## CHAPTER IV.

## LOCAL GOVERNMENT.

## § 1. Introduction.

1. General.-The construction and maintenance of roads, bridges and ferries are generally part of the functions of local autborities, but in New South Wales and South Australia, more especially in the large unincorporated areas, these duties are undertaken directly by the Government. In some States, moreover, a certain proportion of the roads and bridges is constructed and maintained by the Government, which, in addition, advances money for main roads to be expended by municipalities under the supervision of special Boards. Although roads, bridges and ferries constructed and maintained directly by Government do not properly come under the heading of "Local Government," they have been included in this chapter for the sake of convenience.
2. Municipalities, Shires, etc.-A description of the various systems of municipal government in the different States, and their development from the earliest date, was published in 1919 by the Commonwealth Bureau of Census and Statistics in a separate work entitled "Local Government in Australia." Limits of space preclude the incorporation of the information contained therein in the Official Year Book.
3. Water Supply and Sewerage.-In the cities of Sydney, Melbourne and Brisbane 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.
4. 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 a few instances, however, they are directly controlled by the Government. Only those which are controlled by Boards are dealt with in the following pages.
5. Fire Brigades.-In all the States, the management of fire brigades is undertaken by Boards. The members of these Boards are usually elected by the councils of municipalities and insurance companies within the districts placed under their jurisdiction, together with one or more appointed by the Government. Occasionally volunteer or country fire brigades are represented.

## § 2. Government Roads, Bridges, Etc.

1. New South Wales.-(i) General. The control of all roads, bridges and ferries with the exception of those proclaimed as "National " and of those in the unincorporated areas of the Western Division, which still remain under its jurisdiction, was transferred, in 1920, from the Public Works Department to local authorities. The Government has also adopted the policy of assisting municipal and shire councils to recondition certain main roads by doing the work in the first instance, and recovering in instalments from the councils concerned one-half of the cost.
(ii) Roads, Bridges and Ferries. At the 30th June, 1927, the "National" works consisted of 58 miles of roads, 288 bridges with a total length of 108,295 feet, and 18 ferries, while in the unincorporated areas of the Western Division there were 5,688 miles of roads (of which 177 miles were metalled or ballasted, 220 formed only, and 2,932 cleared only), 96 bridges of a total length of 13,495 feet, 489 culverts, and 6 hand punts under the control of the Public Works Department.
(iii) Expenditure on Roads, Bridges and Ferries. The following table shows the expenditure by the Government on roads, bridges, punts, ferries, etc., during each of the years 1923-24 to 1927-28:-

ROADS, ETC.-EXPENDITURE BY GOVERNMENT, 1923-24 TO 1927-28.

| Year. |  | Expenditure <br> from Votes of <br> Public Works <br> Department. | Expenditure <br> from Funds of <br> Main Roads <br> Board. | Endowments and <br> Grants to Concils <br> from Votes of <br> Local Government <br> Department. | Total <br> Expenditure. <br> $1923-24$ <br> $1924-25$$\ldots$ |
| :--- | :--- | :---: | :---: | :---: | :---: |

The Government expenditure in connexion with the Sydney Harbour Bridge, which amounted to $£ 3,348,908$ to the 30th June, 1928, is not included in the figures shown in the table above. Of the total sum expended to date, $£ 2,566,468$ was provided by General Loan Account and the balance from proceeds of municipal and shire rates.
2. Victoria.-(i) General. A small sum is expended annually by the State Government on roads and bridges, and a considerable amount of loan money is advanced in each year to the Country Roads Board for the purpose of constructing and maintaining main and developmental roads, the amount so expended during the year ending 30th June, 1927, being $£ 1,042,441$, and in $1927-28$, $£ 882,896$. An annual payment of $£ 50,000$ is also made out of Consolidated Revenue to the Board for maintenance works.
(1i) Direct Expenditure by Government. The following table shows the amounts of money expended directly by the Government on roads and bridges during the years 1922-23 to 1927-28 :-

ROADS AND BRIDGES-GOVERNMENT EXPENDITURE, VICTORIA, 1922-23 TO 1927-28.

| Year. | 1922-23. | 1923-24. | 1924-25. | 1025-26. | 1926-27. | 1927-28. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Expenditure | $\stackrel{\underset{65,459}{£}}{ }$ | $\stackrel{£}{46,761}$ | $\stackrel{\mathbf{£}}{68,939}$ | $\stackrel{\mathfrak{£}}{81,205}$ | $\begin{gathered} £ \\ 193,291 \end{gathered}$ | $\begin{gathered} \boldsymbol{£} \\ 170,575 \end{gathered}$ |

(iii) Country Roads Board. The duties of this Board were given in some detail in Year Book No. 15, p. 526.

Loans to the amount of $£ 4,822,000$ have been authorized from time to time for permanent works under the Country Roads Acts. One half of the amount expended on permanent works and one-third of the amount expended on maintenance must be refunded by the municipalities affected, 6 per cent. of the amount due in respect of permanent works being payable annually, and the cost of maintenance allocated to
each municipality must be paid before the lst of July in each year. A special rate, not exceeding 6 d . in the pound, may be levied in any ward or riding of a municipality for the purpose of such repayment.

All registration fees, licence fees and fines under the Motor Car Act, all licence fees for unused roads and water frontages, and all registration fees and fines for tractionengines are credited to the Country Roads Board Fund. The total loan expenditure for permanent works to the 30th June, 1927, was $£ 3,863,463$. The following table gives the revenue and expenditure on permanent and maintenance works for the five years 1922-23 to 1926-27 :-

COUNTRY ROADS BOARD, VICTORIA-REVENUE AND EXPENDITURE,

(iv) Developmental Roads. For the purpose of constructing and maintaining subsidiary or developmental roads, the Government has been authorized to borrow sums aggregating $£ 6,475,000$. The work is carried out under the supervision of the Country Roads Board, and the State provides the whole of the money and makes provision out of State funds for liquidating the liability; the municipalities, however, are required to bear a proportion of the interest on the outlay during the period of the loan and to maintain the roads when constructed. The amount expended during the year ended 30th June, 1927, was $£ 576,710$, and the total expenditure to that date was $£ 4,352,329$.
3. Queensland.-Under "The Main Roads Act of 1920," a Main Roads Board was constituted, consisting of three members appointed by the Governor in Council. Subsequently, by "The Main Roads Acts Amendment Act of 1925," the Board was abolished, and its powers conferred upon a single commissioner. The duties of the Commissioner are to make the necessary surveys and investigations in order to determine what roads should be main roads, and, under certain circumstances, to undertake the construction and maintenance of such roads. Before any road can be prociaimed a main road, the shire councils through whose areas such road passes have the right to lodge objections thereto, and the Commissioner must consider such objections and may vary bis decision. The whole of the money necessary for the construction and maintenance of main roads is provided from the Main Roads Fund at the Treasury, and the councils concerned must repay up to one-half the cost thereof over a period of 30 years, with interest. This fund is formed from (a) moneys appropriated by Parliament therefor, (b) fees on motor vehicles and traction engines, (c) fees and rents for unused roads, (d) moneys received from the sale of timber, sand, etc., on any main road and (e) all other moneys received or recovered by the Commissioner. Wherever possible, the Commissioner arranges with local authorities to undertake the survey and construction of works, but in most cases, owing to the dearth of trained engineers in the employ of councils, the Commissioner has had to undertake most of the survey work and preparation of plans and a considerable portion of the construction. During the year ended 30th June, 1928, the receipts of the Commission amounted to $£ 1,034,049$, including $£ 257,886$ from the Treasury Loan Fund, $\mathbf{£ 3 7 7 , 2 2 2}$ from motor fees, and $£ 320,939$ from the Commonwealth for works under the

Federal Aid Scheme ; and the disbursements to $\mathbf{£ 9 4 6 , 4 6 1 , \text { including } \mathbf { ~ } 9 9 , 0 7 0 \text { expenditure }}$ on permanent works, $£ 542,180$ on works under the Federal Aid Road Scheme and £132,394 on maintenance of main roads. At that date, 5,575 miles of roads had been gazetted as main roads, and 437 miles had been surveyed during the year. In addition, 362 miles of roads had been gazetted as developmental roads up to 30th June, 1928, and 75 miles surveyed during the year.

The money made available to the State under the "Federal Aid Road Act" is allocated and expended under the direction of the Commissioner of Main Roads.

The developmental roads sections of "The Main Roads Acts 1920 to 1928 " provide that on such roads the Commissioner will be responsible for the total cost of construction, but that the local authorities concerned shall repay half the interest over a period of twenty years, and that the local authorities shall be responsible for maintenance. The 1928 amendment of the Act makes provision for the declaration and construction of tourist roads. It also prescribes in certain cases more liberal terms in connexion with interest repayments and maintenance of main and developmental roads.
4. South Australia.-The Highways Act 1926 created a Commissioner of Highways and provided for a Main Roads Fund. The Commissioner is virtually empowered to determine upon which roads he will spend the moneys available, in doing which he has to take into account (a) the moneys voted, or likely to be voted, by Parliament for main roads; (b) whether the road is or will be the main trunk route: (i) connecting any large producing area, or any area capable of becoming in the near future a large producing area, with its market or nearest port or railway station ; (ii) connecting two or more large producing areas, or areas capable of becoming in the near future large producing areas, or between two or more large centres of population; (iii) between the capital and any large producing area or any large centre of population ; (iv) between the capitals of this State and any other State ; and (c) whether the area through which the road passes is, or in the near future will be, sufficently served by a railway or railways.

The Main Roads Fund is to be credited with (a) licence fees and registration fees under the Motor Vehicles Acts 1921 to 1927; (b) licence fees under the Vehicles (Licensing) Act 1925 ; (c) motor vehicles tax under the Motor Vehicles Tax Acts 1915 to 1927; (d) fines, penalties, and forfeitures in respect of convictions for offences against the Motor Vehicles Acts, of the Motor Vehicles Tax Acts (exclusive of any sum received for costs), or the Width of Tires Acts; (e) fees for hawkers' licences issued by the Treasurer ; $(f)$ contributions from Councils; ( $g$ ) all sums appropriated by Parliament for main roads ; ( $h$ ) all loans raised and appropriated for main roads.

Moneys standing to the credit of the Fund are to be used by the Commissioner for (a) payment of the expenses incurred in connexion with carrying out the provisions of the Act ; (b) defraying the cost of the operations undertaken by the Commissioner in connexion with main roads and works; (c) payment to each council of the amount of its annual grant for main roads; (d) defraying the cost of any work required to be executed by the State pursuant to any agreement with the Commonwealth relating to the construction, reconstruction and maintenance of roads, etc. ; (e) refunding to the Treasurer any moneys paid or set aside out of General Revenue pursuant to the Main Roads Fund Act 1922; or for the purpose of payment of the interest on any loan raised after the lst July, 1926, and appropriated to main roads ; and $(f)$ paying during each financial year to the Public Debt Commissioners for the purposes of the reduction and redemption of any loan raised after the lot July, 1926, and appropriated to main roads, in addition to any other sum required by law to be so paid for such purposes, at least such a sum as will amount to one and one-quarter per centum of the principal for the time being of such loan.

The Commissioner determines the amount of the Annual Main Road Grant to each Council for construction and maintenance of main roads and also the amount of money. to be expended by each Council out of its revenue for the same purpose provided that such contribution shall not exceed one-half of the grant. In the case of main roads maintained departmentally the Commissioner may recover from the Council in respect of maintenance and interest charges, etc., up to one-third of the annual outlay or an
amount calculated at $£ 150$ per mile per annum, whichever amount is the smaller. The Commissioner also allocates to Councils funds voted by Parliament for roads in newlysettled areas and supervises the expenditure of funds provided under the Federal Aid Roads Scheme. The Commissioner has power to deal with cases in which any main road is being neglected by a Council or in which any work towards which a grant of assistance has been made is not being satisfactorily carried out.

The expenditure from the Main Roads Fund for the year ended 30th June, 1928, was £956,646 ; grants in aid of rates collected paid to Councils amounted to $£ 136,807$. In the sparsely-settled districts outside the incorporated areas, the roads and bridges are constructed and maintained by the Public Works Department which expended during the same period $£ 31,051$.
5. Western Australia.-In Western Australia the construction, maintenance, and management of roads and bridges throughout the State are under the control of municipalities and district road boards which are subsidized by the Government.
6. Tasmania.-(i) Construction. In Tasmania the cost of construction of roads and bridges is borne almost entirely by the State Government.

Up to the 30th June, 1928, the loan expenditure on these works was $£ 4,547,621$ (roads, $£ 3,774,203$; tracks, $£ 229,517$; bridges, $£ 543,901$.) In addition, half the proceeds of the sale of land has formed a Crown Lands Fund for the construction of roads to new holdings. Under this provision $£ 676,628$ has been expended. This fund has in recent years more than met the demands on it, and expenditure therefrom since 1918 has been limited to $£ 10,000$ annually, the balance being used for redemption of debt. The following table gives particulars of the amount and cost of construction for the last five years :-

ROADS AND BRIDGES, TASMANIA-GOVERNMENT EXPENDITURE ON CONSTRUCTION, , 1924 TO 1928.


In addition, in 1927-28, the sum of $£ 87,372$ provided by the Commonwealth Government was expended on roads ; the conditional expenditure by the State Government is included in the above figures.
(ii) Maintenance. The maintenance of roads and bridges is undertaken by the municipalities with some assistance from the State Government, chiefly by way of subsidy. Under the Aid to Road Rates Act, a sum of $£ 11,000$ is distributed annually among the municipalities, in proportion as the cost of maintenance falls on their resources. Under the Main Roads Maintenance Act 1918 a further sum of $£ 5,000$ was provided out of Consolidated Revenue, which, with the addition of the motor tax, less

5 per cent., and a contribution from municipalities, is expended on the upkeep of main roads. In 1928-29 the amount available for 1,018 miles of main road was $£ 55,969$. The work is carried out in most cases by municipalities, under the general direction of an Advisory Board, on which the Government, the municipalities, and the motorists are all represented. Further, the Repairs to Roads Act 1920 provides for loans for 15 years to municipalities for the purpose of re-making roads-half the loan is repaid in instalments by the local body and the remainder by the State Government. The Government also provides for the repair of the more important bridges, and for emergency work.

