Qld(c)	S.A.(c)	W.A.	Tas.(c)	Total
Revenue(d)—							
1960	122,047	65,728	51,186	21,333	(e) 18,875	6,808	285,977
1961	135,248	71,673	53,397	23,779	(e) 20,990	7,598	312,685
1962	150,438	78,063	56,940	26,658	(c) 21,073	8,406	341,578
1963	159,998	83,941	62,668	27,589	(c) 25,356	9,796	369,349
1964	169,130	89,023	64,388	31,836	(c) 28,217	10,478	393,072
Expenditure(d)—							
1960	117,822	64,590	51,262	21,796	(e) 18,730	6,820	281,021
1961	135,926	72,827	54,433	24,926	(e) 21,162	7,673	316,946
1962	149,928	78,142	56,093	26,814	(e) 20,763	8,161	339,900
1963	159,515	83,714	61,901	27,341	(c) 25,071	9,434	366,975
1964	165,695	90,538	64,337	32,018	(c) 28,669	10,282	391,540

(a) Years ended previous 31 December. (b) Years ended 30 September. (c) Years ended 30 June. (d) Excludes loan receipts or expenditure. (e) Municipalities—years ended 31 October; Road Districts—years ended 30 June.

Business undertakings. The tables following show, for 1963-64, 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, STATES, 1963-64 (\$'000)

	N.S.W. (a)	Vic. (b)	Qld (c)	S.A. (c)	W.A. (c)	Tas. (c)	Total
REVENUE (EXCLUDING LOAN RECEIPTS)							
Water supply and sewerage—							
Rates	8,161			..	..	2,947	} 25,444
Charges for services and sales of products	2,230	514	5,407	..	..	364	
Other (including grants)	(d) 2,264	14	5,773	6	42	429	
<i>Total, water supply, etc.</i>	12,655	528	12,211	6	42	3,740	29,183
Electricity and gas—							
Rates	1,155	..	17	..	..	..	1,171
Charges for services and sales of products	180,946	36,942	26,109	1,165	1,925	..	247,087
Other (including grants)	4,709	280	3,284	466	..	..	8,739
<i>Total, electricity, etc.</i>	186,810	37,222	29,410	1,630	1,925	..	256,997
Railways, tramways and omnibuses—							
Charges for services and sales of products . . . . .	..	..	7,692	..	..	..	7,692
Other (including grants) . . . . .	..	..	280	..	..	..	280
<i>Total, railways, etc.</i> . . . . .	..	..	7,972	..	..	..	7,972
Other—							
Rates	(e) 27	(f)	(g) 22	(h)	(i)	(j)	49
Charges for services and sales of products	12,104	2,239	939	231	175	309	15,997
Other (including grants)	424	78	8	22	..	265	798
<i>Total, other</i>	12,555	2,317	969	253	175	574	16,843
Grand total	212,020	40,067	50,563	1,889	2,142	4,314	310,995
EXPENDITURE (EXCLUDING LOAN EXPENDITURE)							
Water supply and sewerage—							
Working expenses	5,060	361	5,083	6	19	1,924	12,452
Depreciation	(k) -218	50	..	..	..	..	-168
Debt charges	5,129	137	5,175	..	35	1,967	12,443
Other (including transfers to general revenue and construction) . . . . .	..	5	1,370	..	..	52	1,427
<i>Total, water supply, etc.</i>	9,971	553	11,628	6	53	3,944	26,154
Electricity and gas—							
Working expenses	153,222	33,568	20,700	1,024	1,310	..	209,824
Depreciation	(k) 3,521	1,166	..	..	192	..	4,879
Debt charges	20,407	1,453	6,026	371	243	..	28,501
Other (including transfers to general revenue and construction) . . . . .	..	852	2,253	69	..	..	3,173
<i>Total, electricity, etc.</i>	177,149	37,039	28,979	1,464	1,746	..	246,378
Railways, tramways, and omnibuses—							
Working expenses . . . . .	..	..	7,804	..	..	..	7,804
Debt charges . . . . .	..	..	786	..	..	..	786
Other (including transfers to general revenue and construction) . . . . .	..	..	275	..	..	..	275
<i>Total, railways, etc.</i> . . . . .	..	..	8,865	..	..	..	8,865
Other—							
Working expenses	(e) 11,394	(f) 1,732	(g) 427	(h) 254	(i) 150	(j) 377	14,333
Depreciation	75	120	..	..	..	..	195
Debt charges	583	224	101	2	..	51	961
Other (including transfers to general revenue and construction) . . . . .	..	216	167	19	..	..	402
<i>Total, other</i>	12,052	2,292	695	275	150	428	15,891
Grand total	199,171	39,883	50,167	1,745	1,949	4,372	297,288

(a) Year ended 31 December 1963. (b) Year ended 30 September 1964. (c) Year ended 30 June 1964. (d) Includes Government grant, \$1,511,000, for part of cost of new works borne by Government. (e) Abattoirs. (f) Abattoirs, hydraulic power undertakings, quarries, iceworks, and reinforced concrete pipe and culvert works. (g) Off-street car parking, municipal markets, hostels, hotels, and cinemas. (h) Quarries, hospitals and cinemas. (i) Quarries, canteen and abattoirs. (j) Abattoirs. (k) Net balance after deducting charge for debt redemption. The full amount of charge for debt redemption is included under debt charges.

Minus sign (—) indicates an excess of credits.

The next table shows the revenue and expenditure, other than loan, of local government business undertakings for the years 1959-60 to 1963-64.

LOCAL GOVERNMENT AUTHORITIES: BUSINESS UNDERTAKINGS—REVENUE AND EXPENDITURE, STATES, 1960 TO 1964

(\$'000)

Year	N.S.W. (a)	Vic. (b)	Qld (c)	S.A. (c)	W.A.	Tas. (c)	Total
Revenue(d)—							
1960	145,581	33,010	30,659	1,202	(e) 1,792	2,974	215,217
1961	160,553	33,769	32,364	1,255	(e) 1,729	3,269	232,939
1962	175,489	35,424	35,718	1,311	(c) 1,536	3,691	253,170
1963	194,460	38,305	42,154	1,505	(c) 1,857	3,969	282,251
1964	212,020	40,067	50,563	1,889	(c) 2,142	4,314	310,995
Expenditure(d)—							
1960	139,255	32,404	30,961	1,251	(e) 1,771	2,942	208,583
1961	155,170	33,464	34,634	1,243	(e) 1,738	3,251	229,500
1962	167,923	35,353	35,452	1,297	(c) 1,422	3,618	245,064
1963	183,801	37,982	41,631	1,539	(c) 1,789	3,823	270,565
1964	199,171	39,883	50,167	1,745	(c) 1,949	4,372	297,288

(a) Years ended previous 31 December. (b) Years ended 30 September. (c) Years ended 30 June.
(d) Excludes loan receipts or expenditure. (e) Municipalities—years ended 31 October; Road Districts—years ended 30 June.

Loan expenditure. The tables below show particulars for 1963-64 of loan expenditure on works connected with the ordinary services and the business undertakings of local government authorities.

LOCAL GOVERNMENT AUTHORITIES: LOAN EXPENDITURE, STATES 1963-64

(\$'000)

—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
Ordinary services—							
Roads, bridges, streets, footpaths, drainage and sewerage	10,455	7,768	25,066	4,277	1,774	1,880	51,220
Council properties	(a) 7,942	(a) 5,174	} (a) 6,507	{ 661	(a) 2,587	(a) 995	} 29,914
Parks, gardens, and recreational reserves	2,004	1,873						426	1,051	694
Other	(b) 2,324	1,129	852	20	273	721	5,319
<i>Total, ordinary services</i>	22,725	15,944	32,426	5,383	5,685	4,289	86,453
Business undertakings—							
Water supply	5,513	227	7,355	..	..	1,415	14,510
Sewerage	3,814	..	..	..	4	1,665	5,484
Electricity and gas	21,876	3,165	4,158	94	509	..	29,802
Railways, tramways and omnibuses . . . . .	..	..	775	..	..	..	775
Abattoirs	2,938	119	..	..	..	62	3,119
Other . . . . .	..	2	146	..	..	..	148
<i>Total, business undertakings</i>	34,142	3,513	12,434	94	513	3,142	53,839
Grand total	56,867	19,457	44,860	5,478	6,199	7,431	140,291

(a) Includes plant. (b) Includes advances for homes, \$607,000.
For years to which particulars relate see following table.

The following table shows the loan expenditure on works connected with local government ordinary services and business undertakings during the years 1959-60 to 1963-64.

LOCAL GOVERNMENT AUTHORITIES: LOAN EXPENDITURE
STATES, 1960 TO 1964
(\$'000)

Year	N.S.W. (a)	Vic. (b)	Qld (c)	S.A. (c)	W.A.	Tas. (c)	Total
Ordinary services—							
1960 . . .	14,003	9,465	16,960	2,315	(d) 3,637	2,218	48,598
1961 . . .	15,189	10,359	22,815	3,579	(d) 4,542	2,553	59,038
1962 . . .	15,847	10,919	22,653	3,354	(c) 5,492	2,774	61,038
1963 . . .	19,856	12,478	25,974	4,977	(c) 6,836	3,862	73,982
1964 . . .	22,725	15,944	32,426	5,383	(c) 5,685	4,289	86,453
Business undertakings—							
1960 . . .	25,551	2,638	12,607	116	(d) 157	2,453	43,522
1961 . . .	30,299	2,736	15,148	82	(d) 275	2,707	51,248
1962 . . .	28,256	3,605	15,133	43	(c) 311	2,884	50,232
1963 . . .	36,988	3,665	10,927	114	(c) 596	3,350	55,640
1964 . . .	34,142	3,513	12,434	94	(c) 513	3,142	53,839

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

Local government and semi-governmental authorities' debt

Statistics of local government and semi-governmental debt for 1959-60 to 1963-64 are given in the following paragraph. The information covers all local government authorities and those semi-governmental authorities responsible for the provision of the following services.

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

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

Queensland. Water Supply and Sewerage, Irrigation and Drainage, Harbours, Electricity Supply, Fire Brigades, University, Hospitals and Ambulances, Marketing (Buying and Selling and Agency), and Industry Assistance.

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

Western Australia. Water Supply and Sewerage, Harbours, Transport, Electricity Supply, Fire Brigades, Hospitals, Marketing (Agency), Housing, University of Western Australia, and Miscellaneous.

Tasmania. Harbours, Electricity, Supply, Fire Brigades, Transport, Housing, and Water Supply.

A detailed list of the authorities included is shown in *State, Territory and Local Government Authorities' Finance and Government Securities*, Bulletin No. 3, 1964-65.

The following table provides a summary of new money loan raisings, provisions for debt redemption, debt outstanding and interest payable by local government and semi-governmental authorities for the year 1963-64. For greater detail see *State, Territory and Local Government Authorities' Finance and Government Securities*.

LOCAL GOVERNMENT AND SEMI-GOVERNMENTAL AUTHORITIES: NEW MONEY
LOAN RAISINGS, REDEMPTION, DEBT, AND INTEREST PAYABLE, STATES
1963-64
(\$'000)

—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
LOCAL GOVERNMENT AUTHORITIES							
New money loan raisings—							
From government . . .	40	333	4,286	1,898	1	164	6,721
From public . . .	36,357	23,651	29,567	4,738	7,053	5,660	107,026
<i>Total loan raisings . . .</i>	<i>36,396</i>	<i>23,984</i>	<i>33,853</i>	<i>6,636</i>	<i>7,054</i>	<i>5,824</i>	<i>113,746</i>
Funds provided for redemption—							
Government loans . . .	481	130	1,740	982	1	29	3,363
Loans due to public . . .	13,833	8,793	12,040	1,193	2,982	1,528	40,369
<i>Total funds, redemptions . . .</i>	<i>14,314</i>	<i>8,923</i>	<i>13,780</i>	<i>2,175</i>	<i>2,982</i>	<i>1,556</i>	<i>43,732</i>
Accumulated sinking fund balance . . .	10,493	7,447	17,929	..	122	729	36,720
Debt—							
Due to government . . .	3,517	7,060	33,754	4,738	18	980	50,067
Due to banks (net overdraft) . . .	309	786	..	..	72	..	1,167
Due to public creditor(a) . . .	215,937	134,534	256,864	22,784	39,936	37,764	707,819
<i>Total debt(a) . . .</i>	<i>219,763</i>	<i>142,380</i>	<i>290,618</i>	<i>27,522</i>	<i>40,027</i>	<i>38,743</i>	<i>759,054</i>
Maturing overseas(a)(b) . . .	2,500	..	5,400	..	..	..	7,900
Annual interest payable(a) . . .	n.a.	7,459	15,031	1,333	2,137	2,053	n.a.

SEMI-GOVERNMENTAL AND OTHER PUBLIC AUTHORITIES

New money loan raisings—							
From government . . .	32,317	41,955	14,363	29,163	11,617	17,311	146,726
From public . . .	61,635	103,669	32,460	10,906	8,585	4,043	221,299
<i>Total loan raisings . . .</i>	<i>93,953</i>	<i>145,624</i>	<i>46,823</i>	<i>40,069</i>	<i>20,202</i>	<i>21,354</i>	<i>368,025</i>
Funds provided for redemption—							
Government loans . . .	6,539	5,379	1,096	3,023	1,608	2,138	19,782
Loans due to public . . .	18,980	11,289	8,680	139	1,775	1,451	42,314
<i>Total funds, redemptions . . .</i>	<i>25,518</i>	<i>16,668</i>	<i>9,776</i>	<i>3,162</i>	<i>3,383</i>	<i>3,589</i>	<i>62,097</i>
Accumulated sinking fund balance . . .	91,991	35,629	16,437	1,759	5,293	2,477	153,587
Debt—							
Due to government . . .	469,475	553,890	54,827	315,328	203,340	232,941	1,829,801
Due to banks (net overdraft) . . .	1,511	943	..	20	355	..	2,829
Due to public creditor(a) . . .	725,007	1,224,654	223,573	103,618	58,384	46,595	2,381,829
<i>Total debt(a) . . .</i>	<i>1,195,992</i>	<i>1,779,487</i>	<i>278,400</i>	<i>418,965</i>	<i>262,078</i>	<i>279,536</i>	<i>4,214,458</i>
Maturing overseas(a)(b) . . .	12,500	10,722	..	..	..	..	23,222
Annual interest payable(a) . . .	n.a.	84,975	14,369	19,123	11,298	12,666	n.a.

(a) Includes debt or interest payable in London and New York. Debt in London is payable in £ sterling which have been converted at the I.M.F. rate of £Stg.1 to \$A2.50; New York debt is payable in U.S. dollars which have been converted at the I.M.F. rate of \$U.S.1.12 to \$A1. (b) Included in debt figures above.

In the table above and the following table 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 from the public 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.