The above provision for maintenance has, however, in recent years been found insufficient to cope with the heavier motor traffic, and to meet the demand for a better road surface further legislation is in contemplation.
7. Summary of Loan Expenditure on Roads and Bridges.-Figures showing the total expenditure on roads and bridges in the States are not available. The subjoined statement, however, gives the amounts of loan expenditure by the State Governments up to the 30th June, 1928 :-

## ROADS AND BRIDGES.-GOVERNMENT LOAN EXPENDITURE TO THE 30th JUNE, 1928.

| Expenditure. | N.S.W. | Victoria. | Q'land. | S. Aust. | W. Aust. | Tasmania. | All States. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total to 30/6,28 | $\underset{8,600,520}{£}$ | $\underset{9,864,032}{f}$ | $\left\|\begin{array}{c} \mathbf{£} \\ 2,741,986 \end{array}\right\|$ | $\underset{3,223,016}{£}$ | $\underset{1,275,786}{f}$ | $\underset{\mid, 547,621}{\substack{£}}$ | $\underset{30,252,961}{£}$ |

The following table shows the annual expenditure from loans on roads and bridges by the central Governments in each State during the years 1923-24 to 1927-28 :-

ROADS AND BRIDGES-LOAN EXPENDITURE BY STATES, 1924 TO 1928.

| Year Ended 30 th June. | N.S.W. | Victoria. | Q'land. (a) | S. Aust. | W. dust. | Tasmania. | All States. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | £ | £ | £ | £ | £ | £ | £ |
| 1924 | 185,578 | 627,078 | 496,000 | 165,940 | 77,744 | 56,752 | 1,609,092 |
| 1925 | 742,266 | 1,177,826 | 200,000 | 132,268 | 92,606 | 130,872 | 2,475,838 |
| 1926 | 972,793 | 1,155, 087 | 356,517 | 246,908 | 96,835 | 192,469 | 3,020,609 |
| 1927 | 1,726,420 | 1,104,345 | 313,121 | 475,601 | 184,911 | 144,327 | 3,948,725 |
| 1928 | 2,554,785 | 917,540 | 262,203 | 144,866 | 364,223 | 176,118 | 4,419,735 |

(a) Includes expenditure on main roads through local authorities.

The two tables given above show only a small proportion of the actual expenditure upon roads and bridges in the different States, for the reason that ( $a$ ) there have been large expenditures from revenue both by the central Governments and by local authorities, and (b) the State Governments have in many cases voted grants and subsidies on the amount of rates collected, and have issued loans to local authorities either for the express purpose of the construction of roads and bridges or for the general purpose of publio works construction.

## § 3. Municipalities, Shires, Etc.

1. New South Wales.-(i) General. Practically the whole of the State, with the exception of the Western Division, has been divided into municipalities and shires, the total area incorporated at the end of 1927 being 184,110 square miles, of which 2,504 square miles are included in the former and 181,606 in the latter. The areas incorporated comprise the whole of the Eastern and Central Divisions of the State. with the exception of Lord Howe Island, the islands in Port Jackson, and the quarantine station at Port Jackson.
(ii) Municipalities.-(a) Summary. The following table gives the number, area and population of municipalities, together with the length of roads and the number of bridges and ferries therein for the years 1923 to 1927 :-

MUNICIPALITIES, NEW SOUTH WALES.-SUMMARY, 1923 TO 1927.

| Year. | $\begin{aligned} & \text { No. of } \\ & \text { Municipali- } \\ & \text { ties. } \end{aligned}$ | Sydney and Suburbs. |  | Country. |  | Length of Roads. | Bridges. | Ferries. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Area. | Population. | Area. | Population. |  |  |  |
|  |  | Acres. | No. | Acres. | No. | Miles. | No. | No. |
| 1923 | 184 | 95,259 | 959,772 | 1,720,275 | 545,850 | (a) | (a) | (a) |
| 1924 | 181 | 95,259 | 989,390 | 1,593,075 | 552,930 | 10,007 | 673 | 24 |
| 1925 | 180 | 96,010 | 1,015,870 | 1,516,883 | 564,430 | (a) | (a) | (a) |
| 1926 | 181 | 96,010 | 1,046,100 | 1,521,683 | 591,500 | (a) | (a) | (a) |
| 1927 | 181 | 96,010 | 1,075,900 | 1,506,344 | 606,520 | 10,229 | 645 | 38 |

(a) Not available-collected triennially.

Of the 10,229 miles of roads, 5,026 were blocked, metalled, ballasted or gravelled, 2,006 formed only, and 1,846 cleared only, while 1,351 miles were natural surface.
(b) Unimproved and Improved Values. The table hereunder gives a comparison of the unimproved and improved values for the years 1923 to 1927 inclusive :-

MUNICIPALITIES, NEW SOUTH WALES.-CAPITAL VALUES, i923 T0 1927.

| Year. |  | Sydney. | Suburbs. | Total Metropolis. | Country. | Grand Total. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Unimproved Value. |  |  |  |  |  |  |
|  |  | £ | £ | £ | £ | £ |
| 1923 | - | 36,918,354 | 60,984,924 | 97,903,278 | 34,238,069 | 132,141,347 |
| 1924 | $\ldots$ | 45,593,929 | 65,559,272 | 111,153,201 | 36,068,427 | 147,221,628 |
| 1825 | $\cdots$ | 45,656,053 | 70,391,344 | 116,047,397 | 37,931,396 | 153,978,793 |
| 1926 |  | 45,675,896 | 74,746,427 | 120,422,323 | 40,224,070 | 160,646,393 |
| 1927 |  | 62,491,115 | 79,917,408 | 142,408,523 | 43,971,292 | 186,379,815 |

Improved Value.

| 1923 | $\ldots$ | $\ldots$ | $107,239,980$ | $174,364,307$ | $281,604,287$ | $99,739,138$ | $381,343,425$ |
| :--- | :--- | :--- | ---: | ---: | ---: | ---: | ---: |
| 1924 | $\cdots$ | $\ldots$ | $141,629,260$ | $191,921,240$ | $333,550,500$ | $106,363,410$ | $439,913,910$ |
| 1925 | $\cdots$ | $\ldots$ | $151,367,380$ | $207,838,392$ | $359,205,772$ | $112,733,389$ | $471,939,161$ |
| 1926 | $\ldots$ | $\ldots$ | $151,528,760$ | $222,560,966$ | $374,089,726$ | $121,329,258$ | $495,418,984$ |
| 1927 | $\ldots$ | . | $185,394,260$ | $238,902,863$ | $424,297,123$ | $132,105,262$ | $556,402,385$ |

(c) Revenue and Expenditure. Particulars of the revenue and expenditure of municipalities for the year ending 31st December, 1927, under various headings, are given below:-

MUNICIPALITIES, NEW SOUTH WALES.-REVENUE AND EXPENDITURE, 1927.

| Particulars. |  | Sydney. | Suburbs. | Country. | Total. |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

## Expenditure.

| General fund |  |  | $\{3,037,543$ | 1,614,817 | 4,652,369 (b) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Trading accounts | - | 44,246,020 (a) | $\left\{\begin{array}{l}\text { 48,676 }\end{array}\right.$ | 807,706 | 856,382 (b) |
| Special and local funds |  |  | ( 61,418 | 353,701 | 415,119 (b) |
| Gross expenditure | . | 4,246,020 | 3,147,637 | 2,776,224 | 10,169,881 |

(a) Items of revenue and expenditure for the city of Sydney cannot be allocated to the different headings shown for municipalities. (b) Exclusive of Sydney.

The next table shows the gross revenue and expenditure of all municipalities for the five years 1923 to 1927 :-

MUNICIPALITIES, NEW sOUTH WALES.-REVENUE AND EXPENDITURE, 1923 T0 1927.

| Municipalities. |  | 1923. | 1924. | 1925. | 1926. | 1927. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

Gross Expenditure.

|  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Sydney . | $\ldots$ | $\ldots$ | $2,371,043$ | $2,666,616$ | $3,086,313$ | $3,587,126$ | $4,246,020$ |
| Suburban | $\ldots$ | $\ldots$ | $1,790,120$ | $2,064,142$ | $2,331,723$ | $2,633,866$ | $3,147,637$ |
| Country | $\ldots$ | $\ldots$ | $1,711,734$ | $1,883,926$ | $2,135,667$ | $2,394,116$ | $2,776,224$ |
| Total | $\ldots$ | $\ldots$ | $5,872,897$ | $\mathbf{6 , 6 1 4 , 6 8 4}$ | $7,553,703$ | $8,615,108$ | $10,169,881$ |

(d) Assets and Liabilities. The financial position of the municipalities as at the 3lst December, 1927, is shown by the following statement of assets and liabilities.

MUNICIPALITIES, NEW SOUTH WALES.-ASSETS AND LIABILITIES, 1927.

| Particulars. | Sydney. | Suburbs. | Country. | Total. |
| :--- | :--- | :--- | :--- | :--- |

Assets.

|  | $\boldsymbol{f}$ | $\frac{£}{\text { ¢ }}$ | ${ }_{6}^{\text {£ }}$ | £ |
| :---: | :---: | :---: | :---: | :---: |
| Bank balances and cash |  | $\int 447,521$ | 616,302 | 1,063,823 ${ }^{-}(b)$ |
| Outstanding rates .. |  | 128,448 | 219,356 | 347,804 ${ }_{8}^{\text { }}$ (b) |
| Sundry debtors .. |  | $\{169,928$ | 309,055 | 478,983 (b) |
| Stores and materials | 26,544,103 (a) | \{ 57,220 | 122,194 | 179,414 (b) |
| Land, buildings, furniture, etc. |  | 1,301,680 | 6,184,895 | 7,486,575 (b) |
| Other |  | (150,475 | 145,472 | $\cdot 304,947_{\mathbf{L}}(\mathrm{b})$ |
| Total | 26,544,103 | 2,264,272 | 7,597,274 | 36,405,649 |

Liabilities.

| Loans, outstanding interest and sundry creditors | I | $\int 3,595,099$ |  | 6,384,186 (b) |
| :---: | :---: | :---: | :---: | :---: |
| Debts due to Goverument and |  |  | 2,789,087 | 6,384,186 (b) |
| interest thereon | \}25,860,663 (a) | 87,866 | 2,629,419 | 2,717,285 (b) |
| Bank overdrafts |  | 288,639 | 326,530 | 615,169 (b) |
| Other |  | (68,307 | 79,209 | 147,516 (b) |
| Total ${ }^{\text {- }}$ | 25,860,663 | 4,039,911 | 5,824,245 | 35,724,819 |

(a) Particulars for the city of Sydney cannot be allocated to the different headings shown for municipalities. (b) Exclusive of Sydney.
(iii) Shires.-(a) Summary. The following table gives the number, area, population, and unimproved capital value of shires, together with the length of the roads, and the number of bridges and ferries therein. It is not possible to give the improved capital value or the assessed annual value, as shires are not compelled to make these valuations.

SHIRES, NEW SOUTH WALES.--SUMMARY, 1923 TO 1927.

|  | Year. | No. of Shires. | Area. | Population. | Unimproved Capital Value. | Length of Roads. | Bridges. | Ferries. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | No. | sq. miles. | No. | £ | miles. | No. | No. |
| 1923 |  | 136 | 181,140 | 691,000 | 140,392,104 | (a) | (a) | (a) |
| 1924 |  | 136 | 181,339 | 686,770 | 144,710,409 | 88,704 | 3,861 | 172 |
| 1925 |  | 136 | 181,590 | 692,280 | 148,251,227 | (a) | (a) | (a) |
| 1926 |  | 136 | 181,582 | 684,400 | 154,614,441 | (a) | (a) | (a) |
| 1927 |  | 136 | 181,606 | 692,150 | 158,991,208 | 93,482 | 3,943 | 173 |

(a) Not available-collected triennially.

Of the 93,482 miles of roads, 19,693 were metalled or ballasted, 14,937 formed only, and 29,992 cleared only, the balance being natural surface.
(b) Revenue and Expenditure. The revenue and expenditure of shires for the years 1923 to 1927 are shown in the following table. Included in the receipts for 1927 are Government grants amounting to $£ 1,202,160$ :-

SHIRES, NEW SOUTH WALES.-REVENUE AND EXPENDITURE, 1923 T0 1927.

| Particulars. | 1923. | 1924. | 1925. | 1926. | 1927. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Revenue. |  |  |  |  |  |
| General Fund- | £ | £ | £ | £ | £ |
| General rates (including interest) | 1,064,842 | 1,129,863 | 1,178,501 | 1,275,540 | 1,346,734 |
| Government endowment | 150,296 | 146,705 | 149,345 | 147,525 | 153,410 |
| Public works | 204,129 | 323,357 | 679,322 | 1,038,343 | 1,169,697 |
| Health administration | 98,532 | 103,500 | 106,125 | 118,188 | 122,664 |
| Public services | 15,712 | 15,885 | 19,106 | 17,651 | 17,146 |
| Shire property | 8,124 | 11,741 | 14,460 | 19,534 | 30,606 |
| Miscellaneous | 16,977 | 15,364 | 20,920 | 32,858 | 27,401 |
| Special and Local Funds | 157,547 | 190,271 | 249,745 | 293,155 | 368,934 |
| Total revenue | 1,716,159 | 1,936,686 | 2,417,524 | 2,942,794 | 3,236,592 |

Expenditure.

| General Fund- |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Administrative expenses | 158,362 | 159,719 | 181,713 | 185,986 | 199,344 |
| Public works . . | 1,268,550 | 1,467,867 | 1,948,301 | 2,437,726 | 2,551,747 |
| Health administration | 104,437 | 107,804 | 116,133 | 125,599 | 135,428 |
| Public services | 31,526 | 31,432 | 38,945 | 41,792 | 39,935 |
| Shire property | 7,041 | 8,524 | 10,438 | 15,224 | 15,269 |
| Miscellaneous ( $a$ ) | 20,327 | 24,236 | 51,791 | 87,074 | 112,044 |
| $\begin{array}{ccc}\text { Special, Local, anil Loan } \\ \text { Funds } & \text {.. } & \text {.. }\end{array}$ | 131,715 | 173,070 | 205,885 | 259,042 | 360,370 |
| Total expenditure | 1,721,958 | 1,972,742 | 2,553,206 | 3,152,443 | 3,414,137 |

(a) Includes interest on loans and overdraft- $£ 13,185$ in 1923 , $£ 19,934$ in 1924, $£ 29,083$ in 1925, $£ 54,271$ in 1926 , and $£ 73,530$ in 1927 .
(c) Assets and Liabilities. The finances of the shires at the end of the year 1927 showed an excess of liabilities of $£ 132,682$. The following table gives particulars of assets and liabilities as at the 31st December, 1927 :-

SHIRES, NEW SOUTH WALES.-ASSETS AND LIABILITIES, 1927.