**LOCAL GOVERNMENT AND SEMI-GOVERNMENTAL AUTHORITIES: NEW MONEY
LOAN RAISINGS, REDEMPTION AND DEBT, AUSTRALIA, 1959-60 TO 1963-64**

(\$'000)

	1959-60	1960-61	1961-62	1962-63	1963-64
LOCAL GOVERNMENT AUTHORITIES					
New money loan raisings—					
From government	4,642	5,940	3,659	5,375	6,721
From public	68,739	71,459	91,148	103,934	107,026
<i>Total loan raisings</i>	<i>73,380</i>	<i>77,399</i>	<i>94,807</i>	<i>109,309</i>	<i>113,746</i>
Funds provided for redemption—					
Government loans	3,001	3,154	3,049	2,999	3,363
Loans due to public	26,450	28,322	30,724	36,564	40,369
<i>Total funds, redemptions</i>	<i>29,452</i>	<i>31,476</i>	<i>33,772</i>	<i>39,563</i>	<i>43,732</i>
Accumulated sinking fund balance	30,632	33,210	36,549	36,930	36,720
Debt—					
Due to government	38,054	40,983	44,014	46,673	50,067
Due to banks (net overdraft)	931	1,051	1,385	1,724	1,167
Due to public creditor(a)	472,358	516,484	579,630	640,910	707,819
<i>Total debt(a)</i>	<i>511,342</i>	<i>558,519</i>	<i>625,030</i>	<i>689,308</i>	<i>759,054</i>
Maturing overseas(a)(b)	11,924	11,001	10,643	8,257	7,900
SEMI-GOVERNMENTAL AND OTHER PUBLIC AUTHORITIES					
New money loan raisings—					
From government	115,148	124,293	126,106	131,127	146,726
From public	173,922	144,289	180,881	218,115	221,299
<i>Total loan raisings</i>	<i>289,070</i>	<i>268,582</i>	<i>306,987</i>	<i>349,242</i>	<i>368,025</i>
Funds provided for redemption—					
Government loans	15,232	16,839	17,670	18,102	19,782
Loans due to public	32,106	34,977	37,689	44,492	42,314
<i>Total funds, redemptions</i>	<i>47,338</i>	<i>51,816</i>	<i>55,359</i>	<i>62,594</i>	<i>62,097</i>
Accumulated sinking fund balance	98,894	115,115	127,048	139,117	153,587
Debt—					
Due to government	1,353,104	1,463,645	1,572,482	1,702,593	1,829,801
Due to banks (net overdraft)	8,830	12,186	11,688	7,333	2,829
Due to public creditor(a)	1,702,416	1,830,308	1,992,297	2,187,816	2,381,829
<i>Total debt(a)</i>	<i>3,064,350</i>	<i>3,306,139</i>	<i>3,576,467</i>	<i>3,897,743</i>	<i>4,214,458</i>
Maturing overseas(a)(b)	23,110	23,286	23,266	23,244	23,222

(a) See footnote (a) page 834.

(b) Included in debt figures above.

Roads and bridges

Commonwealth Government grants

The following table shows the allocation to the States under the several Commonwealth Aid Roads Acts for road construction, maintenance, repair and other works connected with transport for each of the years 1960-61 to 1964-65. After 1 July 1959, when the *Commonwealth Aid Roads Act* 1959 came into operation, the Commonwealth made separate provision for expenditure on strategic roads and the promotion of road safety practices. See also the chapter Public Finance, and Finance bulletins.

**ROAD CONSTRUCTION, MAINTENANCE, ETC.: GRANTS UNDER THE
COMMONWEALTH AID ROADS ACTS, STATES, 1960-61 TO 1964-65
(\$'000)**

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
1960-61	25,740	18,368	16,856	10,256	16,180	4,600	92,000
1961-62	27,622	20,160	18,186	11,504	17,528	5,000	100,000
1962-63	29,880	21,754	19,592	12,400	18,974	5,400	108,000
1963-64	32,442	22,824	21,070	13,338	20,526	5,800	116,000
1964-65	36,346	25,576	23,670	14,902	23,006	6,500	130,000

New South Wales

Main roads administration is organized as a separate department under the control of a Commissioner. The activities of the Department of Main Roads include works on main, developmental, secondary and tourist roads throughout the State, all roads in the unincorporated portion of the Western Division, and certain associated works, principally bridges and vehicular ferries, constructed and maintained from government funds. The Department of Main Roads co-operates with the municipal and shire councils in the work of constructing and maintaining the main roads system. Public roads may be proclaimed (*see* page 844) by the Governor as main roads on the recommendation of the Commissioner for Main Roads.

In the County of Cumberland, which for the purposes of the Main Roads Act is deemed to include the City of Blue Mountains and small sections of other councils' areas on the boundary of the County of Cumberland, the full cost of road and bridge construction is paid from the funds of the Department of Main Roads. The Councils contribute towards the cost at the rate of $\frac{1}{4}$ d. in the £ (equivalent to 0.2083 cents in the \$) on the unimproved value of ratable property or at a rate determined annually by the Commissioner of between ten per cent and fifteen per cent of Council's total rate income, whichever is the less. In the former case the rate payable in respect of lands used principally for primary production is one-half the rate levied on other lands. In country districts the Department meets the full cost of road and bridge works on State highways, the full cost of bridge construction works and three-quarters of the cost of road construction and road and bridge maintenance works on trunk roads, and three-quarters of the cost of bridge construction works and two-thirds of the cost of road construction and road and bridge maintenance works on ordinary main roads. The cost of constructing developmental roads and works is borne in full by the Department of Main Roads, but local Councils are required to maintain them in a satisfactory condition. The Department of Main Roads generally meets half the cost of works on secondary roads and on tourist roads.

Length of roads. The total length of proclaimed roads (*see* page 844) in New South Wales at 30 June 1965 was 25,650 miles classified as: State highways, 6,531 miles; trunk roads, 4,153 miles; ordinary main roads, 11,627 miles; secondary roads, 138 miles; developmental roads, 3,021 miles; and tourist roads, 180 miles. The length of main roads (highways, trunk and ordinary main roads) maintained by the Department of Main Roads at 30 June 1965 was 5,912 miles (26 per cent) while the length maintained by Councils was 16,399 miles (74 per cent). These figures exclude secondary, developmental and tourist roads, and unclassified roads in the Western Division of the State. In the area outside the County of Cumberland (the metropolis and adjoining areas) the proportions of main roads maintained by the Department and Councils respectively were: State highways, 74 per cent, 26 per cent; and trunk and ordinary main roads, 5 per cent, 95 per cent. Unclassified roads in the Western Division of the State, totalling 1,102 miles, were maintained by the Department, while developmental roads, totalling 3,021 miles, were maintained by Councils. In the County of Cumberland the proportions of main roads maintained by the Department and Councils respectively were: State highways, 98 per cent, 2 per cent; and ordinary main roads, 53 per cent, 47 per cent. Secondary roads totalling 138 miles were maintained by Councils. Of the 180 miles of tourist roads throughout the State, 157 miles (87 per cent) were maintained by Councils and 23 miles (13 per cent) by the Department. In 1963 the total length of all roads in New South Wales was estimated at 131,140 miles. The length of roads, according to their surface, were as follows: bitumen or concrete, 23,468 miles; gravel or stone, 45,513 miles; formed only, 28,660 miles; cleared only, 33,499 miles.

Department of Main Roads—operations. Progress has continued with the implementation of the Department's plan for main roads development in the County of Cumberland. Most of the Department's proposals have been incorporated in the County of Cumberland Planning Scheme approved by Parliament under the Local Government (Amendment) Act, 1951. The Department's proposals for the development of the main roads system in Newcastle and the surrounding

districts have been largely incorporated in the Northumberland County District Planning Scheme, and some sections of the system have been constructed. With some modifications, the Department's proposals for the planning of the main roads in the Wollongong-Port Kembla district have been incorporated in the planning scheme prepared by the Illawarra Planning Authority.

During 1964-65 seventy-six new bridges were constructed. In addition, sixty-eight concrete box culverts each having a waterway width of twenty feet or more were completed. Major bridge works under construction included eighteen steel and/or concrete bridges with an aggregate length of 12,441 feet.

Department of Main Roads—revenue and expenditure. The funds of the Department of Main Roads are derived principally from motor vehicle taxation, charges on heavy commercial goods vehicles under the Road Maintenance (Contribution) Act, 1958, grants under Commonwealth Aid Roads Act (see page 835 and the chapter Public Finance), other grants from the State or Commonwealth Governments, and proceeds of a levy on municipal and shire councils in the County of Cumberland in accordance with the Main Roads Act, 1924-1965. The State Government also makes repayable advances for Main Roads Department works, and since 1963 the Commissioner for Main Roads has had the power (with the approval of the Governor on the recommendation of the Treasurer) to borrow moneys.

DEPARTMENT OF MAIN ROADS, NEW SOUTH WALES
REVENUE AND EXPENDITURE, 1960-61 TO 1964-65

(\$'000)

	1960-61	1961-62	1962-63	1963-64	1964-65
REVENUE(a)					
Motor vehicle taxation, registration and licence fees	24,865	25,366	30,327	38,682	41,059
Commonwealth Aid Roads Act	16,478	17,873	19,080	20,617	22,934
State and Commonwealth grants	750	1,408	475	197	70
Contributions by other departments and bodies	765	475	342	326	97
Local authorities' contributions—					
Under Section 11 of Main Roads Act	3,568	4,289	4,506	5,273	5,768
Other	149	250	229	490	91
Other	310	322	277	343	531
Total	46,886	49,983	55,234	65,929	70,549
EXPENDITURE(b)					
Roads and bridges—					
Construction	35,463	37,874	38,000	48,199	56,153
Maintenance	12,275	12,686	12,661	16,209	16,514
Administration	1,825	2,257	2,632	2,820	3,425
Interest, exchange, etc., on debt	454	505	566	986	1,237
Other(c)	1,084	1,064	1,242	1,376	1,125
Total	51,102	54,387	55,100	69,589	78,454

(a) Excludes repayable advances by the State Government and private loans (\$1,150,000 in 1960-61, \$1,270,000 in 1961-62, \$1,780,000 in 1962-63, \$4,020,000 in 1963-64, and \$7,500,000 in 1964-65), and transfers from Sydney Harbour Bridge Account for Expressway construction (\$1,536,000 in 1960-61, \$3,644,000 in 1961-62, \$4,162,000 in 1962-63, \$3,078,000 in 1963-64, and \$2,360,000 in 1964-65). Expenditure from these amounts is fully reflected in Expenditure. (b) Excludes debt redemption (\$97,632 in 1960-61, \$106,150 in 1961-62, \$114,176 in 1962-63, \$123,992 in 1963-64, and \$137,280 in 1964-65) and repayment of government advances (\$800,000 in 1960-61, \$120,000 in 1962-63, \$120,000 in 1963-64, and \$1,020,000 in 1964-65). (c) Mainly purchase of assets not subject to annual depreciation charge. The purchase of other assets is omitted here because the depreciation charge for them is reflected each year in 'Roads and bridges'.

Figures shown on page 837 represent the aggregate revenue and expenditure of five funds—the County of Cumberland Main Roads General and Special Purposes Funds, the Country Main Roads General and Special Purposes Funds, and the Developmental Roads Fund.

Sydney Harbour Bridge. The Sydney Harbour Bridge was opened for traffic on 19 March 1932. The main span is 1,650 feet and clearance for shipping 170 feet from high water level. The deck, 160 feet wide, carries a roadway of eight traffic lanes and two railway tracks, and there is also a footway on each side. The capital cost of the bridge and associated roadways to 30 June 1965 was \$24,373,728, but this amount will be reduced slightly on completion of the disposal of the remaining surplus resumed property. The portion met from repayable loan funds, over \$21,000,000, is repayable from toll income. Income for 1964–65 amounted to \$4,166,000, including road tolls, \$3,796,000; railway passenger tolls, \$282,000; and omnibus passenger tolls, \$30,000. Expenditure amounted to \$2,264,000, including interest, exchange, flotation expenses, etc., \$854,160; sinking fund, \$307,840; maintenance, \$567,310. The accumulated surpluses of the Bridge Account have been used to finance conversion of tram tracks to roadway on, and the construction of expressway-type approaches to, the bridge. From 1957–58 to 1964–65 a total of \$2,233,332 was expended on tram track conversion and \$15,704,000 on the bridge expressway-type approaches. The account showed a deficiency of \$1,817,356 at 30 June 1965. During 1964–65, 37,242,852 road vehicles (excluding omnibuses and exempt vehicles), 25,817,813 rail travellers and 13,670,754 omnibus travellers crossed the bridge, contributing respectively 92 per cent, 7 per cent, and 1 per cent of the total toll revenue.

Victoria

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 which roads should be declared in the various classifications; to supervise the construction, reconstruction and maintenance of these roads; 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 communications or to improve the conditions of traffic.

Length of roads. The total length of roads declared (see page 844) by the Country Roads Board in Victoria at 30 June 1965 was 14,502 miles, classified as follows: State highways, 4,465 miles; main roads, 9,094 miles; by-pass roads, 37 miles; tourist roads, 445 miles; forest roads, 461 miles. The length of the surface sealed (bitumen or concrete) included in the foregoing mileage was 12,391 miles or 85 per cent of the total. It is estimated that, in addition to the 14,502 miles of classified roads, there were approximately 87,000 miles of unclassified roads at 30 June 1965. The latest detailed estimate of the total length of roads and streets in Victoria (as at 30 September 1964) provides the following information: bitumen or concrete, 25,022 miles; gravel or stone, 30,966 miles; formed only, 21,384 miles; cleared only, 23,024 miles; total, 100,396 miles.

Country Roads Board—operations. During 1964–65, 1,899 miles of declared roads under the Board's control were treated with bitumen. In addition, 1,033 miles of undeclared roads, for which the Board contributed funds, were similarly treated. The total length of bitumen treatment carried out in 1964–65 was 3,079 miles (including 147 miles for other authorities). Of the work on the roads under the Board's control in 1964–65, 645 miles related to State highways and by-pass roads. During 1964–65, 170 bridge projects of an estimated total value of \$4,728,000 were initiated. Of these, 116, estimated to cost \$1,768,400, were under municipal supervision.

Country Roads Board—receipts and payments. The funds of the Country Roads Board are derived principally from motor registration fees, two-thirds of additional registration fees (charged on initial registration or transfer), a proportion of drivers' licence fees, fines, payments by the Commonwealth Government under the Commonwealth Aid Roads Acts, road charges under the Commercial Goods Vehicles Act, and repayments by municipalities. As from 1 July 1964 proceeds from fines are paid to consolidated revenue, but an equivalent amount to replace them is made available to the Board from the loan fund. In addition, loans have been authorized from time to time under the Country Roads Acts for permanent works on main and developmental roads, State highways, tourists' roads, and forest roads, while the State Government has provided, free of repayment, loan moneys for restoration of flood and bush fire damage. During 1964–65 loan receipts and payments each amounted to \$762,000. The total loan expenditure to 30 June 1965 was \$32,946,596. This figure does not include loan expenditure from the Developmental Roads Loan Account, a fund which was created for the purpose of constructing and maintaining subsidiary or developmental roads. Loan money raised on this account was exhausted at 30 June 1937, the total expenditure at that date being \$12,851,516.

COUNTRY ROADS BOARD, VICTORIA: RECEIPTS AND PAYMENTS
1960-61 TO 1964-65
(\$'000)

—	1960-61	1961-62	1962-63	1963-64	1964-65
RECEIPTS					
Motor vehicle registration fees(a)	18,564	19,059	20,579	22,669	22,588
Drivers' licence fees(a)	513	520	637	595	603
Drivers' licence testing fees	78	154	149	162	187
Municipalities' payments	1,577	1,555	1,764	1,579	1,690
Commonwealth Aid Roads Acts(b)	17,968	19,755	21,351	22,431	25,182
Loans from State Government	566	1,366	602	666	762
Commonwealth-State contribution for restoration of flood damage	2	..	..	..	..
Road charges Commercial Goods Vehicles Act	4,509	4,525	4,919	5,638	5,926
Other	100	(c) 1,151	168	223	(d) 1,589
Total	43,878	48,086	50,169	53,964	58,527
PAYMENTS					
Construction and maintenance of roads and bridges—					
State highways	13,762	13,673	13,210	19,151	17,081
Main roads	11,839	14,853	13,496	14,889	15,189
By-pass roads	2,193	1,365	863	2,641	4,854
Tourist roads	1,200	1,146	939	1,425	1,422
Forest roads	551	590	553	742	714
Unclassified roads	8,456	10,386	9,668	10,107	11,131
Other	177	139	139	87	167
Plant purchase	1,416	349	1,832	1,193	697
Interest, debt redemption, etc.	1,776	1,855	1,931	1,950	1,988
Office building, Kew—capital cost	1,056	39	542	378	..
Statutory payment to Tourists' Re- sorts Fund	376	383	395	427	469
Administration and other	2,356	3,303	3,813	3,769	4,815
Total	45,159	48,082	47,378	56,758	58,525

(a) After deducting costs of collection. Prior to 1 January 1965 one half of the drivers' licence fees was credited to the funds of the Country Roads Board while the remaining half was credited to the Municipalities Assistance Fund. Since that date, of the total amount collected, one quarter is paid to the Country Roads Board, one quarter is paid to the Municipalities Assistance Fund, and one half is paid to Consolidated Revenue. (b) Excludes portion of Commonwealth Aid Roads Acts advances drawn by the Public Works Department for expenditure on wharfs, jetties, etc. (c) Includes \$1,000,000 Special Grant from Commonwealth Government. (d) Includes grant from Loan Fund, \$700,000, and temporary advance from Public Account, \$500,000.

Melbourne and Metropolitan Board of Works. Since assuming responsibility for carrying-out planning scheme proposals relating to metropolitan highways and bridges, a tentative construction programme of urgent highway works throughout the metropolitan area of Melbourne has been adopted. Expenditure on these projects up to 30 June 1965 was \$5,868,184.

Level crossings. In 1954-55 the Level Crossings Fund was created under the *Country Roads and Level Crossings Funds Act 1954* to finance (a) the elimination of level crossings or the provision of alternative routes to enable road traffic to avoid level crossings; (b) the provision of lights, signs, and lighting at, and the improvement of approaches to, level crossings; and (c) generally, the reduction of danger at level crossings. The Act provides for the payment into the Fund of one-third of all moneys received by way of additional motor registration fees and money provided under any other Act. The amount available for expenditure in 1964-65 was \$761,704, consisting entirely of receipts from owners' certificates. Expenditure from the Fund amounted to \$425,548, of which \$311,246 was incurred by the Railways Department and \$114,302 by the Country Roads Board, leaving a balance carried forward of \$733,972.

Queensland

The Department of Main Roads was constituted in February 1951, with the Commissioner of Main Roads as its permanent head. The duties of the Commissioner are to carry out surveys and investigations necessary to determine State highways, main, developmental, and secondary roads; 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 financed by the State Government by means of Treasury loans. Other roads may be built by the Public Estate Improvement Branch of the Lands Department in order to open up areas of previously inaccessible or undeveloped country.

Length of roads. The total length of *declared roads* (see page 844) in Queensland at 30 June 1965 was 24,452 miles; comprising State highways, 6,323 miles; main roads, 5,199 miles; developmental roads, 4,373 miles; and secondary roads, 8,557 miles. By the amendments to the Main Roads Act published in the Government Gazette of 6 April 1959 mining access, farmers' and tourists roads became secondary roads, and the provisions relating to the declaration of tourist tracks were repealed. The *total length of roads and streets* in Queensland at 30 June 1965 was: bitumen or concrete, 14,039 miles; gravel or stone, 19,920 miles; formed only, 42,729 miles; cleared only, 43,624 miles; total, 120,312 miles.

Department of Main Roads—operations. During 1963–64 the Department completed 1,041 miles of roads, including new construction and stage construction. Bridges of all types to a length of 8,307 linear feet were constructed, bringing the total constructed by the Department at 30 June 1964 to 239,362 feet. In addition, at 30 June 1964, 8,859 feet were under construction.

Department of Main Roads—receipts and payments. The funds of the Department of Main Roads are obtained chiefly from motor vehicle registration and collections, fees, etc. under the Transport Acts, contributions under the Commonwealth Aid Roads Acts, and loans, grants and advances from the State Government. The total receipts and payments during each of the years 1959–60 to 1963–64 are shown below.

DEPARTMENT OF MAIN ROADS, QUEENSLAND: RECEIPTS AND PAYMENTS
1959–60 TO 1963–64
(\$'000)

—	1959–60	1960–61	1961–62	1962–63	1963–64
RECEIPTS					
Motor vehicle registration, Transport Acts collections, fees, etc.	10,809	11,138	11,627	12,339	13,664
Loans from State Government . . . . .	..	..	1,820	1,668	1,046
Grants, advances, refunds, etc. from State Government	652	716	1,818	2,305	2,818
Commonwealth Aid Roads and Works Acts	15,824	16,537	19,203	20,854	24,877
Maintenance repayments—local authorities	1,416	1,446	1,494	1,555	1,586
Hire, rent, sales of plant, etc.	2,500	2,439	2,571	2,966	3,322
Other	1,203	1,047	1,217	1,275	2,126
Total	32,404	33,324	39,750	42,962	49,439
PAYMENTS					
Permanent road works and surveys(a)	22,762	21,653	26,371	28,847	34,345
Maintenance of roads	5,781	4,913	5,758	5,939	6,507
Plant, machinery, buildings, etc. (including plant maintenance)	2,690	2,790	3,039	2,573	3,351
Loans—Interest	313	215	168	120	132
Redemption	659	637	644	650	666
Administration and other	2,541	3,043	3,575	4,063	4,828
Total	34,747	33,250	39,554	42,192	49,829

(a) Includes grants to local authorities for road purposes.

South Australia

The Highways and Local Government Department is administered by the Commissioner of Highways, who is empowered, subject to the approval of the Minister of Roads, to undertake the construction, maintenance and protection of the principal roads of the State, allocate grants to councils for roadworks and supervise the expenditure of these grants, and assist Councils to purchase road-making plant and to defray the cost of roadworks. In addition, the Commissioner advises Councils on technical questions concerning the construction, maintenance or repair of roads. Funds of the Department are derived mainly from the Highways Fund, into which are paid the proceeds from motor vehicle registration and drivers' licences (less cost of collection), appropriations from loan funds, repayments of advances made to Councils and contributions by the Municipal Tramways Trust, and from contributions under the Commonwealth Aid Roads Acts.

Length of roads. In South Australia there are only two classifications of roads. These are main roads proclaimed (*see* page 844) under the provisions of the Highways Act and all other roads, commonly designated district roads. At 30 June 1965 there were 8,156 miles of *proclaimed main roads* and approximately 79,794 miles of district roads, including roads and tracks outside local government areas, totalling 87,950 miles. *Total lengths of roads*, classified by surface, were estimated to be: bitumen or concrete, 7,973 miles; gravel or stone, 13,868 miles; formed only, 10,878 miles; unformed, 55,231 miles.

State Highways and Local Government Department receipts and payments. The following table shows particulars of receipts and payments, during the years 1960-61 to 1964-65, of funds controlled by the Highways and Local Government Department.

HIGHWAYS AND LOCAL GOVERNMENT DEPARTMENT, SOUTH AUSTRALIA
RECEIPTS AND PAYMENTS, 1960-61 TO 1964-65

(\$'000)

—	1960-61	1961-62	1962-63	1963-64	1964-65
RECEIPTS					
Motor vehicles registration, licences, fees	8,223	8,586	9,074	9,978	12,075
Commonwealth Aid Roads Acts	10,256	11,505	12,400	13,337	14,903
Loans from State Government	180	400	580	950	..
Other(a)	899	1,068	1,166	1,210	1,359
Total	19,558	21,558	23,220	25,476	28,337
PAYMENTS					
Construction and reconstruction of roads and bridges(b)	12,932	14,616	15,358	19,517	18,339
Maintenance(a)(b)	4,191	4,674	4,976	5,583	5,277
Recoups to Consolidated Revenue Fund—interest, debt redemption and exchange	431	454	486	512	1,164
Advances to local and semi-governmental authorities	1,405	840	1,162	1,650	1,126
Stores, plant, machinery, suspense accounts, etc.(c)	990	814	-144	538	909
Total	19,949	21,398	21,837	27,801	26,815

(a) Includes reimbursement works for Commonwealth Government. (b) Includes administration expenses. (c) Represents gross repayments less recoveries by charges to works on account of depreciation and materials used.

Minus sign (-) denotes decrease.

Western Australia

Work connected with road construction and maintenance and associated projects in Western Australia is undertaken by the State Government, through the Main Roads Department, and by local government authorities throughout the State. The Department operates under the *Main Roads Act, 1930-1961*, and is administered by a Commissioner of Main Roads responsible

to the Minister for Works. The Act makes provision for public roads in the categories of main roads, controlled-access roads and developmental roads (*see* page 844). An additional category, that of important secondary roads, is used by the Department in determining its works programme. Within its own district each local government authority is responsible for the provision and upkeep of roads other than those provided by the Main Roads Department. In addition, the local authority is required by the Main Roads Act to maintain any developmental road situated in its district.

Length of roads. The total length of constructed roads for which financial provision was made by the Main Roads Department at 30 June 1965 was: main roads, 3,463 miles, including five miles of controlled-access roads; important secondary roads, 7,989 miles; and developmental roads, 42,004 miles. In addition, there were seventy-four miles gazetted as controlled-access roadway as yet not constructed. The total length of roads and streets in Western Australia at 30 June 1965 was made up as follows: bitumen or concrete, 12,056 miles; gravel or stone, 22,243 miles; formed only, 44,798 miles; natural state (cleared only), 28,012 miles; total, 107,109 miles.

Main Roads Department—operations. During the year 1964–65 the activities of the Department included clearing, 2,148 miles; forming, 3,485 miles; gravelling, 2,096 miles; reconditioning, 7,952 miles; and stabilizing, 82 miles. In addition, 1,762 miles were primed and sealed (including widening). New and replacement bridges constructed totalled forty-two, while eleven bridges were widened.

Main Roads Department—receipts and payments. The funds of the Main Roads Department are derived principally from allocations made under the *Commonwealth Aid Roads Act* 1964. In addition, financial assistance was given by the Commonwealth Government to the extent of \$1,500,000 in 1964–65 for the improvement of roads used for the transport of beef cattle in the Kimberley District. The five-year period relating to these additional grants terminates on 30 June 1966 with a total amount of \$6,900,000 of Commonwealth funds matched by a corresponding State contribution. Other sources of income include one-half of the net amount of traffic fees collected in the Metropolitan Traffic Area and an allocation of Department of Transport funds. (Outside the Metropolitan Traffic Area motor vehicle licence fees are collected and retained by the local authorities with the provision that from the 1 January 1965 they are required to contribute to the Central Road Trust Fund the amount of their annual vehicle licence collections which exceeds that of the base year 1958–59. Such amount is reimbursed together with an addition of 75 per cent from Commonwealth matching grants.) During 1964–65 general loan funds to the extent of \$800,000 were allocated for expenditure by the Department. Receipts and payments for the years 1960–61 to 1964–65 are shown in the following table.

MAIN ROADS DEPARTMENT, WESTERN AUSTRALIA
RECEIPTS AND PAYMENTS, 1960–61 TO 1964–65
(**\$'000**)

—	1960–61	1961–62	1962–63	1963–64	1964–65
RECEIPTS					
Motor vehicle registration, licences, fees, etc.	974	974	974	974	974
Central Trust Fund(a)	1,415	2,121	2,799	3,747	4,672
Commonwealth Aid Roads Acts	14,858	15,506	16,257	16,987	21,945
Commonwealth Aid Roads Acts— matching grants(a)	1,407	2,103	2,811	3,539	1,062
Western Australia Grant (Beef Cattle Roads) Act	..	1,000	1,400	1,500	1,500
Commonwealth-State Grant for res- toration of flood-damaged roads	..	640	..	..	..
Recoups from other authorities	434	494	740	1,124	1,455
Other	6	11	14	71	52
Total	19,094	22,849	(b)24,995	(c)27,941	31,660

For footnotes *see* next page.

MAIN ROADS DEPARTMENT, WESTERN AUSTRALIA: RECEIPTS AND PAYMENTS, 1960-61 TO 1964-65—continued

(\$'000)

	1960-61	1961-62	1962-63	1963-64	1964-65
PAYMENTS					
Construction and reconstruction of roads and bridges(d)	10,894	12,940	14,534	13,872	18,110
Maintenance of roads and bridges(d)	1,948	2,172	2,015	2,561	2,196
Grants to local authorities, etc.	2,527	2,873	2,546	2,940	2,939
Payments to local authorities from Central Road Trust Fund and Commonwealth matching grants	808	1,450	1,892	2,518	6,286
Transfer to State Consolidated Revenue	140	140	140	140	195
Plant, machinery, etc.	738	480	971	1,146	1,587
Other(d)	488	775	876	1,405	1,530
Total	17,543	20,830	22,973	(e) 24,582	(f) 32,843

(a) For 1960-61 to 1963-64 includes amounts to be distributed to metropolitan and country local authorities early in the following year. (b) Excludes \$1,400,000 advance from State Treasury. (c) Excludes \$1,000,000 advance from State Treasury. (d) Includes administration and expenditure on hire and maintenance of road construction plant, etc., and on purchase of materials. (e) Excludes \$1,400,000 refund of advance from State Treasury. (f) Excludes \$1,000,000 refund of advance from State Treasury.

Tasmania

Under the *Road Construction (Transfer of Functions) Act 1951*, which came into operation on 1 July 1951 the control of the construction and maintenance of roads and certain road making plant was vested in the Minister for Lands and Works. Works authorized by the Minister in respect of roads classified as State highways, tourist, and developmental roads are constructed by the Department of Public Works and financed from the State Highways Trust Fund, into which are paid the proceeds from Commonwealth Aid Roads grants, motor vehicle registration fees and taxes, licence fees for drivers and public transport, and other moneys made available by Parliament. In addition, provision was made under the *Road Construction (Transfer of Functions) Act* for certain works authorized by the Transport Commission to be carried out and constructed by the Department. The expenditure by the Public Works Department during 1964-65 on the construction and maintenance of roads, tracks and bridges amounted to \$13,155,580, of which \$9,019,766 was charged to road funds, \$48,466 to revenue, \$3,996,450 to loan, and \$90,898 to other funds. Except in special cases, municipal councils bear the cost of maintaining country roads and a proportion of the cost of main and secondary roads.

Length of roads. The length of classified roads (see page 844) at 30 June 1965 was 2,244 miles, comprising State highways, 1,171 miles; main roads, 662 miles; secondary roads, 196 miles; tourist roads, 46 miles; and other roads, 169 miles. The mileages of sealed (bitumen or concrete) roads and their proportions to the respective totals were: State highways, 873 miles (75 per cent); main roads, 436 miles (66 per cent); secondary, tourist and other roads, 126 miles (31 per cent). The total length of classified sealed roads was 1,435 miles (64 per cent). The total length of local authorities roads at 30 June 1965 was 8,622 miles, comprising bitumen or concrete, 1,184 miles (14 per cent); gravel or stone, 6,124 miles (71 per cent); formed only or cleared only, 1,314 miles (15 per cent). Roads of other authorities (Hydro-Electric Commission, Forestry Commission and Closer Settlement Board) totalled 1,672 miles.