2. Victoria.-(i) General. Local Government is established throughout the State, the various divisions being termed cities, towns, boroughs, or shires. Melbourne and Geelong were incorporated under special statutes prior to the establishment of a general system of local government, and except in a few details are not subject to the provisions of the Local Government Act.

In addition to the endowment of $£ 50,000$, the municipalities received from the Government during the financial year 1927-28 a sum of $£ 61,796$ out of the Licensing Fund as the equivalent for (a) fees for licences, (b) fees for the registration of brewers and spirit merchants, and (c) fines, penalties, and forfeitures incurred under the Licensing Act 1915.

The financial years of the cities of Melbourne and Geelong end on the 31st December and the 31st August respectively ; those of all other municipalities on the 30th September.
(ii) Municipalities. (a) Summary. The following table shows the number of cities, towns, boroughs, and shires, with estimated population, number of ratepayers and dwellings, and velue of rateable properiy for the years 1924 to 1928 inclusive :-

MUNICIPALITIES, VICTORIA.-SUMMARY, 1924 TO 1928.

| Year ending 30th September. | $\begin{gathered} \text { Number } \\ \text { of } \\ \text { Municipal- } \\ \text { ities. } \end{gathered}$ | Estimated Population | NumberofRatepayers(bothsexes). | Estimated Number of Dwellings. | Estimated Value of Rateable Property. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Total. | Annual. |
| Cities, Towns, and Borodits. |  |  |  |  |  |  |
|  | No. | No. | No. | No. | £ | £ |
| 1924 | 53 | 998,950 | 279,292 | 229,066 | 264,693,364 | 14,964,345 |
| 1925 | 53 | 1,031,670 | 291,910 | 237,352 | 288,230,793 | 16,388,842 |
| 1926 | 55 | 1,072,510 | 314,386 | 247,756 | 314,333,446 | 17,778,661 |
| 1927 | 55 | 1,106,010 | 319,568 | 256,245 | 339,221,826 | 19,020,312 |
| 1928 | 56 | 1,144,380 | 326,412 | 264,371 | 362,432,238 | 20,220,172 |
| Shires. |  |  |  |  |  |  |
| 1924 | 139 | 627,420 | 213,317 | 147,830 | 235,274,597 | 11,816,074 |
| 1925 | 139 | 635,340 | 221,345 | 151,721 | 250,480,405 | 12,588,177 |
| 1926 | 139 | 632,550 | 246,161 | 151,353 | 257,350,043 | 12,933,459 |
| 1927 | 139 | 643,950 | 254,403 | 154,411 | 267,100,576 | 13,426,424 |
| 1928 | 139 | 647,860 | 265,265 | 156,202 | 274,314,322 | 13,780,690 |

(b) Revenue and Expenditure. The table hereunder shows the revenue from various sources, and the expenditure under various heads of municipalities during the years 1923 to 1927 :-
MUNICIPALITIES, VICTORIA.-REVENUE AND EXPENDITURE, 1923 TO 1927.

| Items. | 1023. | 1924. | 1925. | 1926. | 1927. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Revenue. |  |  |  |  |  |
|  | $\pm$ | £ | £ | £ | £ |
| Rates . . | 2,559,847 | 2,847,282 | 3,152,570 | 3,380,749 | 3,615,998 |
| Licences | 152,437 | 155,009 | 162,430 | 161,682 | 162,863 |
| Taxation ${ }^{\text {dog fees }}$, . | 24,832 | 26,211 | 27,836 | 28,131 | 29,332 |
|  | 99,337 | 97,794 | 111,548 | 114,773 | 125,845 |
| Government endowments and grants .. | 60,607 | 87,783 | 88,335 | 147,014 | 163,384 |
| Contributions for streets, etc. | 141,484 | 180,502 | 264,996 | 320,582 | 352,733 |
| Sanitary charges | 162,129 | 175,520 | 185,091 | 202,360 | 206,351 |
| Rents .. | 108,502 | 125,544 | 133,623 | 137,941 | 138,977 |
| Electric light and gas works | 794,544 | 913,471 | 986,101 | 1,057,596 | 1,163,851 |
| Other sources | 385,204 | 391,637 | 466,550 | 561,718 | 622,937 |
| Total Revenue | 4,488,923 | 5,000,753 | 5,579,080 | 6,112,546 | 6,582,271 |
| Loans | 885,303 | 1,281,423 | 1,535,960 | 1,404,566 | 1,79],655 |
| Total Receipts . . | 5,374,226 | 6,282,176 | 7,115,040 | 7,517,112 | 8,373,826 |

MUNICIPALITIES, VICTORIA.-REVENUE AND EXPENDITURE, 1923 TO 1927-continued.

| Items. | 1923. | 1924. | 1925. | 1926. | 1927. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Expenditure from Revenue. |  |  |  |  |  |
|  | £ | £ | £ | £ | £ |
| Salaries, etc. | 340,319 | 359,493 | 381,815 | 407,009 | 437,921 |
| Sanitary work, street cleaning, etc. | 396,524 | 433,220 | 457,885 | 454,107 | 474,125 |
| Lighting | 131,342 | 134,025 | 144,064 | 153,292 | 160,118 |
| Fire brigades' contributions | 49,225 | 55,412 | 58,250 | 64,508 | 69,058 |
| Public Works $\{$ Construction | 294,711 | 404,661 | 479,690 | 454,247 | 488,881 |
| Public Works Maintenance | 1,366,202 | 1,845,278 | 2,104,402 | 2,195,045 | 2,169,302 |
| Electric Light and Gas Works | 582,380 | 680,568 | 715,498 | 757,456 | 808,630 |
| Formation of private streets, etc. | 163,660 | 343,978 | 426,689 | 446,961 | 548,131 |
| Redemption of loans | 165,675 | 180,987 | 211,152 | 229,913 | 262,110 |
| Interest on loans | 343,164 | 386,946 | 457,669 | 513,222 | 589,101 |
| Charities | 26,288 | 28,550 | 30,187 | 35,469 | 34,096 |
| Other expenditure. . | 356,199 | 393,545 | 433,154 | 581,493 | 724,142 |
| Total from Revenue.. | 4,215,689 | 5,246,663 | 5,900,455 | 6,292,722 | 6,765,615 |

Expenditure from Loans.

|  |  | $\stackrel{£}{6}$ |  | $\stackrel{£}{619}$ |  | $\stackrel{\text { £ }}{ }$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Roads and Bridges | . | 269,620 | $515,337$ | 619,424 | $664,555$ | 894,144 |
| Water and Irrigation | . | 3,225 | 5,216 | 1,855 | 335 | 22,225 |
| Sewerage and Drainage | $\cdots$ | 54,650 | 64,838 | 47,294 | 42,093 | 30,514 |
| Electric Light and Gas | . | 191,655 | 239,406 | 226,400 | 205,780 | 289,649 |
| Publie Buildings | . | 53,995 | 119,277 | 114,472 | 101,271 | 226,381 |
| Other purposes | . . | 312,158 | 337,349 | 526,515 | 304,153 | 236,694 |
| Total from Loan | . | 885,303 | 1,281,423 | 1,535,960 | 1,318,187 | 1,699,607 |
| Grand Total | -• | 5,100,992 | 6,528,086 | 7,436,415 | 7,610,909 | 8,465,222 |

(c) Assets and Liabilities. The assets of municipalities may be classified under three heads (a) the municipal fund, (b) the loan fund and (c) property; the liabilities under two heads-(a) the municipal fund, and (b) the loan fund. The following table shows the amount of municipal assets and liabilities for the years 1923 to 1927 :-

MUNICIPALITIES, VICTORIA.—ASSETS AND LIABILITIES, 1923 TO 1927.

| Items. | 1023. | 1924. | 1925. | 1926. | 1927. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Assets. |  |  |  |  |  |
| Municipal Fund- | £ | £ | £ | £ | £ |
| Uncollected rates | 202,251 | 231,623 | 282,495 | 286,338 | 333,086 |
| Other assets | 730,603 | 1,098,843 | 1,390,966 | 1,049,190 | 1,292,763 |
| Loan Fund- <br> (a) Sinking funds- |  |  |  |  |  |
| Amount at credit | 455,766 | 500,214 | 496,522 | 545,712 | 610,002 |
| Arrears due | 670 | 127 | 724 | 210 | 209 |
| (b) Unexpended balances | 526,622 | 501,858 | 495,980 | 587,609 | 635,771 |
| Property-- |  |  |  |  |  |
| Buildings, markets, etc. | 3,470,951 | 3,956,760 | 4,254,220 | 4,782,140 | 5,311,830 |
| Waterworks | 255,737 | 264,630 | 258,890 | 340,920 | 360,180 |
| Gasworks | 145,874 | 174,660 | 176,330 | 185,690 | 193,540 |
| Electric Light Works | 1,699,120 | 1,816,760 | 1,966,810 | 2,060,140 | 2,232,760 |
| Total | 7,487,594 | 8,545,475 | 9,322,937 | 9,837,949 | 10,970,141 |

MUNICIPALITLES, VICTORIA.-ASSETS AND LIABILITIES, 1923 TO 1927-continued.

| Items. |  |  | 1923. | 1924. | 1925. | 1926. | 1927. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\ldots$ | $\ldots$ | $\ldots$ |  |  |  |  |  |

Liabilities.

| Municipal Fund- | £ | £ | £ | £ | £ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Arrears due sinking funds | 670 | 127 | 724 | 210 | 209 |
| Overdue interest | 8,054 | 7,445 | 8,440 | 9,475 | 22,477 |
| Bank overdrafts | 665,866 | 892,893 | 1,106,264 | 902,820 | 1,144,516 |
| Other liabilities | 440,031 | 767,691 | 990,177 | 819,356 | 819,651 |
| Loan Fund- |  |  |  |  |  |
| Loans outstanding | 6,601,731 | 7,574,523 | 8,146,750 | 9,076,787 | 10,096,696 |
| Due on loan contracts . | 380,839 | -337,695 | 256,794 | 359,496 | 252,331 |
| Due on current contracts.. | 155,233 | 161,031 | 144,677 | 145,051 | 106,048 |
| Total | 8,252,424 | 9,641,405 | 10,653,826 | 11,313,195 | 12,441,928 |

3. Queensland.-(i) General. The whole of the State (except a few islands in Moreton Bay) is incorporated into cities, towns, and shires under the Local Authorities Act of 1902 and its amendments.
(ii) Municipalities. (a) Summary. The following table gives particulars of the area, population, number of inhabited dwellings, and assets and liabilities of cities and towns and of shires for the years 1923 to 1927 :-

MUNICIPALITIES, QUEENSLAND.-SUMMARY, 1923 TO 1927.

| Year. | No. | Area. | Population. | $\begin{gathered} \text { Number } \\ \text { of } \\ \text { Inhabited } \\ \text { Dwelings. } \end{gathered}$ | Rateable Value. | Assets. | Liabilities. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | Government Loans. | Total. |

Cities and Towns. (a)

|  |  |  | sq. miles. | No. | No. | £ | £ | £ | £ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1923 |  | 36 | 537 | 354,187 | 73,874 | 20,606,516 | 3,809,427 | 1,187,596 | 3,427,871 |
| 1924 |  | 35 | 506 | 364,754 | 75,446 | 21,222,382 | 4,566,242 | 1,500,037 | 4,409,566 |
| 1925(a) | - | 28 | 845 | (b) | 77,895 | 21,880,425 | 5,562,366 | 1,759,571 | 5,294,089 |
| 1926(c) |  | 28 | 843 | 483,094 | 102,630 | 29,952,796 | 8,216,424 | 2,159,277 | 9,516,460 |
| 1927(c) |  | 28 | 843 | (d) | 106,277 | 30,730,769 | 9,608,050 | 2,318,486 | 11,821,752 |

Shires. (a)

| 1923 | 134 | 669,627 | 446,943 | 98,608 | 51,041,891 | 1,690,868 | 948,288 | 1,349,752 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1924 | 135 | 669,388 | 460,240 | 101,494 | 51,858,728 | 1,835,457 | 1,091,384 | 1,529,015 |
| 1925(a) | 124 | 669,049 | (b) | 103,984 | 52,059,980 | 2,119,994 | 1,310,755 | 1,837,306 |
| 1926(c) | 124 | 669,051 | 396,325 | 86,659 | 48,473,508 | 1,558,397 | 1,219,713 | 1,727,255 |
| 1927(c) | 124 | 669,051 | (d) | 88,171 | 48,974,308 | 1,657,085 | 1,445,086 | 2,111,467 |

(a) From 1st October, 1925, Greater Brisbane was constituted, absorbing the areas of 2 cities, 6 towns, 10 shires, and part of 2 other shires:
(b) Total population of citics, towns, and shires, 839,634
(c) Figures relating to assets and liabilities include waterworks, electric light works, and railways and tramways controlled by local authorities.
(d) Estimated population of Queensland, 899,176 persons.
(b) Revenue and Expenditure. The revenue and expenditure (including loan moneys) of cities and towns, and of shires for each year from 1923 to 1927, are given hereunder:-

MUNICIPALITIES, QUEENSLAND.-REVENUE AND EXPENDITURE, 1923 т0 1927.

|  | Revenuc. |  |  | Expenditure. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year. | Rates. | Govern- <br> ment <br> Loans and <br> Subsidies. <br> (a) | Total. | Public Works and Services. <br> (b) | Government Loan Redemption. | Office Expenses and Salaries. | Total. |

Cities and Towns.

|  |  | £ | ${ }^{\text {f }}$ | $\pm$ | 2 | , | £ | f |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1923 |  | 917,827 | 215,221 | 1,918,986 | 1,228,434 | 48,097 | 112,978 | 1,771,091 |
| 1924 |  | 950,890 | 296,384 | 2,265,220 | 1,841,001 | 46,514 | 123,574 | 2,453,753 |
| 1925 |  | 1,012,243 | 297,026 | 2,560,252 | 2,112,443 | 50,568 | 160,514 | 2,944,333 |
| 1926 |  | 1,361,278 | 113,974 | 4,297,760 | 3,036,262 | 49,735 | 199,259 | 4,793,973 |
| 1927 |  | 1,477,950 | 180.553 | 5,180,349 | 3,535,114 | 61,591 | 215,597 | 5,406,099 |

Shires.

| 1923 | $\cdots$ | 749,474 | 328,462 | $1,317,104$ | 980,630 | 36,747 | 146,887 | $1,314,514$ |
| :--- | :--- | :--- | :--- | :--- | ---: | ---: | ---: | :--- |
| 1924 | $\cdots$ | 828,790 | 311,576 | $1,409,704$ | $1,041,912$ | 39,872 | 159,402 | $1,429,385$ |
| 1925 | $\cdots$ | 941,742 | 407,688 | $1,659,136$ | $1,246,692$ | 42,407 | 147,597 | $1,676,824$ |
| 1926 | $\cdots$ | 833,478 | 412,056 | $1,526,121$ | $1,196,885$ | 44,804 | 120,569 | $1,591,427$ |
| 1927 | . | 898,004 | 352,975 | $1,585,813$ | $1,167,493$ | 48,120 | 133,463 | $1,635,372$ |

(a) Includes Main Road Receipts. (b) Includes Expenditure on Main Roads.

The figures in the foregoing tables cover all the activities of the local authorities throughout Queensland such as :-Road repairs, street lighting, etc.; waterworks, electric light, and railways and tramways controlled by local bodies.

During the period covered by the table some changes have been made by the absorption of Shires into the Metropolitan Area (see note (a) previous table). Since lst December, 1928, the Brisbane City Council has assumed control of the Metropolitan Water Supply and Sewerage Works.
4. South Australia.-(i) General. A large proportion of South Australia is unincorporated, the balance being under municipal corporations in the larger cities and towns, and district councils in outside areas. These bodies are subsidized by Government, and special grants allocated on the recommendation of the Commissioner of Highways are given for the maintenance and construction of main roads.
(ii) Local Authorities. (a) Summary. During the past five years the number of corporations and district councils has increased by 10, the total being 196, of which 11 corporations and 13 district councils are in the metropolitan area, and 28 corporations and 144 district councils in outside areas. According to the latest available information there are about 1,079 miles of roads in use for general traffic under the control of corporations, and about 44,563 miles under the control of district councils, and of these totals, $14 \frac{3}{4}$ miles are wood-blocked, $128 \frac{1}{2}$ miles are bitumen and concrete, and $13,243 \frac{3}{3}$ miles are tar-paved, metalled or gravelled. The following table gives the area, population, number of occupied dwellings, capital and assessment values and outstanding loans for corporations and district councils separately for the years 1923 to 1927:-

LOCAL AUTHORITIES, SOUTH AUSTRALIA.-SUMMARY, 1923 T0 1927.

| Year. | Area. | Estimated Population. | Occupied Dwellings. | Capital Value. | Assessment Value. | Outstanding Loans. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Municipal Corporations. |  |  |  |  |  |  |
|  | Acres. | No. | No. | f | £ | £ |
| 1923 | 59,279 | 223,875 | 49,260 | 54,983,943 | 2,759,282 | 443,893 |
| 1924 | 62,699 | 232,044 | 51,441 | 60,792,222 | 3,095,439 | 481,060 |
| 1925 | 64,080 | 238,009 | 52,856 | 65,550,732 | 3,300,048 | 525,518 |
| 1926 | 64,560 | 245,389 | 54,697 | 73,228,273 | 3,550,895 | 508,604 |
| 1927 | .. 65,510 | 247,343 | 55,851 | 74,933,076 | 3,736,096 | 605,262 |
| Distriot Counctls. |  |  |  |  |  |  |
| $\overline{1923}$ | . 30,177,455 | 282,266 | 62,223 | 74,949,756 | 3,747,623 | (a) 157,546 |
| 1924 | 30,535,351 | 285,759 | 63,572 | 81,665,583 | 4,083,357 | (a) 175,061 |
| 1925 | . 31,023,175 | 294,749 | 66,585 | 85,608,532 | 4,280,375 | (a) 188,145 |
| 1926 | . $33,390,987$ | 307,998 | 70,096 | 94,432,691 | 4,668,397 | (a) 221,831 |
| 1927 | . . $33,427,925$ | 315,325 | 71,883 | 101,099,384 | 5,102,146 | (a) 276,765 |

(a) Includes advances through District Councils to settlers for vermin-proof fencing, etc., amounting to $£ 180,872$ for 1927 .
(b) Revenue and Expenditure. The next table gives the revenue and expenditure of corporations and district councils for the years 1923 to 1927, showing in separate columns the receipts and expenditure on main roads. The financial year of municipal corporations ends on the 30th November and that of district councils on the 30th June.
LOCAL AUTHORITIES, SOUTH AUSTRALIA.-REVENUE AND EXPENDITURE, 1923 TO 1927.

| Year. | Tocal Government (exclusive of Government Grants Account). |  |  |  |  |  | Government Grants Account (Main Roads). |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Revenue. |  |  | Expenditure. |  |  | Revenue. | Expenditure. |
|  | Rates. | Subsidies. | Total. | Roads. | Other <br> Public <br> Works <br> and <br> Services. | Total. |  |  |
| Municipal Corporations. |  |  |  |  |  |  |  |  |
| 1923 | f 346,844 | $\stackrel{\text { f }}{\text { 34,576 }}$ | $\underset{511,078}{\text { ¢ }}$ | $\stackrel{\text { ¢ }}{\text { ¢ }}$ | $\stackrel{\substack{\text { ¢ }}}{\text { 204,314 }}$ | $\stackrel{\text { ¢ }}{\text { 584,005 }}$ | $\stackrel{\text { ¢ }}{\substack{\text { ¢ } \\ \hline 837}}$ | $\begin{gathered} £ \\ 22,541 \end{gathered}$ |
| 1924 | 346,844 | 34,576 38,538 | 511,078 | 240,902 | 204,314 | 684,005 | 28,637 | 27,486 |
| 1925 | 412,933 | 38,258 | 713,764 | 278,236 | 211,322 | 727,834 | 23,111 | 23,886 |
| 1926 | 450,996 | 48,601 | 755,472 | 347,691 | 226,389 | 800,735 | 38,873 | 41,590 |
| 1927 | 492,472 | 45,735 | 792,093 | 406,500 | 279,666 | 914,808 | 26,044 | 28,342 |
| District Councils. |  |  |  |  |  |  |  |  |
| 1923 | 277,563 | 56,281 | 407,980 | 222,574 | 59,380 | 403,194 | 217,267 | 213,615 |
| 1924 | 317,583 | 64,966 | 464,414 | 262,114 | 54,289 | 445,463 | 241,544 | 235,246 |
| 1925 | 335,690 | 74,797 | 506,889 | 308,068 | 66,215 | 511,725 | 278,065 | 278,086 |
| 1926 | 369,133 | 81,259 | 561,063 | 321,717 | 91,931 | 579,062 | 344,768 | 336,865 |
| 1927 | 409,456 | 87,978 | 630,601 | 374,554 | 141,395 | 699,860 | 346,339 | 353,892 |

5. Western Australia.-(i) General. In this State there are three forms of local authorities, namely :-(a) municipalities, (b) district road boards, and (c) local boards of health, the two former covering the whole of the State. Local boards of health are of three descriptions, (a) municipal, the members being the same as those of the municipal council of the municipality in which each is situated, (b) those under the control of road boards, and (c) those not under the control of road boards or municipalities. Several of the latter two are inactive. The financial year of municipalities and municipal boards of health terminates on the 3lst October, and that of road buards and other local boards of health on the 30th June.
(ii) Municipalities. (a) Summary. The following table gives various particulars regarding municipalities for the years 1924 to 1928.

MUNICIPALITIES, WESTERN AUSTRALIA.-SUMMARY, 1924 TO 1928.

| $\begin{gathered} \text { Year } \\ \text { ended } \\ \text { 31st Oct.—— } \end{gathered}$ | Minicipalities. | Area. | Population. | Dwelling Houses. | Valuation of Rateable Property. |  | Length of Roads and Streets. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Capital value. | Annual Value. |  |
|  | No. | Acres. | No. | No. | £ | £ | Milos. |
| 1924 | 21 | 58,981 | 172,427 | 35,498 | 32,881,961 | 1,910,798 | 994 |
| 1925 | 21 | 58,981 | 172,866 | 35,550 | 35,315,316 | 1,982,967 | 997 |
| 1926 | 21 | 58,981 | 177,591 | 35,832 | 36,882,613 | 2,099,513 | 1,003 |
| 1927 | 21 | 58,981 | 182,417 | 36,598 | 39,111,843 | 2,173,203 | (a) 717 |
| 1928 | 21 | 59,028 | 182,052 | 37,142 | 40,922,358 | 2,297,095 | (a) 737 |

(a) Exclusive of cleared roads, which are included in previous years.
(b) Revenue and Expenditure. Revenue and expenditure of municipalities during the years 1924 to 1928 are given hereunder:-

MUNICIPALITIES, WESTERN AUSTRALIA.-REVENUE AND EXPENDITURE, 1924 T0 1928.

| $\begin{gathered} \text { Year } \\ \text { ended } \\ \text { 3st } \\ \text { October- } \end{gathered}$ | Revenue. |  |  |  | Expenditure. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | From Rates. | From Govt. Grants. | From other Sources. | Total. | $\begin{gathered} \text { Works } \\ \text { and } \\ \text { Improve- } \\ \text { ments. } \end{gathered}$ | Interest and other Charges on Loans. | Other Expenses. | Total. |
|  | £ | £ | £ | £ | £ | £ | £ | £ |
| 1924 | 287,863 | 4,372 | 738,040 | 1,030,275 | 236,050 | 191,618 | 599,952 | 1,027,620 |
| 1925 | 297,143 | 200 | 860,140 | 1,157,483 | 300,799 | 214,226 | 561,578 | 1,076,603 |
| 1926 | 310,230 | 84 | 729,344 | 1,039,658 | 226,822 | 229,335 | 630,828 | 1,086,985 |
| 1927 | 324,696 | 167 | 879,316 | 1,204,179 | 312,309 | 224,850 | 638,484 | 1,175,643 |
| 1928 | 337,200 | 39,245 | 1,000,675 | 1,377,120 | 419,497 | 242,066 | 693,721 | 1,355,284 |

(c) Assets and Liabilities. The table below shows the assets and liabilities of municipalities at the 31st October in each financial year 1924 to 1928 :-

MUNICIPALITIES, WESTERN AUSTRALIA.-ASSETS AND LIABILITIES, 1924 TO 1928.

(iii) District Road Boards. (a) Summary. In the next table the unimproved value is given, but in some instances the annual value is also given, and those portions of districts rated under the annual value are not included in the area rated under the unimproved capital value. The population at the date of the census of 4th April, 1921, was 160,970 , and the number of dwellings 41,662 .

On the 30th June, 1928, the population was estimated at 221,150, and the number of dwelling-houses at 53,301 . Nine districts, however, only give figures at time of the 1921 census.

DISTRICT ROAD BOARDS, WESTERN AUSTRALIA.-SUMMARY, 1924 TO 1928.

| Year ended 30th June - | Number of Road Districts. | Area. | Unimproved Capital Value (Approximate). | Length of Roads in Existence. | Assets. | Liabilities. | Outstanding Loans. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | No. | sq. miles. | £ | miles. | £ | £ | £ |
| 1924 | 122 | 975,828 | 17,310,105a | 39,863 | 418,060 | 348,690 | 242,043 |
| 1925 | 123 | 975,828 | 18,444,720a | 41,666 | 448,318 | 388,403 | 280,089 |
| 1926 | 124 | 975,828 | 20,080,137a | 44,280 | 504,599 | 447,515 | 314,869 |
| 1927 | 125 | 975,828 | 21,119,659a | 15,070b | 571,668 | 545,700 | 409,002 |
| 1928 | 126 | 975,828 | 23,994,418a | 16,515b | 668,615 | 616,415 | 474,446 |

(a) Exclusive of one Board which rates under the annual value only.
(b) Exclusive of cleared roads which are included in previous years.
(b) Revenue and Expenditure. The revenue and expenditure of district road boards are shown in the following table for the years 1924 to 1928 :-

|  | STRICT ROAD BOARDS, WESTERN |  |  |  | AUSTRALIA.-REVENUE AND TO 1928. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Revenue. |  |  |  | Expenditure. |  |  |  |
| $\begin{aligned} & \text { eneath } \\ & \text { June- } \end{aligned}$ | Rates. | $\begin{aligned} & \text { Govern- } \\ & \text { ment } \\ & \text { Grants. } \end{aligned}$ | Other. | Total. | Administration. | Works. | Other | Tota |
|  |  | ${ }^{\text {¢ }}$ | ${ }^{\text {¢ }}$ | ${ }^{\text {£ }}$ | ${ }^{\text {¢ }}$ | ${ }^{\text {£ }}$ | £ |  |
| 1924 | 213,848 | 74,184 | 146,743 | 434,775 | 44,233 | 288,014 | 113,604 | 445,851 |
| 1925 | 233,770 | 66,516 | 186,452 | 486,738 | 46,166 | 299,204 | 140,092 | 485,462 |
| 1926 | 241,243 | 98,123 | 231,174 | 570,540 | 47,416 | 378,334 | 146,891 | 572,641 |
| 1927 | 270,464 | 85,427 | 321,369 | 677,260 | 55,685 | 447,178 | 184,471 | 687,334 |
| 1928 | 296,338 | 103,686 | 352,496 | 752,520 | 66,217 | 459,294 | 239,138 | 764,649 |

(iv) Local Boards of Health. (a) General. On the 31st October, 1928, there were 21 local beards of hcalth withim municipalities, and on the 30th June, 1928, 86 under control of road boards, and 22 extra-municipal boards. Of the extra-municipal boards 7 were inactive during the year.
(b) Finances. The appended table shows the number of boards, their revenue and expenditure, and the assets and liabilities of such as were active from 1924 to 1928. The financial year of municipal boards ends on the 31st October, and that of other boards on the 30th June.
LOCAL BOARDS OF HEALTH, WESTERN AUSTRALIA.-FINANCES, 1924 TO 1928.

| Year. | Number. | Revenue. |  |  | Expenditure. |  | Assets. | Liabilities, |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Rates. | Sanitary Charges and Rubbish Fees. | Total. | $\begin{aligned} & \text { Sanitary } \\ & \text { and } \\ & \text { Rubbish } \\ & \text { Service. } \end{aligned}$ | Total. |  |  |
|  |  | £ | £ | £ |  | £ | £ | f |
| 1924 | 122 | 60,255 | 66,378 | 137,047 | 92,324 | 136,099 | 89,311 | 16,549 |
| 1925 | 123 | 55,907 | 68,738 | 145,844 | 92,236 | 148,265 | 84,526 | 16,348 |
| 1926 | 124 | 58,640 | 66,658 | 141,624 | 96,770 | 145,478 | 85,503 | 19,651 |
| 1927 | 127 | 64,275 | 73,539 | 152,675 | 101,594 | 148,654 | 92,992 | 24,362 |
| 1928.. | 129 | 70,614 | 68,317 | 154,070 | 105,727 | 156,414 | 95,328 | 27,945 |

6. Tasmania.-(i) General. The whole State, with the exception of the cities of Hobart and Launceston, which were incorporated under separate Acts, is divided into manicipal districts.
(ii) Municipalities. (a) Summary. The following table gives the number of municipalities, valuations, outstanding loans and length of roads for the years 1923 to 1927-28. The latest available figure for inhabited dwellings is for the year 1921, when the number was 45,950 .