The total length of all roads in Tasmania at 30 June 1965 was 12,538 miles, comprising bitumen or concrete, 2,666 miles (21 per cent); gravel or stone, 8,552 miles (68 per cent); formed only or cleared only, 1,320 miles (11 per cent).

Combined road funds—receipts and payments. The table following shows particulars of the receipts and payments of the combined Road Funds for the years 1960-61 to 1964-65.

ROAD FUNDS, TASMANIA: RECEIPTS AND PAYMENTS, 1960-61 TO 1964-65
(\\$'000)

—	1960-61	1961-62	1962-63	1963-64	1964-65
RECEIPTS					
Motor vehicle taxation and registration, licences, fees, fines, etc.	2,326	2,509	2,833	3,019	3,153
Commonwealth Aid Roads and Works Acts	4,600	5,000	5,400	5,800	6,500
Recoups from local authorities, etc.	17	17	19	14	16
State Loan Fund	4,923	4,125	3,854	4,761	3,468
Hire of plant and workshop charges	2,786	2,905	2,949	3,165	3,329
Other	754	(a) 992	(a) 682	(a) 465	(a) 1,295
Total	15,405	15,547	15,737	17,224	17,761
PAYMENTS					
Construction and reconstruction of roads and bridges	9,130	9,182	9,801	11,239	11,420
Maintenance of roads and bridges	2,614	2,518	2,567	2,586	2,552
Other works connected with transport	72	38	46	72	76
Grants to local authorities	29	(b) 235	(b) 50	33	15
Purchase, maintenance and operation of plant	3,058	2,919	3,070	3,231	3,402
Other	730	172	147	220	383
Total	15,633	15,064	15,682	17,382	17,848

(a) Includes Commonwealth Employment Stimulation Grant (\$733,912 in 1961-62, \$507,554 in 1962-63, \$15,302 in 1963-64 and \$14,946 in 1964-65). (b) Includes grants under Commonwealth Employment Stimulation Grant (\$206,912 in 1961-62, and \$22,260 in 1962-63).

Summary of roads used for general traffic

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 30 June 1965. The central road authority in each State assumes responsibility under the Act for the whole, or a proportion, of the cost of construction and/or maintenance of these roads, the extent varying from State to State and with the class and locality of the roads. Before proclamation of a main road, consideration is given, in general, to the following points: availability of funds; whether the road is, or will be, within one of several classes of main trunk routes; the value of the roads as connecting links between centres of population or business; whether the district is, or will be, sufficiently served by railways. Provision is also made in some States for the declaration of roads other than main roads. The absence of a particular class in 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, man-power or materials, etc. construction or maintenance may not keep pace with gazettals of mileages, and, therefore, the condition of a road may not match its status.

PROCLAIMED OR DECLARED ROADS: LENGTHS
STATES, 30 JUNE 1965
(Miles)

Class of road	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
State highways	6,531	4,465	6,323	} 8,156	} 3,463	} 1,171	} 60,844
Trunk roads	4,153	} 9,094	5,199				
Ordinary main roads	11,627						
<i>Total main roads</i>	<i>22,311</i>	<i>13,559</i>	<i>11,522</i>	<i>8,156</i>	<i>3,463</i>	<i>1,833</i>	<i>60,844</i>
Secondary roads	(a) 138	..	(b) 8,557	..	7,989	196	16,880
Developmental roads	3,021	..	4,373	..	(c) 42,004	..	49,398
Tourist roads	180	445	..	..	..	46	671
Other roads . . . . .	..	(d) 498	..	..	(e) 74	(f) 169	741
<i>Total other roads</i>	<i>3,339</i>	<i>943</i>	<i>12,930</i>	..	<i>50,067</i>	<i>411</i>	<i>67,690</i>
Grand total	25,650	14,502	24,452	8,156	53,530	2,244	128,534

(a) Metropolitan only. (b) Includes mining access roads, farmers' roads and tourist tracks.
(c) Maintenance of these roads is the responsibility of the several local authorities. (d) Forest roads and by-pass roads. (e) Gazetted as controlled access roadway but not constructed. (f) Subsidized roads.

Total 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 surface groups. The figures in the table for the States are obtained from the Deputy Commonwealth Statistician in each State, and are derived mainly from local government sources.

ALL ROADS USED FOR GENERAL TRAFFIC: LENGTHS
STATES AND TERRITORIES, 30 JUNE 1965
(Miles)

Surface of roads	N.S.W. (a)	Vic. (b)	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Total
Bitumen or concrete	23,468	25,022	14,039	7,973	12,056	2,666	1,459	415	87,098
Gravel, crushed stone or other improved surface	45,513	30,966	19,920	13,868	22,243	} 8,552	1,012	185	142,259
Formed only	28,660	21,384	42,729	10,878	44,798		1,613	90	} 342,132
Cleared only	33,499	23,024	43,624	55,231	28,012		7,270	..	
Total	131,140	100,396	120,312	87,950	107,109	12,538	11,354	690	571,489

(a) 30 June 1963. (b) 30 September 1964.

Aggregate net expenditure on roads and bridges in Australia

In most States there are three classes of authorities concerned with roads and bridges, the State Government, the central road authority and numerous local government bodies. The Commonwealth Government, in addition to the grants it makes to the States for road purposes, is concerned with roads in the Northern Territory and the Australian Capital Territory and roads of access to Commonwealth property in the various States. Some information relating to Commonwealth grants to the States for road purposes and particulars of the expenditure on roads and bridges by local government bodies and the central road authorities are given in preceding sections of this chapter.

Most of these authorities may expend money directly on road construction or indirectly by means of grants and payments to other authorities. These indirect payments, if included in an aggregate, would duplicate expenditure; this, together with the fact that some authorities are unable to supply separate information concerning their road expenditure, makes it difficult to compile precise statistics of aggregate expenditure on roads and bridges.

The information in the following table, which is partly estimated and which excludes the main indirect payments, provides an approximate measure of the aggregate net expenditure by the three classes of authorities mentioned above on roads and bridges in Australia during each of the years ended 30 June 1961 to 1965. Expenditure on roads by those authorities whose primary activity is directed towards functions other than roads, e.g. electricity, forestry, housing, etc. authorities, is not included. The figures cover expenditure on the construction, reconstruction and maintenance of roads and bridges, and direct administration but not debt charges. Because of the difficulties associated with the indirect payments mentioned above, it is not possible to give separate net details for each authority.

**PUBLIC AUTHORITY NET EXPENDITURE ON ROADS AND BRIDGES
STATES AND TERRITORIES, 1960-61 TO 1964-65**
(\$ million)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T. and A.C.T.	Aust.
1960-61 . . .	100	73	48	27	20	16	5	289
1961-62 . . .	104	78	49	29	23	16	8	307
1962-63 . . .	108	77	55	30	26	17	10	324
1963-64 . . .	127	89	65	35	27	18	9	370
1964-65 . . .	143	94	71	37	34	17	9	405

Water supply, sewerage and drainage

The information in this section relates primarily to the metropolitan areas and provincial cities and towns. For information on water supply and irrigation in rural areas *see* the chapter Water Conservation and Irrigation.

New South Wales

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

Metropolitan and Hunter District water supply (to 30 June 1965). The storage reservoirs of the *metropolitan system* with a combined available capacity of 577,112 million gallons, drain catchment areas of 3,860 square miles (Warragamba, 3,480 square miles, Upper Nepean, 347 square miles, and Woronora, 33 square miles). The development of a water supply system on the Warragamba River was completed with the official opening of the Warragamba Dam in October 1960. This dam, constructed in concrete, has a storage capacity of 452,505 million gallons. Its safe net draught is estimated to be 285 million gallons a day. A hydro-electric power station at the dam generated 341 million kWh in 1963-64, and, because of dry conditions, only 146 million kWh in 1964-65. At 30 June 1965 there were 167 service reservoirs in use with a combined capacity of 657 million gallons. Rating for water for 1964-65 was 9d. in the £ (equivalent to 3.75 cents in the \$) of assessed annual value. For water in excess of the gallonage provided for in the rate (calculated at 30 cents per 1,000 gallons) the charge was 28 cents per 1,000 gallons.

The water supply of the *Hunter District system* is drawn principally from three sources: the Chichester Reservoir, with a storage capacity of about 5,000 million gallons and draining a catchment of seventy-six square miles, the Tomago Sandbeds, which extend northerly along the coast towards Port Stephens, and the Grahamstown Water Supply Scheme which is still being developed. Another source of supply, the Nelson Bay-Anna Bay Scheme, is also being developed. Service reservoirs and tanks distributed throughout the Water Supply District have a total storage capacity of 120 million gallons. Water rating for 1964-65 was 1s. 5½d. in the £ (equivalent to 7.2917 cents in the \$) on assessed annual value for occupied properties and 1s. 2½d. in the £ (equivalent to 6.0417 cents in the \$) for unoccupied properties. The price of water to domestic and industrial consumers is 28 cents per 1,000 gallons.

The following tables show, for the Metropolitan and Hunter District systems, the number of properties, the estimated population supplied, and other details.

**METROPOLITAN WATER SUPPLY(a), NEW SOUTH WALES
SERVICES, 1960-61 TO 1964-65**

Year	Improved properties for which water mains 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		
		'000	mill. gals.	mill. gals.	gallons	gallons	miles	
1960-61 . . .	620,944	2,341	219	79,988	353	94	6,664	411,731
1961-62 . . .	634,139	2,481	221	80,556	348	89	6,945	430,588
1962-63 . . .	653,674	2,544	234	85,282	357	92	7,173	438,585
1963-64 . . .	669,948	2,600	255	93,211	381	98	7,397	457,215
1964-65 . . .	693,185	2,660	290	105,892	418	109	7,649	479,321

(a) County of Cumberland, City of Greater Wollongong and Shellharbour and Kiama Municipalities.

**HUNTER DISTRICT WATER SUPPLY(a): SERVICES
1960-61 TO 1964-65**

Year	Properties supplied	Estimated population supplied	Average daily consumption	Total consumption for year	Average daily consumption		Length of mains
					Per property	Per head of estimated population	
			mill. gals.	mill. gals.	gallons	gallons	miles
1960-61 . . .	86,032	290,530	29.7	10,854	346	102	1,483
1961-62 . . .	87,792	296,502	31.7	11,555	361	107	1,512
1962-63 . . .	89,283	301,580	36.6	13,352	410	121	1,551
1963-64 . . .	91,616	309,609	36.4	13,336	398	118	1,590
1964-65 . . .	93,646	316,625	41.5	15,139	443	131	1,623

(a) Newcastle, Maitland and Cessnock areas.

Metropolitan and Hunter District sewerage and drainage system (to 30 June 1965). The metropolitan system serving Sydney and suburbs comprises three major sewerage systems and seven minor systems, consisting of six outfalls discharging directly into the Pacific Ocean and four treatment works. In addition, seven centres outside the metropolitan area (Camden, Campbelltown, St. Mary's, Port Kembla, Richmond, Warragamba township, and Wollongong) are served by local treatment works. Stormwater drainage channels under the control of the Metropolitan Water, Sewerage and Drainage Board at 30 June 1965 were 179 miles long. Sewerage rating for 1964-65 was 9½d. in the £ (equivalent to 3.9583 cents in the \$) of assessed annual value, and drainage rating 1¼d. in the £ (equivalent to 0.5208 cents in the \$).

The main sewerage system of the *Hunter District* serves the City of Newcastle and discharges into the Pacific Ocean at Merewether Gulf. There are also local treatment works at Maitland, Cessnock and some of the outlying districts. Sewerage rates for 1964-65 were 1s. 0½d. in the £ (equivalent to 5.2083 cents in the \$) of assessed annual value of occupied lands and 9½d. in the £ (equivalent to 3.9583 cents in the \$) for unoccupied lands, and drainage rates (on certain areas served) 1¼d. in the £ (equivalent to 0.625 cents in the \$).

The following table gives details of sewerage services and stormwater drains of the Metropolitan system.

METROPOLITAN SEWERAGE AND DRAINAGE(a)
NEW SOUTH WALES: SERVICES, 1961 TO 1965

30 June—	Improved properties for which sewerage available	Estimated population served	Lengths of sewers	Length of stormwater channels
		'000	miles	miles
1961 . . .	412,034	1,620	4,231	180
1962 . . .	426,333	1,710	4,489	178
1963 . . .	451,997	1,780	4,763	179
1964 . . .	475,735	1,870	5,074	180
1965 . . .	501,389	1,930	5,328	179

(a) County of Cumberland, City of Greater Wollongong, Shellharbour and Kiama Municipalities.

At 30 June 1965, 68,764 premises had been connected to the Hunter District Water Board's sewerage system (Newcastle-Maitland-Cessnock areas). The total length of sewers under the Board's control was 976 miles, and the length of drains was 51 miles.

Metropolitan and Hunter District systems' finances. The following table shows the debt, revenue and expenditure of the Metropolitan Water, Sewerage and Drainage Board and the Hunter District Water Board for each of the services of water supply, sewerage and drainage during 1964-65, and for the three services combined for the years 1960-61 to 1964-65.

**METROPOLITAN AND HUNTER DISTRICT WATER SUPPLY, SEWERAGE
AND DRAINAGE, NEW SOUTH WALES: FINANCES, 1960-61 TO 1964-65**
(\$'000)

Year	Capital debt at 30 June	Revenue	Expenditure				Surplus (+) or deficit (-)
			Working expenses (a)	Interest and exchange	Debt redemption	Total	

METROPOLITAN(b)

1964-65—								
Water . . .	270,724	32,485	15,151	12,525	4,801	32,477	+8	
Sewerage . . .	166,054	21,207	10,766	7,436	3,001	21,203	+4	
Drainage . . .	4,162	1,198	930	205	58	1,193	+5	
Total, 1964-65 . . .	440,941	54,890	26,846	20,166	7,861	54,873	+17	
1963-64 . . .	407,205	50,860	25,133	18,549	7,145	50,827	+33	
1962-63 . . .	375,776	44,191	20,970	16,838	6,355	44,162	+29	
1961-62 . . .	340,372	39,651	18,700	14,892	6,027	39,619	+32	
1960-61 . . .	310,244	34,495	16,188	13,146	5,137	34,471	+24	

HUNTER DISTRICT(c)

1964-65—							
Water . . .	52,233	4,386	1,985	2,050	465	4,500	-115
Sewerage . . .	16,794	1,991	1,032	720	229	1,982	+9
Drainage . . .	751	132	82	37	6	125	+7
Total, 1964-65 . . .	69,778	6,508	3,099	2,808	701	6,607	-99
1963-64 . . .	65,254	6,205	2,890	2,653	648	6,191	+14
1962-63 . . .	59,931	5,813	2,640	2,431	722	5,794	+19
1961-62 . . .	55,408	5,466	2,791	2,101	529	5,421	+45
1960-61 . . .	50,674	4,758	2,532	1,733	473	4,738	+20

(a) Includes provision for renewals, long service leave, etc. (b) County of Cumberland, City of Greater Wollongong, Shellharbour and Kiama Municipalities. (c) Newcastle-Maitland-Cessnock areas.