MUNiCiPálities, TASMANIA.-SUMMARY, 1923 TO 1927-28.

(b) Revenue and Expenditure. The next table gives the revenue and expenditure of all municipalities for the years 1923 to 1927-28:-

MUNICIPALITIES, TASMANIA.-REVENUE AND EXPENDITURE, 1923 TO 1927-28.

| Year. |
| :--- |

(a) Hobart only (Launceston figures not available). (b) Including Loans. (c) Excluding Loans.
7. Northern Territory.-(i) Municipality of Darwin. The following particulars relate to the year 1925-26 :-Area, 2,024 acres, population 924, number of occupied dwellings 231, of unoccupied dwellings 3, and of other buildings 132 . Revenue from general rates $£ 1,602$, from Government grants $£ 801$, other sources $£ 443$, total $£ 2,846$; expenditure $£ 3,332$.
(ii) Bagot Roads District. During the year $1925-26$ the receipts amounted to $£ 141$ and the expenditure to $£ 4$, leaving (with a balance of $£ 185$ brought forward from the previous year) a balance in hand of $£ 322$.
8. Basis for Municipal Rating and Limits for Rates.-These matters were dealt with at some length in Official Year Book, No. 17, pp. 124-25, but limitations of space preclude their repetition in the present issue.

## § 4. Summary of Municipal Finance.

1. General.-In the preceding parts of this chapter certain particulars have been given regarding local authorities in each individual State. In this paragraph, comparative figures are given for each State regarding the financial operations of the local governing bodies referred to in § 3. The particulars in the next two tables refer to financial years as follows:-New South Wales : calendar year 1927. Victoria: 30th September, 1927, except Melbourne, 31st December, and Geelong, 31st August, 1927. Queensland : calendar year 1927. South Australia : Corporations, 30th November, and district councils, 30th June, 1927. Western Australia; Municipalities, 31st October, 1927, district road boards, 30th Fune, 1927. Tasmania: 30th June, 1928.
2. Number, Revenue, Expenditure, and Valuation of Municipalities.-The subjoined table shows the number, revenue, and expenditure, including loan money, and valuation of local authorities in each State and in Australia during the years indicated above. It should be noted that, excepting in Tasmania, the metropolitan water supply systems are not under municipal control; the particulars given of revenue and expenditure for the five States other than Tasmania do not, therefore, include revenue and expenditure on account of these systems.

MUNICIPALITIES IN EACH STATE.-FINANCIAL SUMMARY, 1927.

| Particulars. | N.S.W. | Victoria. | Q'land. | S. Aust. | W. Aust. | Tasmania. | Total. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. of local <br> authorities. | 317 | 195 | 152 | 196 | $273(d)$ | 49 | 1,182 |

Receitis.


Expenditure.

\begin{tabular}{|c|c|c|c|c|c|c|c|}
\hline \begin{tabular}{l}
Works, services, etc. \\
Interest on loans and overdrafts \\
Redemptions, sinking funds, etc. \\
Administration Other
\end{tabular} \& \[
13,584,018
\] \& \(\left\{\begin{array}{c}5,593,542 \\ 589,101 \\ - \\ 209,110 \\ 437,921 \\ 1,582,548\end{array}\right.\) \& \(4,702,607\)
565,021

385,636
349,060
$1,039,147$ \& $\begin{array}{r}1,573,425 \\ 53,204 \\ \\ 66,805 \\ 166,112 \\ 172,048 \\ \hline\end{array}$ \& $\left\{\begin{array}{l}1,964,571\end{array}\right.$ \& $\left(\begin{array}{r}1,007,021 \\ 163,027 \\ \\ 45,774 \\ 88,351 \\ 14,046\end{array}\right.$ \& 34,405,095 <br>
\hline Total \& (g)13,584,018 \& 8,465,222 \& 7,041,471 \& 2,031,594 \& 1,964,571 \& 1,318,219 \& 34,405,095 <br>
\hline
\end{tabular}

## Valuations.

Capital value of property Annual value of property ..
$a 345,371,023|636,746,560| f 79$
(b) $\quad 34,000,862 \mid$
(b)
$76,032,460$
$8,838,242$
c60,231,502 5

|  |  |
| ---: | ---: |
| $50,107,953$ | $1,348,194,575$ |
| $2,721,147$ | $(b) \quad \because$ |
|  | $\ddots$ |

(b)
(b) Not available. (c) The valuation of road districts is the unimproved capital value. (d) Including 127 . Boards of Health, some of which are within municipalities and others within road districts. (e) Sanitary charges, licences, fees, ete. $(f)$ Rateable value. $(g)$ Portion only of loan money included.
3. Local Government Loans, 1927.-The following table shows the amount of loans raised by local authorities during the year 1927, of loans current at the end of that year, and the liability on account of interest and sinking fund, and of loans redeemed during 1927 :-

LOCAL AUTHORITIES.-LOANS, 1927. .

| Particulars. | N.S.W. | Victoria. | Q'land. | S. Aust. | W. Aust. | Tasmania. | Total. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Loans raised during year | $\stackrel{£}{3,118,577}$ | $\stackrel{\text { ¢ }}{1,236,698}$ | $\underset{\text { 2,077,645 }}{ }$ | $\begin{gathered} £ \\ 204,351 \end{gathered}$ | $\stackrel{\text { ¢ }}{\mathbf{£}}$ | $\stackrel{\text { f }}{260,905}$ | $\stackrel{\mathcal{L}}{7,215,784}$ |
| Loans current at end of year | 22,176,600 | 10,096,696 | 11,637,116 | 882,027 | 2,738,193 | 3,198,684 | 50,729,316 |
| Annual liability on account of - interest | 1,151,195 | (a) | 597,911 | 48,810 | 145,378 | 165,141 | (a) |
| Total sinking fund at end of year | 2,159,820 | 610,211 | 341,923 | 31,009 | - 505,535 | 480,640 | 4,129,438 |
| Amount of loans redeemed during year | (a) | (a) | (a) | 59,278 | 78,753 | 20,821 | (a) |

(a) Not available.

## § 5. Water Supply, Sewerage, and Drainage.

1. New South Wales-(i) General. In Sydney and its suburbs the water supply and sewerage systems are controlled by the Metropolitan Water, Sewerage and Drainage Board, and in Neweastle and its suburbs by the Hunter District Water Supply and Sewerage Board. In country districts, both waterworks and sewerage works are constructed by the Public Works Department, and, when completed, handed over to the municipalities affected, by which the cost must be repaid.
(ii) Metropolitan Waterworks. (a) General. During the year ended 30th June, 1928, progress was made with the pressure tunnel 10 miles long and 10 feet in diameter which is being constructed to convey water to the city. Service reservoirs of $\mathbf{3 6}$ million gallons and 19 million gallons respectively are being constructed at Killara and Waverley-Vaucluse and amplification of pumping plant and mains is proceeding. The maximum day's consumption in the metropolitan area was $104,459,000$ gallons. The mileage of mains now totals 3,872 miles.
(b) Water Supplied, etc. The following table gives the number of houses and estimated population supplied, and other details for the years 1924 to 1928 :-

WATERWORKS, SYDNEY.-WATER, SUPPLIED, 1924 TO 1928.

| Year ended 30th June- | Number of Houses Supplied. | Estimated <br> Population <br> Supplied. | Average Daily Supply. | Total Supply for the Year. | Average Daily Supply. |  | Maing Laid. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Per House. | Per Head of Estimated Population. |  |
|  | No. | No. | 1,000 Gallons. | 1,000 Gallons. | Gallons. | Gallons. | Miles. |
| 1924 | 250,804 | 1,254,020 | 58,628 | 21,458,036 | 234 | 46.78 | 126 |
| 1925 | 259,799 | 1,298,995 | 57,355 | 20,934,784 | 221 | 44.15 | 150 |
| 1926 | 268,558 | 1,342,790 | 67,142 | 24,506,739 | 250 | 50.00 | 175 |
| 1927 | 280,157 | '1,400,785 | 70,344 | 25,675,530 | 251 | 50.22 | 211 |
| 1928 | 290,926 | 1,454,630 | 74,650 | 27,321,939 | 257 | 51.32 | 227 |

(c) Finances.-The following statement shows the revenue and expenditure on account of the services of waterworks, sewerage and drainage during the year 1927-28, and is followed by a statement giving similar figures for the combined services for a period of five years.

WATERWORKS, SEWERAGE, AND DRAINAGE, SYDNEY, 1927-28.

| Item. | Revenue. | Working Expenses, Sinking Fund Contribution, and Renewals. | Capital Indebtedness. | Percentage of Working Expenses and Sinking Fund Contribution on Revenue. | Percentage of Revenue on Capital Cost. | Interest. | $\underset{\substack{\text { Surplus } \\ \text { or }}}{ }$ <br> Deffcit. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Water | $\begin{gathered} \mathfrak{£} \\ 1,480,748 \end{gathered}$ | $\underset{a 693,414}{£}$ | $\stackrel{\boldsymbol{£}}{19,318,558}$ | $\%$ 39.66 | $\begin{gathered} \% \\ 7.66 \end{gathered}$ | $\stackrel{\text { ¢ }}{\text { 816,323 }}$ | $\mathbf{f}$ $-\quad 28,989$ |
| Sewerage | 941,870 | b320,100 | 11,692,727 | 33.34 | 8.06 | 510,310 | +111,460 |
| Drainage | 45,383 | c 19,882 | 520,354 | 43. 05 | 8. 72 | 20,315 | + 5.186 |

(a) Includes payment of $£ 74,071$ to State Debt Commissioners in reduction of Capital Indebtedness, and $£ 106,172$ on Renewals.
(b) Includes payment of $£ 46,668$ to State Debt Commissioners in reduction of Capital Indebtedness, and $£ 6,049$ on Renewals.
(c) Includes payment of $£ 2,274$ to State Debt Commissioners in reduction of Capital Indebtedness, and $\mathfrak{£ 3 4 5}$ on Renewals.

WATERWORKS, SEWERAGE, AND DRAINAGE SYSTEMS, SYDNEY.-FINANCES, 1924 TO 1928.

| Year ended 30th June- | Revenue. | Working Expenses. | Capital Cost, exclusive of Items on which Interest is not charged. | Percentage of <br> Working <br> Expenses on Revenue. | $\begin{gathered} \text { Percentage } \\ \text { of } \\ \text { Revenue } \\ \text { on } \\ \text { Capital } \\ \text { Cost. } \end{gathered}$ | Interest Payable on Capital Cost. | Proflt after Payment of Working Expenses and Interest. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1924 | $\underset{\mid 1,861,637}{£}$ | $\begin{gathered} £ \\ 624,887 \end{gathered}$ | $\stackrel{f}{\mathbf{f}}$ | $\stackrel{\%}{\%}$ | $\begin{gathered} \% \\ 8.77 \end{gathered}$ | £ | $\stackrel{\text { ¢ }}{179,018}$ |
| 1925 | 1,860,306 | 687,275 |  | 36.94 | 8.02 |  | 179,018 |
| 1928 | 2,131,471 | 908,401 |  | 42.62 | 7.93 |  |  |
| 1927 | 2,266,909 | 946,505 | 29,213,313 | 41.75 | 7.76 | 1,433,539 | $-113,135$ |
| 1928 | 2,468,00] | 1,033,396 | 31,531,639 | 41.87 | 7.83 | 1,346,948 | 87,657 |

(iii) Metropolitan Sewerage and Drainage Systems. (a) General. . In addition to the usual progress made in connecting additional houses, 76 miles of new sewers were laid, the total length now being 1,578 miles. The quantity of sewage pumped was 4,831 million gallons.
(b) Houses Drained, Population Served, Length of Sewers, etc. Particulars for the years 1924 to 1928 are given hereunder :-
SEWERAGE AND DRAINAGE SYSTEMS, SYDNEY.-PARTICULARS OF SERVICES, 1924 TO 1928.

| Year ended 30th June- |  | Number of Houses Drained. | Estimated Population Served. | Total Length of Sewers. | Total Length of Stormwater Drains. Drains. | Ventilating Shafts Erected. | Sewers Ventilated |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1924 |  | $\begin{gathered} \text { No. } \\ 165,215 \end{gathered}$ | $\stackrel{\text { No. }}{826,075}$ | $\begin{aligned} & \text { Miles. } \\ & 1,313.90 \end{aligned}$ | $\begin{aligned} & \text { Miles. } \\ & 65.96 \end{aligned}$ | Feet. 543,306 | Miles. 1,208 |
| 1925 | $\cdots \quad$. | 170,774 | 853,870 | 1,358. 19 | 66.37 | 556,032 | 1,246 |
| 1928 | . | 176,388 | 881,940 | 1,415.57 | 68.85 | 568,506 | 1,283 |
| 1927 | . | 179,580 | 897,900 | 1,491.37 | 74.67 | 578,932 | 1,312 |
| 1928 | .. . | 185,058 | 925,290 | 1,577.88 | 71.41 | 594,714 | 1,348. |

(iv) Newcastle Water Supply. (a) General. The recent policy of increasing the local water storage was continued, and reservoirs at Tenambit (capacity $1,398,500$ gallons) and Pelton (capacity $1,205,750$ gallons) were completed and made available during 1927-28. Reservoirs at Raymond Terrace (capacity 306,000 gallons) and at Cardiff, Heights (capacity 707,043 gallons) were also completed during the year, and work was in progress on the following reservoirs, viz., Buttai extension, Cessnock No. 2, Dudley,: and Waratah, the additional storage to be provided by the latter works amounting to $10,120,000$ gallons. The water supply was extended to various outlying districts during the year, to Miller's Forest and Raymond Terrace in the north, the Aellalong Valley, Bellbird and the coal-mining districts in the west, and to Fassifern and Dudley in the south and Lake District.

The net addition to lengths of water-mains laid was 65 miles, bringing the total length of mains to 737 miles.
(b) Particulars of Services. The following table supplies details for the years 1924 to 1928 :-

NEWCASTLE WATER SUPPLY.-SUMMARY,
1924 TO 1928.

| Year ended 30th June- |  | Number of Houses Supplied. | Estimated <br> Population <br> Supplied. | A verage Daily Supply. | Total Quantity Supplied for the Year. | A verage Daily Supply. |  | Mains |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Per House. |  |  |  | Per Head of Estimated Population. |  |
|  |  |  | No. 29.5 | No. | 1,000 gallons. | 1,000 gallons. | Gallons. <br> 195 | Gallons. <br> 38.92 | Miles. |
| 1925 |  | 31,405 | 157,025 | 6,334 | 2,312,045 | 201 | 40.34 | 22 |
| 1926 |  | 33,997 | 160,985 | 7,310 | 2,668,214 | 215 | 43.00 | 47 |
| 1927 |  | 36,690 | 183,000 | 8,139 | 2,970,781 | 222 | 44.47 | 75 |
| 1928 | $\cdots$ | 39,262 | 196,000 | 8,182 | 2,994,610 | 208 | 41.60 | 68 |

(c) Finances. The next table gives the revenue, working expenses, capital debt, and net profit for the years 1924 to 1928 :-

NEWCASTLE WATER SUPPLY.-FINANCES, 1924 TO 1928.

| Year ended 30th June- | Revenue. | Management and Working Expenses. | Capital Debt. | Percentage of <br> Working <br> Expenses on <br> Revenue. | $\begin{gathered} \text { Percentage } \\ \text { of } \\ \text { Revenue } \\ \text { on } \\ \text { Capital } \\ \text { Debt. } \end{gathered}$ | $\begin{gathered} \text { Interest } \\ \text { on } \\ \text { Capital } \\ \text { Debt. } \end{gathered}$ | Surplus. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | £ | £ | £ | \% | \% | £ | £ |
| 1924 | 143,138 | 63,883 | 3,010,615 | 44.63 | 4.75 | 46,286 | 32,969 |
| 1925 | 153,045 | 53,318 | 3,424,853 | 34.84 | 4.47 | 48,316 | 51,411 |
| 1926 | 163,807 | 65,329 | 3,733,126 | 39.88 | 4.39 | 55,819 | 42,659 |
| 1927 | 170,601 | 78,397 | 4,078,397 | 45.95 | 4.18 | 65,938 | 26,266 |
| 1928 | 214,669 | 89,769 | 4,396,114 | 41.82 | 4.88 | 76,957 | 47,9:43 |

(v) Newcastle Sewerage Works. . (a) General. The sewerage works for Newcastle and suburbs as originally designed have been completed by the Department of Public Works and vested in the Board.

The amplification, extension, and improvement of such sewerage works have been reported upon favourably by the Parliamentary Standing Committee on Public Works, and an Act, "The Newcastle and Suburbs Sewerage Amplification Act 1928 " was passed on the 21st May, 1928, authorizing the construction of the necessary works at an estimated cost of $£ 660,000$.

An Engineering Experts Committee is inquiring into the question of the amplifica. tion, extension and improvement of the stormwater drainage works of the Newcastle district. The works comprised in the Cottage Creek storm water area have been authorized and are under construction, and the Throsby Creek catchment area scheme is now being prepared.
(b) Sewerage Connexions and Length of Sewers. During the year ended 30th June, 1928, the number of properties connected with sewers was 824 , making a total of 20,043 . New sewers of a total length of 4 miles were constructed by the Board, bringing the total length of sewers under the Board's control to 187 miles.
(c) Finances. Particulars in regard to chief items for the years 1924 to 1928 are given hereunder :-

NEWCASTLE SEWERAGE.-FINANCES, 1924 T0 1928.

| Year ended 30th June- | Revenue. | Management and Working Expenses. | Capital Debt. | Percentage of Working Expenses on Revenue. | Percentage of Revenue on Capital Debt. | Interest on Capital Debt. | Surplus. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\mathfrak{f}$ | £ | $\mathfrak{E}$ | \% | 0 | £ | £ |
| 1924 | 56,210 | 21,914 | 646,552 | 38.99 | 8.69 | 30,939 | 3,357 |
| J925 | 63,707 | 21,910 | 672,526 | 34.39 | 9.47 | 31,033 | 10,764 |
| 1926 | 68,412 | 22,625 | 719,549 | 33.07 | 9.51 | 31,932 | 13,855 |
| 1927 | 75,175 | 25,578 | 781,452 | 34.02 | 9.62 | 32,968 | 16,629 |
| 1928 | 79,636 | 24,206 | 923,740 | 30.40 | 8.62 | 33,777 | 21,653 |

(vi) Water Supply and Sewerage in Country Towns*. (a) General. Under the Local Government Act 1919, the Public Works Department may, upon application by any municipal or shire council, construct, out of moneys voted therefor by Parliament, waterworks or sewerage works, and when completed transfer the control thereof to the council. In each case the cost, with interest, is repayable by instalments spread over a period corresponding to the probable life of the work.
(b) Waterworks. Up to the 30th June, 1928, waterworks in 74 towns had been completed and handed over to the respective local authorities. The capital cost of these works was $£ 2,921,673$; the outstanding capital indebtedness as at the datc mentioned was $£ 2,265,907$, and the annual repayment instalments totalled $£ 119,098$. The Broken Hill and Junee water supplies are administered by the Public Works Department under special Acts; these services entailed capital expenditures of $£ 481,795$ and $£ 104,633$ respectively.
(c) Sewerage and Stormwater Drainage Works. Up to the 30th June, 1928, sewerage works in twelve towns, and stormwater drainage works in sixteen towns had been completed. Capital expenditure thereon totalled $£ 756,785$, and the outstanding capital indebtedness $£ 713,758$. The repayment instalments total $£ 36 ; 225$ per annum.
2. Victoria.-(i) A. The Melbourne and Metropolitan Board of Works. (a). General. All land within 13 miles of the General Post Office is included within the metropolitan area for water supply and sewerage purposes. This area covers 434 square miles of land area, and in 1928 embraced 24 cities, and part of another city, together with parts of 13 shires, or a total of 38 municipalities or portions thereof. The whole of the city of Mordialloc and of the shire of Moorabbin are included in the metropolis for water supply purposes, and the Board is also empowered to supply water to certain municipalities outside the 13 -mile radius, to the Metropolitan Farm at Werribee, the outfall-sewer area, and elsewhere. Various other shires also arrange for bulk supplies of water. The liability on the 30th June, 1928, for loans raised by the Board, was $£ 19,902,020$. The Board is still empowered to borrow $£ 2,237,914$ before reaching the limit of its borrowing powers.
(b) Revenue and Expenditure. The following table shows the actual receipts and expenditure, and the loan receipts and expenditure of the Board from 1923-24 to 1927-28 :-

## WATER SUPPLY AND SEWERAGE, MELBOURNE.-REVENUE AND EXPENDITURE, 1923-24 TO 1927-28.



Ordinary Receipts.

|  | £ | , | $\stackrel{\text { £ }}{ }$ | ${ }^{\text {£ }}$ | ${ }^{\text {f }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Water supply | 545,835 | 587,765 | 656,116 | 710,273 | 826,482, |
| Sewerage, etc. | 472,074 | 521,205 | 577,186 | 620,154 | 589,614 |
| Live stock-Metropolitan farm | 85,059 | 77,763 | 109,474 | 82,410 | 110,811. |
|  | 12,427 | 10,178 | 3,276 | 3,525 | 1,183* |
| Interest \{ Sewerage . | 11,190 | 1.6,503 | 14,089 | 18,306 | 18,807. |
| Superannuation Contributions | .. | .. | 3,215 | 9,268 | 9,410 |
| Total | 1,126,585 | 1,213,414 | 1,363,356 | 1,443,936 | 1,556,307 |

[^0]WATER SUPPLY AND SEWERAGE, MELBOURNE.-REVENUE AND EXPENDITURE, 1923-24 TO 1927-28-continued.

| Particulars. | 1923-24. | 1924-25. | 1925-26. | 1926-27. | 1927-28. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Ordinary Expenditure. |  |  |  |  |  |
|  | £ | £ | £ | £ | 1 |
| General management | 68,803 | 73,739 | 74,536 | 77,150 | 85,261 |
| Live stock, etc.-Metropolitan farm | 101,311 | 86,546 | 103,485 | 89,702 | 141,236 |
| Maintenance $\{$ Water supply . . | 81,991 | 80,557 | 84,468 | 99,968 | 120,446 |
| Maintenance $\{$ Sewerage | 74,459 | 76,877 | 83,342 | 96,894 | 100,166 |
| Interest $\left\{\begin{array}{l}\text { Water supply }\end{array}\right.$ | 238,572 | 283,145 | 305,182 | 340,663 | 388,114 |
| Interest \{ Sewerage .. | 441,567 | 475,680 | 506,985 | 549,190 | 682,809 |
| Patriotic, Relief Funds, etc. |  |  | 500 | 2,319 | 157 |
| Superannuation, Pensions, and Compensation Allowances .. | 5,562 | 9,061 | 6,113 | 12,546 | 13,785 |
| Contribution Government Loan Redemption | .. | . . | 761 | 179 | 181 |
| River Snagging .. .. | . | . | 5,422 | 5,428 |  |
| Contributions to Municipalities | . | . | . | . . | 3,850 |
| Total | 1,012,265 | 1,085,605 | 1,170,794 | 1,274,039 | 1,436,005 |

Loan Receipts.

|  |  | £ | £ | £ | £ | ¢ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Water supply |  | 18,588 | 19,015 | 21,327 | 31,282 | 34,617 |
| Sewerare | . . | 61,992 | 58,348 | 77,654 | 94,535 | 99,629 |
| Proceeds of loans |  | 1,260,716 | 1,783,293 | 1,775,000 | 800,000 | 3,290,713 |
| Miscellaneous |  | 21,875 | 28,557 | 65,974 | 31,744 | 47,537 |
| Alterations to water mains | . | . . | 5,426 | 9,757 | 10,979 | 17,078 |
| Alterations to sewers |  | . | 3,785 | 1,758 | 606 | 5,298 |
| Total | - | 1,363,171 | 1,898,424 | 1,951,470 | 969,146 | 3,494,872 |

Loan Expenditure.

B. Melbourne Water Supply. (a) Progress of Work. The principal works completed or in hand during the year ended 30th June, 1928, were:-Construction of Maroondah Dam (upper portion and outlet tower). Duplication of Maroondah Syphons and inlet to Preston Reservoir, 30,273 lineal feet. Raising lining of Maroondah Aqueduct, 400 lineal feet. Construction of O'Shannassy Dam. Construction of outlet and diversion works, Silvan Reservoir. Construction of service reservoir at North Essendon and erection of concrete valve houses. Construction of Coranderrk Aqueducts Nos. 1 and 2. Construction of 18 -inch scour main from North Essendon Reservoir to Moonee Ponds Creek, 2,787 lineal feet. Construction of Notting Hill Reservoir No. 2. Laying 6 -inch scour main, Notting Hill Reservoir No. 2, 831 feet of 6 -inch concrete pipes. Construction of Mount Waverley Reservoir No. 1. Construction of 18 -inch scour main, Mount Waverley Reservoir

No. 1, 1,903 lineal feet. Erection of mild steel girders, trusses, etc., at Maribyrnong Bridge. During the year 6 miles 40 chains of aqueducts were constructed, and (allowing for water mains lifted) there was a net increase in large mains laid of 36 miles 293 chains and of 81 miles 23 chains in pipes under 12 inches diameter, in varions parts of the metropolis.

The total length of aqueducts, mains, and reticulation amounted to 2,438 miles.
(b) Quantity of Water, Number of Houses, and Population Supplied. The following table gives various particulars for the years 1924 to 1928 . The rate levied over the period has remained at sixpence in the pound.

WATER SUPPLY, MELBOURNE.-PARTICULARS OF SERVICES, 1924 TO 1928.

(c) Capital Cost, Revenue, Expenditure and Surplus. The total cost of construction, revenue, working expenses (exclusive of renewals and special war expenditure), interest and surplus for the five years ending 30th June, 1928, together with the total amounts to that date are given below:-
.. WATER SUPPLY, MELBOURNE.-FINANCES, 1924 TO 1928.

(a) Exclusive of Renewals.
(b) Includes Interest on Renewals and Sinking Funds.
C. Melbourne Sewerage. (a) Progress of Work. One section of main sewer and four sections of branch sewers were completed; 51 reticulation areas and one minor reticulation extension were also completed. The deviation of the North Yarra main at Stony Creek and one section of main sewer, two sections of branch sewers, also rising mains at Preston, together with seventeen reticulation areas were in progress. By day labour one
section of branch sewer and four reticulation areas, 258 minor reticulation extensions, 2,571 branches and short pieces of reticulation and cleven alterations were completed. Portion of the main outfall sewer from 7 miles 42 chains to 8 miles 29 chains, a distance of 67 chains, has been arched over and ventilation tubes installed at regular intervals. At 30 th June, 1928, there were 42 separate contracts and day labour jobs in progress, ranging in cost from $£ 100$ to $£ 36,767$.