Local government country water supply and sewerage systems. At 31 December 1963 country water supply services were conducted or under construction by 50 municipalities, 86 shires and 5 county councils, and country sewerage services by 52 municipalities and 37 shires. The capital indebtedness of these schemes was \$75,735,674 at 31 December 1963, namely \$52,969,754 for water and \$22,765,920 for sewerage. Debt of the municipalities amounted to \$38,016,026, shires to \$27,515,930 and county councils to \$10,203,718. Government advances amounting to \$864,646 are included in these figures. Aggregate income and expenditure amounted to \$12,654,822 and \$9,970,736, respectively, in 1963.

Other country 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 31 December 1964 was \$7,135,396. In 1964 income (excluding subsidies, State Government, \$160,218 and mining companies, \$458,418) amounted to \$631,320 and expenditure (excluding debt redemption, \$330,494) amounted to \$909,082. The Cobar Water Board was constituted in February 1964. At 31 December 1964 its capital indebtedness was \$1,644,916. 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 direct to private consumers. The capital indebtedness of these systems was \$14,977,908 at 31 December 1964. The Mulwala Water Supply and Sewerage Service was constructed as an urgent war-time work for the Commonwealth, and the Bethungra Water Supply System is administered by the Department of Public Works in conjunction with the Junee supply.

Victoria

Melbourne and Metropolitan Board of Works. The Board consists of a Chairman and fifty-one Commissioners elected to represent the municipalities which lie wholly or partly within the metropolitan area. The principal functions of the Board are: to control and manage the metropolitan water supply system; to provide the metropolitan area with an efficient main and general sewerage system; to deal with main drains and main drainage works; to control and manage the rivers, creeks and watercourses within the metropolitan area; and to carry out the functions of a permanent planning authority.

Metropolitan water supply. There are six storage reservoirs serving the metropolitan area—Yan Yean, 7,233 million gallons (available for consumption, 6,649 million gallons); Toorourrong, 60 million gallons; Maroondah, 6,289 million gallons (4,870 million gallons); O'Shannassy, 930 million gallons; Silvan, 8,853 million gallons (8,823 million gallons); and Upper Yarra, 45,400 million gallons (44,120 million gallons); total 68,765 million gallons (65,452 million gallons). Service reservoirs number thirty-seven, with a total capacity of 366 million gallons. The water rate levied by the Board in 1964-65 was 8d. in the £ (equivalent to 3.3333 cents in the \$) on the net annual value of the properties served. The charge for water consumed in excess of the quantity which, at 20 cents per 1,000 gallons, would equal the assessed water rates on each property, was 20 cents per 1,000 gallons. The following table shows particulars of Melbourne metropolitan water supply services for the years 1960-61 to 1964-65.

MELBOURNE WATER SUPPLY: SERVICES, 1960-61 TO 1964-65

Year	Number of houses supplied	Estimated population supplied	Average daily consumption	Total consumption for the year	Average daily consumption		Length of aqueducts, etc., mains and reticulation	Number of meters
					Per house	Per head of estimated population		
1960-61	510,078	'000 1,836	mill. gals. 152.9	mill. gals. 55,822	gallons 300	gallons 83.3	miles 5,245	392,396
1961-62	519,216	1,869	157.6	57,521	304	84.3	5,477	422,318
1962-63	547,123	1,981	151.3	55,225	277	76.4	5,622	460,866
1963-64	572,431	2,072	162.9	59,621	285	78.6	5,882	485,856
1964-65	595,727	2,157	168.2	61,409	282	78.0	6,098	511,077

Metropolitan sewerage and drainage. Particulars of sewerage and drainage services for 1960-61 to 1964-65 are shown on the next page. The rate levied in 1964-65 for sewerage was 1s. 2d. in the £ (equivalent to 5.8333 cents in the \$) on the net annual value of the property served. The drainage rate was 2d. in the £ (equivalent to 0.8333 cents in the \$).

**MELBOURNE SEWERAGE AND DRAINAGE: SERVICES
1960-61 TO 1964-65**

Year	Number of houses for which sewers are provided	Estimated population for which sewers are provided	Average daily pumping	Total sewerage pumped for the year	Average daily pumping		Length of sewers, etc.	Length of main drains
					Per house	Per head of estimated population		
1960-61	395,109	'000 1,331	mill. gals. 88.1	mill. gals. 32,159	gallons 223.0	gallons 66.2	miles 3,550	miles 193
1961-62	399,890	1,361	83.0	30,308	207.6	61.0	3,665	198
1962-63	422,899	1,402	84.9	30,997	200.8	60.6	3,769	205
1963-64	443,291	1,446	89.7	32,833	202.4	62.0	3,932	211
1964-65	453,078	1,491	93.6	34,152	206.5	62.8	4,113	218

The metropolitan sewerage system consists of the main system (serving an area of 96,159 acres) and five subsidiary systems—the Sunshine system (serving an area of 2,727 acres), the Laverton system (serving an area of 172 acres), the Kew system (serving an area of 112 acres), the South-eastern system (serving an area of 3,909 acres in Cheltenham, Parkdale, Mentone, and Mordialloc), Watsonia system (serving an area of 188 acres), and the Maribyrnong system (serving an area of 182 acres). The Metropolitan Sewerage Farm, 26,809 acres in extent and situated about twenty-four miles south-west of Melbourne beyond the township of Werribee, serves to purify and dispose of approximately ninety-eight per cent of the sewerage flow of the metropolis before its discharge into Port Philip Bay. The total capital cost (less depreciation) of the farm to 30 June 1965 was \$9,507,128. Revenue during 1964-65 amounted to \$478,406, cost of sewerage disposal to \$557,820, trading expenses to \$285,588, interest to \$505,168, and net cost of sewerage purification to \$870,170. These financial particulars are included in the sewerage items of the summary below.

Melbourne and Metropolitan Board of Works finances. The following table provides for the year 1964-65 a summary of the financial operations of the water supply, sewerage and drainage services conducted by the Melbourne and Metropolitan Board of Works, and of the combined services for the years 1960-61 to 1964-65.

**MELBOURNE AND METROPOLITAN BOARD OF WORKS: FINANCES
1960-61 TO 1964-65**

(\$'000)

Service, etc.	Capital cost of works and buildings at 30 June(a)	Revenue	Expenditure				Surplus (+) or deficit (-)
			Working expenses	Interest and exchange	Debt redemption	Total	
Water	138,708	12,160	3,924	7,180	..	11,104	+ 1,056
Sewerage	140,023	11,404	3,509	6,793	..	10,302	+ 1,102
Drainage	24,983	1,744	388	884	..	1,272	+ 471
General(b)	11,259	..	1,486	..	1,960	3,446	- 3,446
Total, 1964-65	314,972	25,307	9,308	14,856	1,960	26,124	- 817
1963-64	286,566	24,373	9,315	13,342	1,693	24,350	+ 23
1962-63	258,428	23,429	10,068	11,840	1,494	23,403	+ 26
1961-62	235,014	21,400	9,644	10,553	1,189	21,386	+ 14
1960-61	213,336	18,315	8,043	9,450	1,061	18,554	- 239

(a) Total loan indebtedness—1964-65, \$295,886,410. (b) Statutory and general expenditure not distributed over services.

State Rivers and Water Supply Commission. Water supply and conservation throughout Victoria (except for the area controlled by the Melbourne and Metropolitan Board of Works) is under the jurisdiction of the State Rivers and Water Supply Commission. The events leading to the establishment of the Commission, and its works in the spheres of irrigation, domestic and stock water supply to farms, drainage, flood protection and river improvements, have already been described in the chapter Water Conservation and Irrigation. This section is therefore confined to the Commission's functions in connection with urban water supply and sewerage.

Extra metropolitan water supply. At 30 June 1965 the Commission provided a reticulated water supply from its own works to 137 cities and towns having a combined population of 199,000 persons. The principal systems operated by the Commission serve part of the Mornington Peninsula—Dandenong area (about 77,000 people supplied); Bendigo, Castlemaine, etc. (57,000); and about 8,000 people in the Western District. In addition, 13,000 persons in a number of towns in the Bellarine Peninsula receive supply through a Commission-operated distributory system from headworks controlled by the Geelong Waterworks and Sewerage Trust. The Bendigo-Castlemaine supply also provides for the irrigation of 11,000 acres as well as urban requirements in the area. Outside these areas the Commission supplies mainly small towns in the north of the State in areas where it also supplies farms with water for irrigation or domestic and stock purposes. Capital expenditure by the Commission on urban water supply at 30 June 1965 was divided between the several systems as follows: Mornington Peninsula, \$21,400,000; Bendigo-Castlemaine, \$9,300,000; Bellarine Peninsula, \$2,350,000; Otway System (Western District), \$2,350,000; other, \$2,350,000; total, \$37,750,000. This expenditure is net of redemption payments. In addition to the towns supplied by the Commission there are approximately 604,000 people in 224 cities and towns throughout the State who get a reticulated water supply from works operated by local authorities.

All these authorities operate under the supervision of the State Rivers and Water Supply Commission, largely because the Government subsidizes their capital expenditure. Most new works are financed from Government loan funds, but the Geelong Trust and in recent years some other local authorities borrowed money privately. In most cases the local authority controls both headworks and distribution system, but several towns—serving in all about 50,000 people—draw their water from the State Rivers and Water Supply Commission and are concerned only with reticulation of the water. Together, therefore, the Commission and local authorities supply 361 urban centres containing more than 803,000 people. Very few towns of any importance are now without reticulated water supply. The following table presents the financial position in respect of town water supply at 30 June 1965.

TOWN WATER SUPPLY, VICTORIA: CAPITAL LIABILITY, 30 JUNE 1965
(\$'000)

	Water supply provided by—		
	Local authorities	State Rivers and Water Supply Commission	Total
Government advances	53,500	38,200	91,700
Less redemption	3,850	450	4,300
Government advances outstanding . .	49,650	37,750	87,400
Borne by State	9,150	17,250	26,400
Borne locally	40,500	20,500	61,000

In addition, nearly \$18,000,000 has been borrowed locally, mainly by the Geelong Waterworks and Sewerage Trust.

The proportion of loan capital borne by the State is much higher in the case of Commission undertakings than for towns supplied by local authorities. This is because most Commission undertakings have been developmental in nature. Besides meeting interest on capital borne by it, the State pays the difference between three per cent and the actual rate paid on practically all the capital carried locally. The total annual subsidy on country town water supply is currently about \$2,500,000.

Extra metropolitan sewerage systems. With the exception of the town of Eildon, whose sewerage system is controlled directly by the State Rivers and Water Supply Commission, the construction and management of sewerage works in Victoria's country cities and towns are the responsibility of local authorities supervised by the Commission. Except for the Geelong Waterworks and Sewerage Trust and the Latrobe Valley Water and Sewerage Board which have special Acts dealing with their activities, all sewerage authorities operate under the Sewerage

Districts Act. At 30 June 1965 there were fifty-six cities and towns with sewerage systems in operation. These contained about 520,000 persons, nearly one half of the total number of residents outside the metropolitan area.

Expenditure on sewerage in Victorian country towns at 30 June 1965 was approximately \$62,000,000, of which some \$47,000,000 had been advanced by private lenders. The annual State subsidy on country sewerage in Victoria is currently about \$1,200,000, provided mainly in the form of subsidies on interest rates paid along the same lines as for town water supply. Comparatively little capital is borne directly by the State.

Geelong Waterworks and Sewerage Trust. The Geelong Waterworks and Sewerage Trust was constituted in 1908 and reconstituted under the *Geelong Waterworks and Sewerage Act 1909*. 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. The amount of loan money which may be raised is limited to \$24,000,000 for water supply undertakings and \$10,000,000 for sewerage undertakings. The population supplied is estimated by the Trust at 107,940 persons. This and other general information relates to 30 June 1965.

The *Geelong water supply scheme* comprises two systems for gathering and storing water, the water in both systems being brought over fifty miles to Geelong. There are seven storage reservoirs and eleven service basins whose total storage capacity is 13,292 million gallons. The length of water mains and reticulation is 550.4 miles. The total expenditure on water supply to 30 June 1965 was \$15,213,802. General fund expenditure for 1964-65 comprised \$408,412 for working expenses and \$816,902 for interest, redemption and reserves, while revenue amounted to \$1,236,976. The sinking fund appropriations at June 1965 amounted to \$840,134. The replacement and contingencies reserve amounted to \$919,872. There is a water rate of 1s. 7d. in the £ (equivalent to 7.9167 cents in the \$) (with minima of \$1 for vacant land and \$2 for tenements) on the net annual value of ratable properties.

The *Geelong sewerage scheme* consists of a main outfall sewer to the ocean and 302.7 miles of main and reticulation sewers. The sewerage area is 11,851 acres, and the number of buildings connected within the sewered areas is 25,531. The total expenditure on sewerage works to 30 June 1965 was \$6,271,202. The revenue in 1964-65 amounted to \$663,134, and the general fund expenditure comprised \$224,346 on working expenses and \$436,332 on interest, redemption and reserves. Sinking fund appropriations at 30 June 1965 were \$492,902. Replacement and contingencies reserve amounted to \$989,934. A general rate of 1s. 4d. in the £ (equivalent to 6.6667 cents in the \$) is levied on the net annual value of ratable properties.

Under the *Barwon River Improvement Act 1939* a portion of the Barwon River is vested in the Geelong Waterworks and Sewerage Trust. General maintenance and improvements of the surrounding area is financed by the levying of an improvement rate of ¼d. in the £ (equivalent to 0.2083 cents in the \$) on the net annual value of all lands within the Drainage Area. The revenue for 1964-65 amounted to \$23,920.

The Ballarat Water Commissioners and the Ballarat Sewerage Authority. The body known as the Ballarat Water Commissioners was constituted on 1 July 1880 and the Ballarat Sewerage Authority on 30 November 1920. The members of the Water Commissioners constitute the Sewerage Authority. General and financial information given herein relates to the year ended 31 December 1965.

The *Ballarat water supply district* comprises an area of about sixty-five square miles, containing a population of about 61,000. The total storage capacity of the seven reservoirs is 5,435 million gallons and the catchment area is 24,182 acres. The capital cost of construction of the waterworks was \$5,827,126 to 31 December 1965. The liabilities amounted to \$3,640,546 at 31 December 1965, including loans due to the Government totalling \$3,383,352. The revenue for the year 1965 was \$402,120. Working expenses during 1965 amounted to \$220,076 and interest and other charges to \$181,576. A water rate of 1s. 0d. in the £ (equivalent to 5 cents in the \$) on the net annual valuation is levied, with a minimum charge of \$3 per annum on any ratable property.

The *Ballarat sewerage district* comprises the City of Ballarat and parts of the Shires of Ballarat, Bungaree and Grenville and the Borough of Sebastopol. There are more than 188 miles of sewers. The capital cost of sewerage construction works to 31 December 1965 was \$4,101,674. Two hundred and sixty-two sewered areas had been declared as at 31 December 1965. Assessments in the sewerage district numbered 19,614, while those in sewered areas numbered 16,546. There were 14,596 buildings connected. The scheme is financed by debenture-issue loans from various financial institutions. The liabilities on account of loans secured for construction at 31 December 1965 amounted to \$3,610,992; redemption payments at that date totalled \$806,156. House connections financed by the Authority numbered 4,210. Revenue during 1965 amounted to \$414,622, and expenditure, which included \$238,780 for interest and redemption, was \$409,618. A sewerage rate of 1s. 4d. in the £ (equivalent to 6.6667 cents in the \$) on the net annual valuation is levied, with a minimum charge of \$6 on any ratable property.