The operation of the pumping station at Spotswood has been entirely satisfactory for the year, and no stoppages of any kind have occurred. The total volume of sewage pumped during the year 1928 was $13,746,968,000$ gallons, or an average of $37,560,000$ gallons per day. The increase over the total for the preceding year was $1,197,388,000$ gallons and the unit cost of raising 1,000 gallons 100 feet was reduced from .477 d . to .465 d . Any further increase in the daily flow should result in a still greater reduction in the unit cost of pumping. The work of duplicating the straining wells was completed during the year and the old wells are being given a thorough overhaul as opportunity offers.
(b) Number of Houses Connected, etc. Particulars of services for the years 1924 to 1928 are given below :-

SEWERAGE, MELBOURNE_—PARTICULARS OF SERVICES, 1924 T0 1928.

| Year ended 30th June- | Number of Houses for which Sewers are Provided. | Estimated <br> Population for which Sewers are Provided. | Average Daily Pumping. | Total Sewage Pumped for the Year. | Average Daily Pumping. |  | LengthoíSewers,etc. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Per House. | $\begin{gathered} \text { Per Head } \\ \text { Estimated } \\ \text { Population. } \end{gathered}$ |  |
|  | No. | No. | $\begin{aligned} & 1,000 \\ & \text { Gallons. } \end{aligned}$ | $\begin{aligned} & \text { 1,000 } \\ & \text { Gallons. } \end{aligned}$ | Gallons. | Gallons. | Miles. |
| 1924 | 182,987 | 810,632 | 35,750 | 13,084,370 | 199.5 | 45.0 | 1,861 |
| 1925 | 191,318 | 847,538 | 36,847 | 13,449,080 | 196.9 | 44.4 | 1,925 |
| 1926 | 199,918 | 885,637 | 35,478 | 12,949,420 | 181.4 | 40.9 | 2,001 |
| 1927 | 208,003 | 921,453 | 34,382 | 12,549,580 | 168.6 | 38.1 | 2,091 |
| 1928 | 216,785 | 960,358 | 37,560 | 13,746,968 | 173.2 | 39.1 | 2,172 |

(c) Disposal of Night-soil from Unsewered Premises. The agreements entered into with 29 councils for the collection and delivery by them of night-soil from unsewered premises within their respective municipal districts have continued in operation during the year. The total number of pans cleaned was $1,323,101$, and the night-soil was disposed of by burial by the Board at its various depots at Brooklyn, Campbellfield, Burwood, and Moorabbin, though operations at Burwood ceased on 30th November, 1927.

Though the Board suggested that a Bill should be introduced into Parliament to enable the Board to compel the installation of septic tanks or other approved treatment, and thus abolish the pan system and the hateful fly problem, no legislation has yet been passed to bring about the desired improvement.
(d) Main Drains. A number of necessary amendments to the Metropolitan Drainage and Rivers Act 1923 was passed in December, 1926, and though all the amendments desired by the Board were not included, it was decided that construction work should be proceeded with immediately. Contracts amounting to $£ 337,559$ have been let to 30 th June, 1928 , of which works to the value of $£ 194,447$ have been actually completed.

Most of the principal drainage areas in Melbourne and suburbs have been defined, and preliminary schemes have been prepared for dealing with the storm waters from a number of these areas.
(e) Finances. The capital cost, revenue, working expenses (exclusive of renewals), percentage of working expenses on revenue, interest and deficiency for the years 1924 to 1928 are given below:-

SEWERAGE, MELBOURNE.-FINANCES, 1924 TO 1928.

| Year ended 30th June- | Capital Cost. | Revenue. | Working Expenses. | Percentage of Working Expenses on Revenue. | Interest. | Deficiency. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | £ | - | £ | £ | £ | £ |
| 1924 | 337,740 | 480,748 | a 119,571 | 24.87 | b 451,168 | 89,991 |
| 1925 | 441,275 | 537,657 | a 129,050 | 24.00 | b 485,027 | 76,420 |
| 1926 | 665,133 | 600,445 | a 133,988 | 22.31 | b 520,508 | 54,051 |
| 1927 | 463,363 | 633,165 | a 148,814 | 23.50 | b 560,539 | 76,188 |
| 1928 | 590,984 | 625,690 | a 157,323 | 25.14 | b 598,962 | 130,595 |
| Total to date | 11,084,335 | 9,790,699 | a2,305,126 | 23.54 | b10,069,059 | 2,583,486 |

(a) Exclusive of Renewals.
(b) Includes interest on Renewals and Sinking Funds.
(f) Metropolitan Sewage Farm. On 30th June, I928, the total area of the farm was 22,634 acres. The following table gives details in connexion therewith for the years 1924 to 1928:-

METROPOLITAN SEWAGE FARM.-FINÄNCES, 1924 TO 1928.

(a) Exclusive of Renewals.
D. River Improvement. During the year ended 30th June, 1928, improvement works have been carried out on the River Yarra, Maribyrnong River and Merri Creek, consisting chiefly of river snagging, grading and beaching of banks, widening of the waterway and dredging operations. The Board also commenced an important section of the River Yarra improvements work, viz., the cut through the quarries above the Church Street Bridge.
(ii) Geelong Waterworks and Sewerage Trust. (a) General. The Geelong Waterworks and Sewerage Trust, constituted in 1908, consists of five commissioners, two of whom represent the city of Geelong, one the town of Geelong West, one the town of Newtown and Chilwell, and one the shires of Bellarine, Corio and South Barwon jointly. The amount of loan money which may be raised is limited to $£ 725,000$ for water supply undertaking, $£ 710,000$ for sewerage undertaking, and $£ 220,000$ for sewerage installation to properties under the deferred payment system. The population supplied is about 44,869.
(b) Water Supply. The catchment area is about 16,000 acres. The works comprise the Korweinguboora Reservoir and the Bolwarra Weir on Eastern Moorabool River, together with the necessary channels, mains and reservoirs. The storage capacity of all the reservoirs is $2,738,119,808$ gallons, and there are 245 miles of reticulation mains within the city of Geelong and its suburbs. The total expenditure on waterworks to the 30th June, 1928, was $£ 634,078$, and the revenue for the year 1927-28 was $£ 50,428$.
(c) Sewerage Works. The sewerage scheme consists of a main outfall sewer to the ocean at Black Rock, about 9 miles from Geelong, and 130 miles of reticulation mains have already been laid. The drainage area is 9,489 acres, and the number of buildings within the drainage area is 11,000 , and within the sewered areas 10,550 , while 10,300 buildings have been connected with the sewers. Up to 30th June, 1928, the total expenditure on sewerage works was $£ 587,494$ and on the cost of sewerage installations under deferred payment conditions $£ 220,000$, of which $£ 69,103$ is outstanding. The revenue amounted to $£ 44,997$.
(iii) Bendigo Sewerage.Authority. The members of the Bendigo City Council constitute this Authority. The-sewerage district comprises the whole area of the city of Bendigo. The works when completed are estimated to cost $£ 450,000$, and comprise treatment works consisting of (a) non-septic sedimentation and liquefying tanks and oxidizing chambers without filters, but with land disposal of eflluent by irrigating permanent pastures; (b) main outfall sewer, main, sub-main, branch, and reticulation sewers, of which over 62 miles had been constructed by the end of February, 1929, at which date 3,681 premises had been connected to sewers. An unique feature of the scheme is the entire omission of the " boundary trap " from house sewers with resulting omission of "induct vent" to house sewers and the omission of all ventilation on street sewers, the main and reticulation sewers all being amply ventilated by the house sewer ventilation, while the consequent all round saving both of first cost and maintenance is considerable. Results are still completely satisfactory after six years in operation without boundary traps. The method of sewage disposal has produced continuously an effluent well within the required standards of purity, and in addition returns more than $£ 1,000$ per annum from fat sheep, lambs and wool. Expenditure to end of February, 1929, was £251,812 for sewerage scheme and $£ 106,062$ for house connexions.
(iv) Water Supply in Country Towns and Districts. Most of the country waterworks are controlled by the State Rivers and Water Supply Commission, but a number of other waterworks is controlled by Waterworks Trusts or by municipal corporations.

The following table gives particulars regarding waterworks under the control of trusts and municipal corporations for the years 1924 to 1928 :-

COUNTRY WATERWORKS, VICTORIA.-FINANCES, 1924 TO 1928.

| Year. | Under Waterworks Trusts. |  |  |  | Under Municipal Corporations. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\left.\begin{gathered} \text { Number } \\ \text { Trusts. } \end{gathered} \right\rvert\,$ | Capital Cost. | Capital Indebted- ness | Current Interest standing $\qquad$ | $\left.\begin{array}{\|c} \text { Number } \\ \text { of Cor- } \\ \text { porations. } \end{array} \right\rvert\,$ | Capital Cost. | Capital IndebtedIndebted ness | Current Interest standing $\qquad$ |
|  | No. | £ | £ | ${ }_{1}^{\text {f }}$ | No. | ${ }^{\text {£ }}$ | ${ }_{50}^{\text {£ }}$ | $\stackrel{\text { f }}{ }$ |
| 1924 | 99 | 1,322,315 | 983,663 | 13,712 | 29 | 785,602 | 503,890 | 9,811 |
| 1925 | 102 | 1,383,538 | 1,036,516 | 14,545 | 29 | 785,788 | 500,595 | 3,329 |
| 1926 | 105 | 1,457,155 | 1,098,512 | 17,787 | 29 | 786,388 | 498,195 | 3,656 |
| 1927 | 102 | 1,541,086 | 1,176,434 | 14,150 | 29 | 807,433 | 515,631 | 2,141 |
| 1928 | 102 | 1,637,071 | 1,255,037 | 13,482 | 29 | 820,084 | 525,687 | 3,651 |

3. Queensland.-(i) The Metropolitan Water Supply and Sewerage Board, Brisbane. (a) General. The whole of the water supply in the metropolitan area, including bulk supply to the city of Ipswich, is filtered. Filtration works are situated at Holt's Hill, Mount Crosby, and consist of eleven slow sand type of filters, capable of treating 16,500,000 gallons of water per 24 hours; the supply from Enoggera Reservoir is also filtered. The total capacity of the service reservoirs, on Bartley's Hill, Highgate Hill, Wickham Terrace, Tarragindi Hill, Roberts' Lookout (elevated tank), and Roles Hill

Manly, is about $22,900,000$ gallons. The $42-\mathrm{in}$. and $36-\mathrm{in}$. trunk mains laid from Mount Crosby in 1925 are in constant use. The three new units of pumping plant lately installed at Mount Crosby Pumping Station continue to provide efficient service. The new weir and overbridge, completed in 1926, is in good order and functions beneficially.

With the exception of short trial runs for testing purposes, there has not been any necessity to run the electrical pumping station for supplying water to Lake Manchester throughout the past year. A pipe line and tunnel between Gold Creek Reservoir and Enoggera Reservoir was completed in the early part of the year, but so far has not been put into regular commission. The new 24 -in. trunk main from River-road to Eildon Hill has been in constant operation with good results. A subsidiary $16-\mathrm{in}$. distributing main from Constitution Road to Gympie Road was completed towards the end of the year. The reinforced concrete elevated water tower at Paddington Heights, holding 100,000 gallons of water, is in constant service with beneficial results. A service reservoir on Roles Hill, Manly, holding 1,800,000 gallons of water, commenced in 1927, was completed during the latter part of the year. This reservoir serves inhabitants on the surrounding heights and provides ample pressure.

During the year 1928 nearly 45 miles of mains were laid, and new services installed numbered about 2,739.
(b) Brisbane Waterworks. Summary. The following table gives a summary of operations for the last five years:-

WATERWORKS, BRISBANE.-SUMMARY, 1924 T0 1928.

| Year. | Length of Reticulation Mains. | Number of Tenements Connected. | Estimated <br> Population Supplied. | Quantity Supplied. | Average Daily Supply. | Average Daily Supply per Head of Estimated Population. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Miles. | No. | No. | 1,000 Gallons | Gallons. | Gallons. |
| 1924 | 645 ${ }^{\text {3 }}$ | (a) 50,152 | 246,300 | 4,378,486 | 11,963,078 | 44.68 |
| 1925 | 675 | (a) 53,119 | 258,175 | 4,703,044 | 12,885,052 | 45.80 |
| 1926 | 714 | (a) 56,887 | 275,015 | 5,392,671 | 14,774,442 | 48.88 |
| 1927 | 744 | (a) 57,485 | 288,494 | 4,642,277 | 12,718,570 | 44.10 |
| 1928 | $777 \frac{1}{2}$ | (a) 60,224 | 301,368 | 4,833,818 | 13,207,156 | 43.82 |

(a) Metropolitan area.

The total length of the trunk mains is 189 miles.
(c) Brisbane Sewerage Scheme. Reticulation work in Brisbane and South Brisbane is being proceeded with and premises within the reticulated areas are being connected to the sewers. Twenty-two and a half miles of main sewers and $95 \frac{1}{2}$ miles of reticulation sewers and house connexion branches have been constructed and 9,450 premises have been connected.
(d) Brisbane Waterworks and Sewerage Works Finances. The subjoined table gives particulars regarding finance during the years 1924 to 1928 :-
WATER AND SEWERAGE WORKS, BRISBANE.-FINANCE, 1924 T0 1928.

|  | Year. | Capital Cost. | Net Revenue from Rates. | Management and Working Expenses. | New Works Construction. | Interest and Redemption of Loans, including Sinking Fund (a) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | £ | £ | £ | £ | £ |
| 1924 |  | 5,872,547 | 402,272 | 157,370 | 785,068 | 294,420 |
| 1925 |  | 6,364,380 | 481,571 | 187,420 | 491,833 | 368,295 |
| 1926 |  | 6,776,465 | 516,351 | 198,143 | 412,085 | 373,053 |
| 1927 |  | 7,266,706 | 642,328 | 222,450 | 490,241 | 378,137 |
| 1928 |  | 7,617,956 | 669,603 | 215,448 | 375,038 | 383,221 |

[^1](ii) Country Towns Water Supply. In addition to the city of Brisbane, there were at the end of the year 1927, thirty-four country towns in Queensland provided with water supply systems constructed by municipalities chiefly from Government loans. The subjoined statement gives particulars of all water supply systems, exclusive of Brisbane, for the year 1927:-

QUEENSLAND.—PARTICULARS OF COUNTRY WATER SUPPLY SYSTEMS, 1927.

4. South Australia.-(i) General. The water supply and sewerage systems in this State are constructed and maintained by the Public Works Department.
(ii) Adelaide Waterworks. (a) Summary. The following table gives particulars for the years 1923-24 to 1927-28, the figures for consumption being recorded by gaugings taken at the reservoirs and including evaporation and absorption. There are 53,689 meters in the Adelaide District.

ADELAIDE WATERWORKS.-SUMMARY, 1923-24 TO 1927-28.