Latrobe Valley Water and Sewerage Board. The Latrobe Valley Water and Sewerage Board was constituted on 1 July 1954. The Board consists of seven members, namely: two Government nominees (one of whom is Manager and also Board Chairman), three members elected by water supply, sewerage and river improvement authorities within the Latrobe Valley, and one representative each of the State Electricity Commission of Victoria and the Gas and Fuel Corporation of Victoria.

The Board is empowered to construct *water supply works within the Latrobe Valley*, but at present its main construction activities are confined to the central industrialized areas. Capital expenditure during 1964-65 totalled \$664,616 compared with \$630,906 in 1963-64. The total capital cost of construction of the waterworks was \$10,586,992 to 30 June 1965. Liabilities amounted to \$11,337,848, including loans due to the Government totalling \$11,127,040. Revenue for the year was \$717,730. Working expenses during 1964-65 amounted to \$533,490, including interest on loans amounting to \$325,182. The Board does not strike a rate, but supplies consumers, including local water supply authorities, by measure. The quantity supplied during the year ended 30 June 1965 was 9,700 million gallons.

The *Latrobe Valley sewerage system* consists of a main outfall sewer, about fifty-two miles in length. Wastes conveyed consist mainly of industrial wastes, such as paper wastes and gasification wastes, together with small quantities of domestic sewerage. The capital cost of the sewerage construction works to 30 June 1965 was \$5,671,714. Liabilities amounted to \$6,396,002, including loans due to the Government totalling \$5,798,080. Revenue in 1964-65 was \$275,484 and expenditure totalled \$305,230, including \$110,452 interest and other charges. No sewerage rate is levied, but a charge is made by measure for wastes both from industries and public authorities.

Other sewerage authorities. At 30 June 1965 seventy-eight other sewerage authorities had been constituted under the provisions of the Sewerage Districts Acts, and systems were in operation in fifty-three districts.

Queensland

Brisbane City Council (to 30 June 1965). This organization conducts the water supply and sewerage systems of the City of Brisbane, and also supplies, in bulk, the whole of the water used by the City of Ipswich and the major portion of that used by the City of Redcliffe. Redcliffe also supplements its supply from that of the Pine Rivers Shire Council.

Storage facilities for *Brisbane water supply* comprise the following (available capacities are shown in parentheses): Somerset Reservoir, 200,000 million gallons (55,000 million gallons); Lake Manchester, 5,806 million gallons (5,720 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 (600 million gallons); Gold Creek Reservoir, 407 million gallons (400 million gallons). There are eighteen service reservoirs with a capacity of approximately 43 million gallons. The Somerset reservoir 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 for the year ended 30 June 1965, was 3d. in the £ (equivalent to 1.25 cents in the \$) on the unimproved valuation of all ratable land, with a minimum charge of \$19 for the year for each assessment. The following table is a summary of operations of the complete Brisbane City Council system (Brisbane, Ipswich and Redcliffe) for the years 1960-61 to 1964-65.

BRISBANE WATER SUPPLY(a): SERVICES, 1960-61 TO 1964-65

Year	Services connected	Estimated population supplied	Average daily consumption	Total consumption for the year	Average daily consumption		Length of trunk and reticulation mains
					Per service	Per head of estimated population	
			mill. gals.	mill. gals.	gallons	gallons	miles
1960-61	171,820	626,470	46.8	17,100	273	74.8	2,196
1961-62	178,279	649,970	45.3	16,538	254	69.7	2,284
1962-63	182,804	665,479	48.3	17,644	264	72.6	2,378
1963-64	187,502	683,223	51.2	18,684	273	74.9	2,390
1964-65	192,875	700,658	61.4	22,409	318	87.6	2,538

(a) Includes Ipswich and Redcliffe.

The sewage treatment works of the *Brisbane sewerage scheme* is situated at Luggage Point at the entrance to the Brisbane River. Sewerage rating for the year ended 30 June 1965 was 2½d. in the £ (equivalent to 1.0417 cents in the \$) on the unimproved valuation of each portion of land, with a minimum charge of \$20 for the year. The following table is a summary of operations of the Brisbane sewerage scheme for the years 1960-61 to 1964-65.

BRISBANE SEWERAGE: SERVICES, 1960-61 TO 1964-65

Year	Premises connected	Estimated population served	Total sewage pumped for the year	Length of main, branch, reticulation, etc. sewers
			mill. gals.	miles
1960-61 . . .	62,781	232,290	5,222	853
1961-62 . . .	67,407	249,406	5,808	906
1962-63 . . .	71,754	265,490	6,673	944
1963-64 . . .	75,964	281,067	6,959	1,042
1964-65 . . .	84,390	312,243	6,565	1,222

Brisbane City Council water supply and sewerage systems—finances. The following table shows particulars of the finances of the water supply and sewerage undertakings of the Brisbane City Council for the years 1960-61 to 1964-65.

BRISBANE WATER SUPPLY AND SEWERAGE: FINANCES, 1960-61 TO 1964-65
(\$'000)

Service and year	Gross capital cost to 30 June	Revenue	Expenditure			Surplus (+) or deficit(-)
			Working expenses	Interest, redemption, etc. charges	Total (a)	
Water supply—						
1960-61 . . .	36,874	4,630	2,089	1,759	4,617	+ 13
1961-62 . . .	39,990	4,963	2,260	1,950	4,763	+ 201
1962-63 . . .	43,059	5,650	2,334	2,168	5,218	+ 432
1963-64 . . .	46,175	5,989	2,492	2,330	5,318	+ 670
1964-65 . . .	49,768	7,030	2,827	2,436	5,889	+ 1,141
Sewerage—						
1960-61 . . .	33,675	1,965	564	979	1,929	+ 36
1961-62 . . .	35,907	2,072	592	1,130	2,091	- 19
1962-63 . . .	39,854	2,525	592	1,304	2,336	+ 189
1963-64 . . .	45,439	2,763	651	1,550	2,571	+ 192
1964-65 . . .	50,184	3,664	803	1,705	3,434	+ 230

(a) Total, including other expenditure.

Country towns. In addition to the City of Brisbane, there were at 30 June 1964, 195 cities and towns in Queensland provided with water supply systems controlled by municipal and shire councils. At 30 June 1964 there were forty-two cities or towns in addition to Brisbane with sewerage systems. The receipts (other than loan and loan subsidy) of water undertakings controlled by the cities and towns referred to above amounted to \$6,222,470 in 1963-64. Expenditure amounted to \$6,309,630, including \$2,807,692 for debt charges. In addition, expenditure from loans and loan subsidy amounted to \$4,698,638. Finances of sewerage undertakings are incorporated in council general funds and are not available separately.

South Australia

The water supply and sewerage systems in this State were constructed mainly, and are maintained, by the Engineering and Water Supply Department, under the control of the Minister of Works. Works controlled by the Department are the Adelaide, Barossa, Beetaloo, Bundaleer, Moorook, Tod River, Warren, Yorke Peninsula and other country water districts systems, the Morgan-Whyalla water supply system, the metropolitan and country sewerage systems, the Metropolitan Flood Waters Scheme, and works on the River Murray constructed under the River Murray Waters Agreement. Several water supply schemes on the Murray River are operated by the Department of Lands in conjunction with its irrigation works, and supplies to Woomera and Leigh Creek coalfield are controlled by the operating authorities. The following tables show particulars of metropolitan and country waterworks combined.

WATERWORKS, SOUTH AUSTRALIA: SERVICES, 1960-61 TO 1964-65

Year	Assessments(a)		Area of districts supplied (a)	Capacity of reservoirs, tanks, etc.	Length of mains	Number of meters
	Number	Annual value				
		\$'000	'000 acres	mill. gals.	miles	
1960-61 . . .	319,108	81,187	13,119	35,405	9,292	232,072
1961-62 . . .	338,636	85,404	13,154	45,106	9,634	247,972
1962-63 . . .	357,342	92,737	13,287	45,062	9,996	262,571
1963-64 . . .	365,579	104,159	13,373	45,173	10,469	278,183
1964-65 . . .	376,425	109,651	13,524	45,179	10,748	292,212

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

WATERWORKS, SOUTH AUSTRALIA: FINANCES, 1960-61 TO 1964-65
(\$'000)

Year	Invested capital at 30 June (a)	Revenue	Expenditure			Deficit
			Working expenses (b)	Interest	Total	
1960-61 . . .	130,367	8,569	6,377	4,747	11,124	2,555
1961-62 . . .	146,231	9,065	8,390	5,388	13,778	4,713
1962-63 . . .	161,817	9,903	7,975	6,395	14,370	4,467
1963-64 . . .	172,583	11,103	7,752	6,960	14,711	3,608
1964-65 . . .	189,205	11,955	8,475	7,694	16,169	4,214

(a) After deduction of depreciation. (b) Includes debt redemption.

Adelaide waterworks. At 30 June 1965 the Adelaide waterworks supplied a district of 216,352 acres. The capacity of reservoirs and storage tanks was 24,217 million gallons and there were 3,333 miles of mains. Water is also drawn from the 11,300 million gallon reservoir at South Para in the Barossa Water District. The Mannum-Adelaide pipeline conveys water from the River Murray to Adelaide at a rate of up to 66 million gallons a day. Water is delivered to the River Torrens or, by further pumping, to the River Onkaparinga. With further development, the main will operate as a closed system connected to the metropolitan reticulation. The pipeline supplements the Warren system and other country areas.

ADELAIDE WATERWORKS: FINANCES, 1960-61 TO 1964-65
(\\$'000)

Year	Invested capital at 30 June (a)	Revenue	Expenditure			Surplus (+) or deficit (-)
			Working expenses (b)	Interest	Total	
1960-61 . . .	70,158	5,917	3,463	2,436	5,899	+ 18
1961-62 . . .	77,254	6,302	4,754	2,738	7,492	- 1,190
1962-63 . . .	83,461	6,874	4,143	3,380	7,522	- 649
1963-64 . . .	86,692	7,796	3,861	3,610	7,471	+ 326
1964-65 . . .	92,872	8,417	4,222	3,907	8,129	+ 289

(a) After deduction of depreciation. (b) Includes debt redemption.

Adelaide metropolitan sewerage system. The Adelaide metropolitan sewerage system, comprising the Adelaide, Glenelg, Port Adelaide and Salisbury-Elizabeth areas of 153 square miles in all, includes a sewage farm, and treatment works at Glenelg and Port Adelaide. Construction of a large treatment works at Bolivar is in progress to supersede the sewage farm and carry out increased load due to metropolitan expansion. Financial and other particulars for 1960-61 to 1964-65 are shown hereunder.

ADELAIDE METROPOLITAN SEWERAGE: SUMMARY
1960-61 TO 1964-65

Year	Length of sewers	Number of connections	Invested capital at 30 June (a)	Revenue	Expenditure			Surplus
					Working expenses (b)	Interest	Total	
	miles		\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
1960-61 . . .	1,598	173,753	26,753	4,121	1,776	958	2,734	1,387
1961-62 . . .	1,659	179,918	29,090	4,422	1,827	1,049	2,876	1,546
1962-63 . . .	1,714	186,143	33,510	4,689	2,002	1,151	3,153	1,536
1963-64 . . .	1,774	194,889	38,996	5,239	2,201	1,265	3,466	1,774
1964-65 . . .	1,854	204,128	47,127	5,513	2,363	1,380	3,743	1,769

(a) After deduction of depreciation. (b) Includes debt redemption.

Country sewerage schemes. Sewerage schemes are operating at Port Lincoln, Naracoorte, Nangwarry, Mount Burr, Myponga, and Angaston. At Port Lincoln the sewers discharge to an ocean outfall, and treatment works are used on the other systems. There are 141 miles of sewers and 3,563 connections in the country systems. A sewerage scheme for Mount Gambier is under construction.

Country water supply. Water districts systems at 30 June 1965 comprised an area of 13,308,147 acres. Supply came from reservoirs having a total capacity of 20,851 million gallons, from the River Murray, and from underground sources. Apart from local supplies, water from the River Murray comes from branches of the Mannum-Adelaide main and from the Morgan-Whyalla main. The principal areas of underground supplies are in the south-east of the State, where water from the Murray Basin can be had at moderate depths or from lakes, and from sand beds on Eyre Peninsula. In the year 1964-65 supplies made to Mount Gambier, Naracoorte and other towns amounted to 1,030 million gallons, and the Uley-Wanilla, Lincoln and Poldas Basins contributed 618 million gallons to the Tod River Water District.

COUNTRY WATERWORKS, SOUTH AUSTRALIA: FINANCES
1960-61 TO 1964-65
 (\$'000)

Year	Invested capital at 30 June (a)	Revenue	Expenditure			Deficit
			Working expenses (b)	Interest	Total	
1960-61 . . .	60,209	2,651	2,914	2,311	5,225	2,573
1961-62 . . .	68,976	2,763	3,636	2,651	6,286	3,523
1962-63 . . .	78,356	3,030	3,833	3,015	6,848	3,818
1963-64 . . .	85,892	3,307	3,891	3,350	7,241	3,934
1964-65 . . .	96,333	3,538	4,253	3,787	8,040	4,502

(a) After deduction of depreciation. (b) Includes debt redemption.

Morgan-Whyalla water supply scheme. This scheme, which has 223 miles of main, was officially opened on 31 March 1944, the capital invested to 30 June 1965 being \$24,067,200. Particulars of the scheme, where applicable, are included in the tables of the combined waterworks, page 855. Apart from supplying Whyalla, the main has been used to allow expansion of reservoir supplies in the northern agricultural area of the State, and to meet new demands caused by industrial growth at Whyalla duplication of the main is under way. During 1964-65 water used from the scheme amounted to 4,066 million gallons.

Western Australia

The principal water supply systems of Western Australia are under the control of two State authorities, the Metropolitan Water Supply, Sewerage, and Drainage Board and the Department of Public Works and Water Supply. The Metropolitan Water Supply, Sewerage, and Drainage Board is constituted under the provisions of the *Metropolitan Water Supply, Sewerage, and Drainage Act, 1909-1963* and consists of seven members appointed by the Governor. The area which constitutes the territory administered by the Board extends from Perth southward to Kwinana and Serpentine, northward to Sorrento, and eastward to Greenmount. The Department of Public Works and Water Supply controls the Goldfields and Agricultural Water Supply and the Great Southern Towns Water Supply as well as ninety-two local water supplies (see also the chapter Water Conservation and Irrigation, pages 185-6). Five independent town schemes are controlled by local Water Boards in country areas, and individual water supplies serve railways timber mill towns, isolated mines, pastoral properties, stock routes, and agricultural areas, mainly from dams, tanks, wells, and bores.

Metropolitan water supply, sewerage and drainage. The sources of the metropolitan water supply are Serpentine Reservoir and Serpentine Pipehead Reservoir, Canning Reservoir, Wungong Brook Diversion Weir, Churchman Brook Reservoir, and Victoria Reservoir. The supply from these sources is supplemented as necessary from a pipeline link with Mundaring Weir and from a number of artesian bores. The amount of bore water used, however, is now rarely more than 10 per cent of the total metropolitan consumption and is usually considerably less. The largest of these sources are the Serpentine Reservoir and the Canning Reservoir. Serpentine Reservoir is constructed of rolled earth fill, and the embankment rises 171 feet above the stream bed, the length at the crest being 1,390 feet. Its capacity is 39,000 million gallons, and the area of the catchment is 245 square miles. Canning Reservoir, with an estimated catchment area of 302 square miles, has a storage capacity of 20,550 million gallons retained by a concrete wall 218 feet high and 1,534 feet long at the crest. Water from storages on the Darling Range is conveyed to service reservoirs which serve an area of approximately 1,270 square miles, including the whole of the metropolitan area. To meet the peak demand during the summer months, supplies from these sources are supplemented from a system of artesian bores which can provide a daily maximum of 13 million gallons.

The following table shows particulars of the *metropolitan water supply services* for 1960-61 to 1964-65.

**METROPOLITAN WATER SUPPLY, WESTERN AUSTRALIA
SERVICES, 1960-61 TO 1964-65**

Year	Number of services (a)	Estimated population supplied (a)	Average daily consumption	Total consumption for year	Average daily consumption		Length of mains	Number of meters
					Per service (b)	Per head of estimated population (b)		
1960-61 .	133,647	446,000	mill. gals. 49.3	mill. gals. 18,015	gallons 374	gallons 112.3	miles 2,137	103,969
1961-62 .	137,960	460,730	50.6	18,492	373	111.6	2,179	116,610
1962-63 .	142,246	476,000	47.1	17,214	336	100.5	2,278	123,364
1963-64 .	149,033	491,740	53.2	19,454	362	109.7	2,411	130,480
1964-65 .	154,051	508,010	55.7	20,339	367	111.7	2,526	135,471

(a) Figures relate to 30 June.

(b) Calculated from averages for the year.

Water rating for 1964-65 was 1s. in the £ (equivalent to 5 cents in the \$) on annual valuation on land used for residential purposes and 1s. 6d. in the £ (equivalent to 7.5 cents in the \$) on annual valuation on land not so used.

Some particulars of the *metropolitan sewerage and main drainage services* for 1960-61 to 1964-65 are shown below.

**METROPOLITAN SEWERAGE AND MAIN DRAINAGE
WESTERN AUSTRALIA: SERVICES
1960-61 TO 1964-65**

Year	Services	Estimated population served	Length of sewers	Length of main drains
1960-61 . . .	66,664	264,000	miles 724	miles 72
1961-62 . . .	67,378	239,110	736	77
1962-63 . . .	68,223	240,700	751	81
1963-64 . . .	68,958	241,700	769	94
1964-65 . . .	69,553	242,340	777	100

Sewerage rating for 1964-65 was 1s. 9d. in the £ (equivalent to 8.75 cents in the \$) on annual valuation, while metropolitan main drainage rating was 4d. in the £ (equivalent to 1.6667 cents in the \$).

Metropolitan Water Supply, Sewerage and Drainage Board—finances. The following table shows particulars of the finances of the Western Australian Metropolitan Water Supply, Sewerage and Drainage Board.

METROPOLITAN WATER SUPPLY, SEWERAGE AND MAIN DRAINAGE
WESTERN AUSTRALIA: FINANCES, 1960-61 TO 1964-65
(\$'000)

Service and year	Capital cost to 30 June	Revenue	Expenditure			Surplus (+) or deficit (-)
			Working expenses	Interest and debt redemption	Total	
Water supply—						
1960-61	40,513	3,461	1,680	1,760	3,440	+ 21
1961-62	44,312	3,607	1,545	1,976	3,521	+ 85
1962-63	48,489	3,705	1,505	2,175	3,680	+ 25
1963-64	51,482	4,175	1,583	2,502	4,084	+ 91
1964-65	54,334	4,370	1,653	2,641	4,294	+ 76
Sewerage—						
1960-61	15,287	1,868	1,011	723	1,734	+ 134
1961-62	16,603	1,877	1,050	893	1,944	- 67
1962-63	18,119	2,261	1,102	1,019	2,120	+ 141
1963-64	19,851	2,323	1,214	1,015	2,229	+ 93
1964-65	22,050	2,426	1,272	1,053	2,325	+ 101
Main drainage—						
1960-61	3,543	228	100	158	258	- 30
1961-62	3,950	240	126	181	307	- 66
1962-63	4,383	296	151	200	351	- 54
1963-64	4,998	310	153	217	370	- 60
1964-65	5,641	342	191	238	429	- 87

Country water supplies. Information concerning country water supplies is included in the chapter *Water Conservation and Irrigation* (see pages 185-6).

Tasmania

Waterworks. At the end of 1964-65 there were ninety-six municipally operated waterworks in Tasmania. The capacity of the reservoirs was 2,293 million gallons, the estimated population served was 304,550, and the number of properties served was 97,149. A regional scheme is operated as a State concern, supplying bulk water to the municipalities of Evandale, George Town, Lilydale, St. Leonards, and Westbury. In addition, this same scheme supplies water direct to industry situated near the Tamar River. The overall control of water supply in the greater Hobart area, comprising the municipalities of Hobart, Clarence, Glenorchy, and Kingborough, is now vested in the Metropolitan Water Board, but the municipalities retain primary responsibility for reticulation. The Board has undertaken the construction of a new bulk supply, with an ultimate daily capacity of 20 million gallons. This scheme is now virtually complete, and the anticipated total cost is \$5,140,000. During 1964-65 the metropolitan water supply was extended to serve the towns of Cambridge, Midway Point and Sorell. Provision has also been made for a second stage of the extension to serve the towns of Rokeby, Lauderdale and Seven Mile Beach. The initial estimate for the cost of these extensions was \$1,329,600.

Sewerage. At the end of 1964-65 there were twenty-one municipal sewerage schemes in operation in Tasmania. They served an estimated population of 202,000 and the number of tenements served was 54,300.

Northern Territory

Information relating to water supply in the Northern Territory may be found in the chapter *Water Conservation and Irrigation* (see pages 188-9).

Australian Capital Territory

The water supply, sewerage and drainage systems in the Australian Capital Territory are under the control of the Commonwealth Department of Works. The sources of the water supply are: Cotter Dam (capacity 967 million gallons) and Bendora Dam (2,360 million gallons). Eight pumps are capable of pumping approximately 27 million gallons daily. The total population served in

the Australian Capital Territory, which during 1964-65 consumed 4,800 million gallons of water, was 89,210 (at 30 June 1965). In addition, the Canberra water supply system supplied 373 million gallons of water to Queanbeyan, New South Wales. The total number of water meters at 30 June 1965 was 19,781 and the total length of water lines was 377 miles. The sewerage system for Canberra and suburbs consists of a treatment works, 295 miles of sewerage reticulation and 6½ miles of rising mains (at 30 June 1965). There were also 298 miles of stormwater sewers.

Harbour boards and trusts

The number and net tonnage of vessels which entered the major ports in each State during the years 1963-64 and 1964-65 are shown in the chapter Transport and Communication (see page 450). Particulars of oversea and interstate cargo discharged and shipped during 1964-65 are shown on page 451 of the same chapter.

New South Wales

Maritime Services Board of New South Wales. The Maritime Services Board of New South Wales is a corporate body of seven Commissioners comprising three full-time members and four part-time members representing shipping and other maritime interests. The Board was constituted on 1 February 1936, under the Maritime Services Act, 1935, 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. It 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 ports of Sydney, Newcastle and Botany Bay the Board is also responsible for the provision of adequate wharfage and channels and carries out all construction, maintenance and dredging work. All revenue earned by the Board at the ports of Sydney, Newcastle and Botany Bay, with the exception of that earned from pilotage and navigational services, is credited to the Maritime Services Board Fund, and all revenue expenditure incurred at the three ports is drawn from that Fund. The following table shows particulars of the finances of the Board in respect of the ports of Sydney, Newcastle and Botany Bay.

MARITIME SERVICES BOARD FUND: FINANCES OF THE PORTS OF SYDNEY, NEWCASTLE AND BOTANY BAY, 1960-61 TO 1964-65
(\$'000)

Year	Revenue				Expenditure(a)			Surplus
	Wharfage and transhipment rates	Tonnage rates and berthing charges	Other charges	Total	Administration and maintenance	Interest, debt redemption, exchange, etc.	Total	
1960-61	6,261	1,263	1,855	9,379	5,130	4,162	9,293	87
1961-62	9,308	1,399	2,585	13,293	7,513	5,714	13,228	65
1962-63	9,693	1,581	2,438	13,712	7,543	6,056	13,599	113
1963-64	10,838	1,755	2,933	15,526	7,864	7,567	15,431	95
1964-65	11,594	1,858	3,565	17,017	9,109	7,835	16,945	72

(a) Excludes capital expenditure but includes transfers to the Renewals Fund Reserve Account (\$2,050,000 in 1960-61, \$2,750,000 in 1961-62, \$3,091,000 in 1962-63, \$4,778,000 in 1963-64, and \$5,080,000 in 1964-65.)

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 four miles, there are two separate channels, each 700 feet wide, the Western Channel not less than forty-two feet deep (low water ordinary spring tide) and the Eastern Channel forty-two 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 twenty-one square miles, of which about one-half has a depth of thirty feet or more at low water ordinary spring tide. The mean range of tides is 3 feet 6 inches.

The wharves are situated close to the business centre of the city, about four or five miles from the Heads. At 30 June 1965 there was one dolphin berth 550 feet long, and ninety-three effective commercial cargo berths with a total length of 47,471 feet, controlled by the Board.

Accommodation for harbour craft amounts to 2,395 feet, while the length of other berths, including oil and private wharves, totals 22,615 feet. Depth of water at wharves is up to thirty-six feet. Special facilities for the storage and handling of products such as wheat, wool, coal, etc. are provided, and modern plant has been installed for replenishing ships' bunkers with oil or coal. Docking facilities are available for the largest vessel afloat. The Captain Cook Graving Dock ranks among the largest graving docks in the world, being 1,139 feet by 147 feet 7½ inches with a depth of 45 feet 2 inches over the sill at high water. There are also several smaller dry docks and floating docks in the port.

Port of Newcastle. As from 1 May 1961 the Maritime Services Board of New South Wales became the single authority for the port of Newcastle. An Advisory Committee consisting of eight members, appointed by the Governor, assists the Board in matters associated with the operation of the port. It is primarily a coal-loading port, and the proximity to the coal fields 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 twenty-six feet at low water, is 350 feet wide. Work is now in hand to increase the depth to thirty-six feet for a width of 500 feet. Wharfage accommodation amounts to approximately 16,000 feet, including about 2,600 feet of privately owned wharfage. There are also two dolphin berths available for tie-up purposes. A floating dock of 15,000 tons capacity is available at the port.

Botany Bay. The Maritime Services Board of New South Wales is the administrative and controlling authority. The port is primarily a discharging centre for the oil refinery at Kurnell, near Sydney, and two berths are available as well as tanker mooring buoys. The entrance to the Bay is approximately one and a quarter miles wide, with a minimum depth of about thirty-six feet in the dredged swinging basin.

Port Kembla. As from 3 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. This Department, however, continues to be the constructing authority in respect of works, dredging and maintenance. An Advisory Committee consisting of nine members, appointed by the Governor, has been formed to assist the Board in the operation of the port. It has an area of approximately 340 acres, with depths ranging from twenty to fifty feet (low water ordinary spring tide), and wharfage accommodation totalling 8,000 feet has been provided for large ocean-going vessels. No cargo sheds are available, as the nature of trade at the port does not call for the provision of sheltered storage accommodation at the berths. It is the port of the southern coalfields and for the expanding industrial area in and about Wollongong. The developmental programme for Port Kembla includes the construction of an inner harbour to provide wharfage for the steelworks in addition to modern general cargo berths; a coal loading plant capable of loading at the rate of 2,000 tons per hour is now available. Present accommodation is 1,900 feet of wharfage, with thirty-six feet (low water ordinary spring tide) of water alongside. Width in the entrance to the inner harbour basin is 400 feet.

Other ports. In addition to the ports of Sydney, Newcastle, Port Kembla, and Botany Bay, the Board controls twenty-nine outports along the coastline of 609 miles. The shipping trade of these outports is relatively small.

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 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 1 February 1936 the State enactments have been administered by the Maritime Services Board. The gross collections by the State authorities amounted to \$22,865,196 in 1964-65. This figure includes the revenue for the ports of Sydney, Newcastle and Botany Bay (*see* table on page 860) and State navigation service collections, \$5,848,380 (1964-65).

Victoria

Melbourne Harbor Trust. Information regarding the origin and constitution of this Trust, which controls the port of Melbourne, appears in Official Year Book No. 12, pages 970-2. The port of Melbourne comes under the control of the Melbourne Harbor Trust Commissioners, an independent autonomous statutory organization, with a full-time Chairman and five part-time Commissioners with specialized knowledge of the requirements of exporters, primary producers, shipowners, importers, and of all aspects of port labour. The area of water and land under the control of the Trust is ten and a half square miles, with sheds available for cargo in transit totalling 22,928 feet in length and covering an area of about forty-three acres. Three of the

largest transit sheds on the Australian coast are now in operation at Appleton Dock. The sheds are 600 feet long by 150 feet wide, each with a cargo stacking area of 81,000 square feet. The berths are used for the general cargo trade and have both rail and crane facilities and modern amenities for port workers. The total length of wharves, piers and jetties in the port is 61,550 feet, covering an area of about fifty-nine acres with 56,940 feet of effective berthing space.

During 1965 major reconstruction and modernization of several cargo berths in the Port including 1-4 Victoria Dock and 19 South Wharf was concluded. Construction of a new shipping control centre seventy-four feet above ground level, with radar and visual observation of the entire port area, was continued. The specifications and design for the construction of a 250-ton dual purpose floating crane were finalized and tenders called for the building of the crane. A modernization programme costing \$720,000 was undertaken on the main oversea passenger terminal at Station Pier. The depth of water (low water ordinary spring tide) from the main channels to the principal wharves is thirty-one to thirty-nine feet. The following table shows particulars of the financial operations of the Trust.

MELBOURNE HARBOR TRUST: FINANCES, 1961 TO 1965
(\$'000)

Year	Gross loan indebtedness at 31 December	Revenue		Expenditure				Surplus (+) or deficit (-)
		Wharfage and tonnage rates	Total	Administration and maintenance	Interest, debt redemption, exchange, etc.	General reserve, depreciation, renewals and insurance account	Total	
1961 . . .	28,481	4,607	7,583	5,422	1,821	408	7,652	- 69
1962 . . .	29,750	4,883	7,958	5,176	1,788	969	7,932	+ 26
1963 . . .	29,835	5,459	8,969	5,411	1,898	1,546	8,855	+114
1964 . . .	29,773	7,145	11,312	6,687	2,632	1,812	11,132	+181
1965 . . .	30,473	7,058	11,434	6,450	2,393	2,382	11,226	+208

Geelong Harbor Trust. The Geelong Harbor Trust, constituted in 1905, is under the control of three Commissioners appointed from time to time by the Governor-in-Council. At the end of 1965 there were eighteen effective berths in the port, plus two berths at the Commonwealth Explosives Pier, Point Wilson, owned and operated by the Commonwealth. Point Henry Pier, a 4,000 feet alumina discharging structure, was officially opened on 13 April 1966, and Corio Quay South No. 1, a new general cargo and meat loading berth, is expected to come into operation by late 1966. The construction of a modern dry bulk berth with an initial discharge rate of 1,000 tons per hour will commence in 1966, but the four seven and half ton cranes to operate on this berth have in the meantime commenced to operate on the adjacent Kings Wharf. Eight berths have a depth of thirty-six feet at low water, while all other berths (except Commonwealth Explosives Pier, Point Wilson and Point Henry Pier, thirty feet) have a depth of thirty-two feet at low water. Revenue for the year 1964 was \$3,102,766 and expenditure from revenue totalled \$1,740,288. At 31 December 1964 the value of the Trust's fixed assets was \$20,090,408 and loans outstanding amounted to \$7,185,212.

Portland Harbor Trust. Construction of an all-weather deep-sea port of three berths with a low water depth of thirty-six feet was completed to operational standards in 1960. A new oil tanker berth was brought into commission during 1963, from which petroleum products are pumped to bulk terminals at North Portland, and the completion of a bulk grain terminal now provides in-transit storage for one million bushels of grain awaiting overseas shipment. The Trust has now embarked on a new construction programme to provide additional bulk berth, designed primarily for the discharge of phosphate rock, sulphur and other chemicals. Operating revenue for the year ended 30 June 1965 was \$257,568 and revenue expenditure was \$233,846. The value of the Trust's fixed assets, less depreciation, was \$15,705,420 at 30 June 1965, and loans and advances outstanding amounted to \$16,393,156.

Queensland

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.

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. Adequate dry-docking facilities are available. The finances of Brisbane Harbour for the years 1959-60 to 1963-64 are shown below.

BRISBANE HARBOUR: FINANCES, 1959-60 TO 1963-64
(\$'000)

Year	Loan indebtedness at 30 June	Receipts		Payments	
		Harbour dues	Total	Working expenses(a)	Total
1959-60 .	5,024	1,544	2,118	1,462	1,906
1960-61 .	5,626	1,526	2,328	1,358	1,802
1961-62 .	5,432	1,484	2,168	1,256	1,698
1962-63 .	5,296	1,640	2,514	1,774	2,146
1963-64 .	5,032	1,858	2,500	3,346	3,838

(a) Excludes interest and redemption included in total.

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

Harbour Boards. Harbour boards control the ports of Bowen, Bundaberg, Cairns, Gladstone, Mackay, Rockhampton, and Townsville. Finances for each port for the year ended 30 June 1964 are shown below, together with a summary for the years ended 30 June 1960 to 1964.

HARBOUR BOARDS, QUEENSLAND: FINANCES, 1959-60 TO 1963-64
(\$'000)

Harbour board	Loan indebtedness at 30 June	Revenue		Expenditure (excluding loan)		Surplus(+) or deficit(-)
		Wharfage and harbour dues	Total	Working expenses	Total (including interest and redemption) (a)	
Bowen	535	23	28	19	28	..
Bundaberg	6,226	573	887	239	813	+ 74
Cairns	5,328	441	744	239	758	- 14
Gladstone	2,266	176	517	65	473	+ 45
Mackay	4,228	361	1,091	364	965	+127
Rockhampton	2,176	85	114	47	109	+ 5
Townsville	7,610	670	2,037	388	2,257	-220
Total, 1963-64	28,369	2,329	5,419	1,362	5,402	+ 17
1962-63	22,619	2,179	4,119	1,203	3,731	+388
1961-62	19,682	1,883	3,571	997	3,248	+322
1960-61	18,791	1,724	3,366	1,095	3,251	+116
1959-60	16,861	1,818	3,614	1,123	3,054	+561

(a) Includes expenditure on capital works from accumulated revenue.

South Australia

The South Australian Harbors Board. All South Australian harbours are controlled by the South Australian Harbors Board, which consists of three Commissioners appointed by the Governor for a period of five years and eligible for re-appointment. The Board is responsible to the Minister of Marine for the discharge of its duties and functions. The most important

ports are the five deep-sea ports of Port Adelaide, Port Pirie, Wallaroo, Port Lincoln, and Thevenard. At a few ports the wharves or jetties are privately controlled, the principal of these being at Whyalla, Ardrossan and Rapid Bay, all of which are controlled by the Broken Hill Pty. Co. Ltd. Port Augusta is controlled by the Commonwealth Railways on behalf of the Commonwealth Government. Maximum depths of water (low water) at the wharves of the main ports range from twenty-seven feet at Port Pirie to thirty-five feet at Port Adelaide (Outer Harbor). The following table shows the finances of the Board for 1960-61 to 1964-65.

THE SOUTH AUSTRALIAN HARBORS BOARD: FINANCES
1960-61 TO 1964-65
(\$'000)

Year	Capital at 30 June (a)	Revenue	Expenditure from revenue			Surplus
			Working expenses	Interest	Total	
1960-61	34,864	5,429	3,369	1,317	4,686	744
1961-62	37,112	5,153	3,353	1,402	4,755	399
1962-63	38,968	5,098	3,344	1,531	4,876	222
1963-64	40,996	6,114	3,591	1,581	5,172	942
1964-65	42,474	6,201	3,908	1,679	5,587	614

(a) State Treasurer's funds and reserve employed.

Western Australia

Fremantle Port Authority. The Port of Fremantle is operated and controlled by a body corporate administered by a Board of five Commissioners appointed triennially by the Governor. The port covers an extensive water area of some 180 square miles and comprises an inner and an outer harbour. The inner harbour includes eighteen deep-water land-backed berths, providing 703,850 square feet of covered storage space and 11,148 feet of wharf berth accommodation. All inner harbour berths are dredged to a low water depth of thirty-six feet. The outer harbour includes three main anchorages, Gage Roads, Owen Anchorage and Cockburn Sound. Deep-water jetties, including the oil refinery jetty in Cockburn Sound, are available in the outer harbour. Ocean-going deep draft ships enter the Sound by means of channels dredged through Success and Parmelia Banks to a low water depth of thirty-eight feet and a bottom width of 500 feet. In the outer harbour there are three tanker berths each with a low water depth of forty-four feet at the Kwinana oil refinery, one berth at the nearby steelworks jetty with a low water depth of thirty feet, and one berth at the alumina works jetty with a low water depth of forty feet. There are also special berths for the off-loading of cattle and the handling of explosives. Gross earnings for 1964-65 amounted to \$7,334,376, working expenses to \$5,673,740, interest charges on loan capital \$703,828, sinking fund contributions \$190,396, and capital and other funds employed totalled \$18,138,468.

Albany Harbour Board. The Albany Harbour is controlled by a board of five members appointed by the Government. The depth of water in the entrance channel is thirty-three feet, at one arm of the jetty thirty-one feet and at the other arm thirty-three feet. In the approaches to wharf berths the depth is thirty-three feet. Wharf accommodation consists of 1,115 feet, and in addition the Deepwater Jetty has 2,500 feet of accommodation. Gross earnings for the year 1964-65 amounted to \$350,174, working expenses \$155,278, interest and sinking fund charges \$199,666, and capital account totalled \$3,828,084.

Bunbury Harbour Board. The Bunbury Harbour is controlled by a board of five members appointed by the Government. The depth of water in the harbour is thirty feet and berthing accommodation is 4,300 feet. Gross earnings for the year 1964-65 amounted to \$532,826, working expenses \$327,814, interest on loan capital \$288,128, and capital account totalled \$6,195,300.

Other ports. The following ports are controlled by the State Government Harbour and Light Department: Broome, Busselton, Carnarvon, Dampier, Derby, Esperance, Exmouth, Geraldton, Onslow, Point Samson, Port Hedland, Wyndham, and Yampi.

Tasmania

There are eight marine boards and one harbour trust in Tasmania. The marine boards control the ports of Hobart, Launceston, Stanley (Circular Head), Burnie and Wynyard (Table Cape), Devonport and Ulverstone, Strahan, Currie (King Island), and Whitemark (Flinders

Island), and the harbour trust controls the port of Smithton. 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 sixteen and forty feet.

The following table shows particulars of the finances for each port for 1964-65.

MARINE BOARDS AND HARBOUR TRUST, TASMANIA: FINANCES, 1964-65
(**\$'000**)

Authority	Loan indebtedness at 30 June (a)	Receipts (revenue account)		Expenditure (revenue account)		Surplus (+) or deficit(-)
		Wharfage charges	Total	Loan charges	Total	
Hobart	2,700	741	1,505	289	1,486	+ 18
Launceston	2,783	595	1,587	220	1,451	+135
Devonport	3,886	560	857	313	1,023	-166
Burnie	7,473	566	1,001	448	948	+ 53
Circular Head	143	14	31	19	31	+ 1
King Island	81	25	32	6	28	+ 5
Strahan	29	27	34	4	33	+ 1
Flinders Island	4	12	14	2	12	+ 2
Smithton . . . . .	..	..	1	..	3	- 2
Total	17,099	2,542	5,062	1,302	5,015	+ 47

(a) The total of new loans raised during 1964-65 was \$2,842,000, of which Launceston raised \$650,000, Devonport \$600,000, Burnie \$1,574,000, and King Island \$18,000.

Fire brigades

New South Wales

A Board of Fire Commissioners, consisting of five members, one appointed by the State Government (President) and one each representing insurance companies, local government authorities, volunteer firemen, and permanent firemen, operates under the Fire Brigades Act, 1909-1958, and 157 fire districts had been constituted at the end of 1964. The cost of maintenance of fire brigades is borne in proportions of local councils and the Government each one-eighth, and the insurance companies three-quarters. The Board's borrowing power is limited to \$2,000,000.

At 31 December 1964 the authorized strength of the Fire Brigade throughout the fire districts of New South Wales was 421 officers and 1,296 permanent and 2,676 volunteer firemen. Corresponding figures for the Sydney Fire District were 344, 1,151 and 292. The revenue for the year 1964 was \$7,539,320, made up as follows: from the Government, \$933,840; municipal and shires, \$933,840; fire insurance companies and firms, \$5,603,040; and from other sources, \$68,600. The disbursements for the year were \$7,986,912. The Board of Fire Commissioners provides the fire protection services for Canberra, in the Australian Capital Territory, and the cost of these services is reimbursed by the Commonwealth Government.

Under the Bush Fires Act, 1949-1963 a Bush Fire Fighting Fund exists from which finance is provided for the prevention and fighting of bush fires. Contributions to the Fund by the Government, councils and insurance companies are in the proportion of one quarter, one quarter and one-half, respectively. At 30 June 1965 Volunteer Brigades equipped by means of this fund numbered 2,500 with an active membership of about 150,000 persons. The approved expenditure from the Fund for equipment, up to 30 June 1966, amounted to \$6,823,754.

Victoria

In Victoria, fire brigades are controlled by the Metropolitan Fire Brigades Board consisting of ten members, including an employees' representative, and the Country Fire Authority also consisting of ten members.

Metropolitan Fire Brigades Board. The Metropolitan Fire Brigades Board receives contributions from the municipalities and the insurance companies in the proportion of one-third and two-thirds respectively. On 30 June 1965 the Board had under its control forty-five stations, 1,051 permanent staff, 233 special service and clerical, etc. staff, and twelve part-time firemen. The total receipts for 1964-65 were \$5,051,498, comprising contributions \$4,263,914, receipts for services \$487,420, and interest and sundries \$300,164. The expenditure was \$4,886,864.

Country Fire Authority. This authority 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 twenty-five fire control regions, four of which (Ballarat, Bendigo, Geelong and the Dandenong, Chelsea and Frankston areas) are wholly urban and the remainder mixed urban and rural. The Country Fire Authority receives contributions in the proportion of two-thirds from insurance companies and one-third from the Treasury. At 30 June 1965 the Country Fire Authority Act applied to 199 insurance companies and 205 urban and 1,043 rural fire brigades. The effective registered strength of the brigades was 111,599 members. Income for the year 1964-65 amounted to \$1,773,268. Total expenditure other than loan amounted to \$1,604,430.

Queensland

Fire Districts are constituted under the Acts of 1920-1956. 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: Treasury one-seventh, insurance companies five-sevenths, and local authorities one-seventh. The insurance companies' contribution is paid to the State Government and thence to fire brigades.

At 30 June 1964 there were eighty-three Fire Brigade Boards. The number of stations was 155 and full-time staff numbered 916, including 24 administrative, 205 officers and 687 firemen. Volunteers numbered 123. Part-time staff numbered 1,195, including 86 administrative, 125 officers and 984 firemen. The total revenue for the year 1963-64 was \$3,366,500, received mainly from the following sources: Government \$454,588, local authorities \$454,588, insurance companies \$2,272,930. Loan receipts (Government and other) were \$1,063,904. The total expenditure for the year was \$3,243,140, the chief items being salaries and wages \$2,304,796, and interest and redemption of loans \$360,716.

South Australia

The Fire Brigades Act, 1936-1958 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. When the Treasury proportion exceeds its statutory contribution of approximately \$26,000, the excess is borne five-sevenths by insurance companies and two-sevenths by the municipalities. At 30 June 1965 there were altogether thirty-seven fire brigade stations, of which thirteen were metropolitan and twenty-four country.

The strength of the permanent staff at 30 June 1965, was 416, including 290 officers and men, 92 country auxiliary firemen and 34 other employees (including maintenance workers). The total revenue for the year 1964-65 was \$1,239,990, including contributions of \$1,025,442 made up as follows: insurance companies \$617,038, Treasury \$161,590 and municipalities \$246,814. The Treasury contribution includes an additional grant of \$135,750.

Western Australia

By the provisions of the *Fire Brigades Act, 1942-1964* certain local government areas are constituted fire districts under the control of the Western Australian Fire Brigades Board. There were fifty-one fire districts at 30 September 1965. The contribution to the Board is made in the proportion of 16 per cent from the Government, 20 per cent from local government authorities, and 64 per cent from insurance companies. The number of local government authorities and insurance companies who contributed numbered sixty-nine and 168 respectively. The brigades, throughout the State, controlled by the Western Australian Fire Brigades Board at 30 September 1965 numbered sixty-seven, with a staff of 1,539, including 307 permanent officers and firemen and 1,232 volunteer brigade officers and firemen. The revenue for the year ended 30 September 1965 was \$1,557,742 and the expenditure \$1,581,328.

Under the *Bush Fires Act, 1954-1964* a Bush Fires Board, consisting of thirteen members, six of whom are nominated by the Country Shire Councils Association, was set up to advise the Minister for Lands on bush fire control. The Act also provides for the registration of bush fire control officers, who numbered 2,004 at 30 June 1965, and the establishment of bush fire brigades, 861 at 30 June 1965. Many individual brigades are large organizations with numerous self-contained sections.

Tasmania

The *Fire Brigades Act 1945* provided for the creation of the Fire Brigades Commission of Tasmania to co-ordinate the activities of existing fire brigade boards, while leaving the responsibility for individual control and management with the boards. The Commission consists of two persons nominated by the Minister, one person elected by the City or Municipal Councils' representatives and three persons elected by the insurance representatives of the Fire Brigades Boards. Contributions towards the cost of operations are on the basis of one quarter each from the treasury and the municipalities and one half from the insurance companies concerned. The cost for the year 1964-65 amounted to \$516,738. There were, at 30 June 1965, twenty-three boards controlling thirty-six stations, and their aggregate staffs numbered 564, including 127 permanent officers, 367 part-time firemen, including officers, and 70 volunteers.