(b) Finances. Particulars for the years 1923-24 to 1927-28 are given below :-

ADELAIDE WATERWORKS.-FINANCES, 1923-24 TO 1927-28.

| Year ended 30th June-- | Capital Cost. | Revenue. |  | Expenses. |  |  | Percentage of Net Revenue on Capital Cost. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |
|  |  | Rates. | Total. | Engineering | Revenue | Total. |  |
|  | £ | £ | £ | £ | £ | £ | \% |
| 1924 | 3,100,856 | 194,158 | 268,574 | 53,673 | 10,972 | 64,645 | 6.58 |
| 1925 | 3,166,088 | 220,151 | 280,327 | 59,020 | 11,193 | 70,213 | 6.64 |
| 1926 | 3,241,024 | 240,538 | 312,728 | 62,147 | 12,201 | 74,348 | 7.35 |
| 1927 | 3,281,781 | 276,621 | 351,163 | 62,710 | 11,332 | 74,042 | 8.44 |
| 1928 | 3,379,517 | 372,117 | 469,844 | 65,968 | 11,292 | 77,260 | 11.62 |

(iii) Adelaide Sewerage. Particulars for the years 1923-24 to 1927-28 are given hereunder :-

ADELAIDE SEWERAGE.-SUMMARY, 1923-24 T0 1927-28.

(iv) Country Towns Water Supply. (a) Summary. The chief items of information regarding these undertakings are set forth in the table below for the years 1923-24Ito 1927-28.

COUNTRY TOWNS WATERWORKS, SOUTH AUSTRALIA.-SUMMARY, 1923-24 T0 1927-28.

(a) Assessments were regrouped in 1926.
(b) Finances. The next table gives financial infurmation for the years $1923-24$ to 1927-28:-

COUNTRY TOWNS WATERWORKS, SOUTH AUSTRALIA.-FINANCES, 1923-24 TO 1927-28

| Year ended 30th June- | Capital Cost.' | Revenue. |  | Working Expenses. |  |  | $\begin{gathered} \text { Percentage } \\ \text { of Net } \\ \text { Revenue } \\ \text { on } \\ \text { Capital Cost. } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Rates. | Total. | Engineering Branch. | Revenue Branch. | Total. |  |
|  | £ | £ | £ | £ | £ | £ | \% |
| 1924 | 5,200,184 | 84,241 | 120,599 | 66,007 | 8,303 | 74,310 | 0.89 |
| 1925 | 6,754,682 | 93,124 | 126,032 | 58,840 | 8,077 | 66,917 | 0.87 |
| 1926 | 7,189,448 | 98,573 | 140,318 | 62,442 | 7,040 | 69,482 | 0.98 |
| 1927 | 7,945,357 | 126,222 | 173,707 | 81,728 | 7,200 | 88,928 | 1.07 |
| 1928 | 8,653,373 | 167,522 | 219,426 | 89,970 | 7,873 | 97,843 | 1.41 |

(v) Other Sewerage Systems. Information in summarized form is given below regarding the two suburban sewerage systems, viz., the Glenelg system and the Port Adelaide and Semaphore system, for the years 1923-24 to 1927-28:-

## SUBURBAN SEWERAGE SYSTEMS, SOUTH AUSTRALIA.-SUMMARY, 1923-24 T0 1927-28.

| Year ended soth June- | Length of Sewers. | Number of Connexions. | Capital Cost. | Revenue. |  | Working Expenses. |  | Percentage of Net Revenue on Capital Cost. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Rates. | Total. | Mainten- | Total. |  |
|  | Miles. | No. | £ | £ | £ | £ | $\mathfrak{£}$ | \% |
| 1924 | 72 | 7,208 | 451,709 | 17,538 | 18,855 | 14,595 | 15,165 | 0.81 |
| 1925 | 78 | 7,756 | 475, 340 | 19,552 | 20,884 | 9,118 | 9,755 | 2.34 |
| 1926 | 84 | 8,394 | 509,483 | 21,240 | 22,422 | 10,745 | 11,405 | 2.16 |
| 1927 | 88 | 8,934 | 543,026 | 23,998 | 24,961 | 10,714 | 11,623 | 2.46 |
| 1928 | 92 | 9,331 | 561,572 | 37,747 | 38,632 | 10,277 | 11,176 | 4.89 |

5. Western Australia.-(i) General. The water supply and sewerage systems of Western Australia are all under the management of Government Departments, and are divided into the following categories :-(a) Metropolitan Water Supply, Sewerage and Drainage, covering Perth, Fremantle, Claremont, Guildford, Midland Junction, and Armadale District, (b) Goldfields Water Supply, (c) Water Supply of other towns, (d) Agricultural Water Supply, (e) other Mines Water Supply, and ( $f$ ) artesian and sub-artesian waters. The consumption of water by the railways is not included in figures for water supplied given hereunder.
(ii) Metropolitan Water Supply, Sewerage and Drainage. (a) General. The sources of the metropolitan water supply are the Victoria Reservoir, Bickley Brook, Mundaring Reservoir, thirteen bores, and the Armadale, Churchman Brook, Canning River, and Wungong pipe head dams. The sewerage system consists of septic tanks and percolating filters for Perth, and septic tanks and ocean outfall for Fremantle and Subiaco. At the 30 th June 1928, the number of premises connected with sewers was 18,696 .
(b) Summary. The following table gives particulars regarding water supply for the years 1924 to 1928 :-

WATER SUPPLY, WESTERN AUSTRALIA.-SUMMARY, 1924 T0 1928.

| Year ended 30th June- |  | Estimated <br> Population <br> Supplied. | Number of Houses Supplied. | Water Supplied. | Average Daily Supply. |  | Number of Meters. | Length of Mains. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Per Head. |  |  | Per House. |  |  |
|  |  |  | No. | No. | 1,000Gallons. | Gallons. | Gallons. | No. | Miles. |
| 1924 |  | 174,580 | 39,386 | 3,089,825 | 48.36 | 214.93 | 22,114 | 700 |
| 1925 |  | 178,600 | 40,741 | 2,909,095 | 44.62 | 195.63 | 23,416 | 713 |
| 1926 |  | 184,000 | 42,302 | 3,131,144 | 46.63 | 202.79 | 24,750 | 760 |
| 1927 |  | 192,000 | 44,235 | 2,777,186 | 39.63 | 175.85 | 27,572 | 782 |
| 1928 |  | $\begin{array}{r} 199,000 \\ -6 x_{1} \end{array}$ | 46,457 | 3,136,946 | 42.92 | 184.48 | 33,752 | 798 |

(c) Finances. The table hereunder gives separate information for the water supply and sewerage and drainage branches for the years 1924 to 1928 :-

WATER SUPPLY AND SEWERAGE AND DRAINAGE, WESTERN AUSTRALIA.FINANCES, 1924 TO 1928.

| Year ended 30th June- | Water Supply. |  |  | Sewerage and Drainage. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Capital Cost. | Revenue. | Expendi- ture. | Capital | Revenue. | Expenditare. |
|  | £ | £ | £ | £ | £ | £ |
| 1924 | 1,722,594 | 135,250 | 152,824 | 1,055,612 | 83,388 | 76,532 |
| 1925 | 2,162,771 | 140,811 | 169,011 | 1,150,261 | 91,073 | 78,830 |
| 1926 | 2,553,179 | 149,176 | 188,235 | 1,243,217 | 96,600 | 80,165 |
| 1927 | 2,762,036 | 198,951 | 198,340 | 1,341,722 | 85,970 | 84,020 |
| 1928 | 2,982,104 | 224,510 | 207,492 | 1,430,832 | 97,782 | 88,677 |

(iii) Goldfields Water Supply. The source of supply for the Coolgardie and adjacent goldfields, as well as for towns and districts on or near the pipe-line, is the Mundaring Reservoir, which has a capacity of 4,650 million gallons. There are three classes of consumers-the railways, the mines, and "other," and in 1927- 88 the railways consumed 8 per cent., the mines 17 per cent., and "other " 75 per cent. of the supply. The following table gives details for the years 1924 to 1928 :-
a0LDFIELDS WATER SUPPLY, WESTERN AUSTRALIA.--SUMMARY, 1924 T0 1928.

| Year ended 30th June- | Total Consumption. | Number of Services. | Length of Water Mains. | Capital Cost. | Revenue. | Expendi- ture. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1,000 gallons. | No. | Miles. | £ | £ | £ |
| 1924 | 1,159,000 | 10,628 | 1,303 | 3,487,887 | 167,597 | 212,713 |
| 1925 | 1,139,000 | 10,706 | 1,371 | 3,544,274 | 178,495 | 215,517 |
| 1926 | 1,161,000 | 10,676 | 1,454 | 3,642,059 | 179,402 | 218,956 |
| 1927 | 1,106,000 | 10,594 | 1,483 | 3,656,147 | 168,183 | 207,583 |
| 1928 | 1,120,000 | 10,443 | 1,488 | 3,677,067 | 165,679 | 181,009 |

(iv) Water Supply of Other Towns. During the year 1927-28 there were 26 towns provided with water supplies, of which 12 are controlled by Water Boards and 14 by the Public Works Department. The total supplies to the latter towns for the year ending 30th June, 1928, were as follows:-Domestic, $107,000,000$ gallons, and Railways, $25,000,000$ gallons. The estimated population was 17,000 , and the average daily domestic consumption was 17 gallons per head.
(v) Agricultural Water Supply. During the year 1927-28, 23 tanks were excavated and 8 wells sunk, all of which yielded fresh water. During the 18 years from the 1st July, 1910, to the 30 th June, 1928, 468 tanks were built, 330 wells sunk, and 2,714 bores put down to a total depth of 134,054 feet. Of the bores mentioned, 459 gielded fresh and 249 stock water.
(vi) Artesian and Sub-artesian Waters. Up to the 30th June, 1928, the total number of bores put down in search of artesian or sub-artesian water was 234 , including 49 sunk in the metropolitan area, ranging in depth from 32 to 4,006 feet.
6. Tasmania.-(i) Hobart Water Supply. The cost of this undertaking to the 30th June, 1928, was $£ 431,261$, but a considerable amount of reticulation work has been done out of revenue and not charged to capital account. The outstanding loans at 30th June, 1928, amounted to $£ 357,636$. At the same date the number of tenements supplied in the city and suburbs was 10,283 and the length of reticulation mains 121量 miles. The revenue for the fears 1924 to 1928 was as follows:-

HOBART WATERWORKS.-REVENUE, 1924 TO 1928.

| Heading. | 1924. | 1925. | 1926. | 1927. | 1928. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Revenue | $\stackrel{£}{34,965}$ | $\stackrel{£}{34,935}$ | $\stackrel{£}{\mathbf{£}}$ | $\begin{gathered} \underset{37,153}{ } \end{gathered}$ | $\stackrel{£}{\mathbf{£}, 822}$ |

(ii) Hobart Sewerage System. The revenue for the year ended 30th June, 1928, was £38,922. Up to that date $80{ }_{3}^{3}$ miles of sewers had been laid in connexion with the original city system at a cost of $£ 213,410$, and 8,321 tenements connected. Since the original city was sewered, the Municipalities of Queenborough and New Town have been included in the city, and are now being sewered. In Queenborough $25 \frac{1}{2}$ miles of sewers, connecting with $\mathbf{1 , 4 1 0}$ tenements, have been constructed at a cost of $£ 119,470$. In New Town a total of 36 miles of sewers has been laid, and 1,368 properties connected. The cost to 30th June, 1928, including surveys and sewerage outfall, was $£ 110,409$.

## § 6. Harbour Boards and Trusts.

1. New South Wales.-(i) Sydney Harbour Trust. (a) General. The Sydney Harbour Trust, which consists of three Commissioners appointed by the Government, controls the whole of the wharves resumed by the Government in 1901. The Commissioners also provide and maintain the lighting and marking of the harbour, and carry out all necessary dredging. The whole of what might be termed city wharves is owned by the Commissioners and leased to various shipping companies, but the Trust directly operates and maintains a certain number of open wharves. Outside the city area the wharves are, to a large extent, privately controlled, but all structures beyond high-water mark are held under leases issued by the Trust. The extent of wharfage accommodation now available for use totals 76,107 lineal feet, inclusive of 9,267 lineal feet privately owned, 4,693 lineal feet of cross wharf and 3,427 lineal feet of ferry wharves.

The depth of water at the entrance to the port is not less than 80 feet and in the channels there are 40 feet at low-water spring tides. The foreshores of Sydney Harbour are about 200 miles in length. The area of the water in the port is 14,284 acres, of which 3,000 acres have a depth ranging from 35 to 160 feet.

Since its inception, the Trust has spent $£ 7,504,243$ on the reconstruction and extension of the wharfage and improvements to the port and vested area. Over 14,381 lineal feet of old and obsolete wharfage have been demolished, and 34,155 lineal feet of new berths have been constructed. Other improvements include $2,910,000$ square feet of floor area of new sheds and nearly 4 miles of new roadways.

During the year 1928, $1,630,131$ tons of material were dredged at a cost of $£ 98,647$. In the process of towing such material, 35,482 miles were run at a cost of $£ 35,330$.
(b) Finances. The subjoined table gives particulars concerning the finances of the Trust for the years 1924 to 1928 :-

SYDNEY HARBOUR TRUST.-FINANCES, 1924 TO 1928.

| Year ended 30th June. | Revenue. |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Wharfage and Harbour Rates. | Tonnage Rates and Berthing Charges. | Other Sources. | Total. | Expenditure. | Total Capital Debt. | Interest. | Balance. |
|  | $\mathcal{L}$ | ${ }^{-}$ | $\mathfrak{f}$ | $\boldsymbol{E}$ | £ | $\boldsymbol{f}$ | f | £ |
| 1924 | 553,295 | 44,879 | 299,183 | 897,357 | 276,883 | 10,417,859 | 528,743 | 91,731 |
| 1925 | 587,157 | 58,735 | 324,510 | 970,402 | 283,040 | 10,644,468 | 526,944 | 160,418 |
| 1926 | 618,075 | 53,143 | 344,660 | 1,015,878 | 298,101 | 10,956,555 | 554,446 | 163,331 |
| 1927 | 674,311 | 54,935 | 354,610 | 1,083,856 | 320,033 | 11,299,089 | 569,884 | 193,939 |
| 1928 | 673,418 | 46,678 | 358,197 | 1,078,293 | 344,000 | 11,590,431 | 584,814 | 149,479 |

2. Victoria.-(i) Melbourne Harbour Trust. (a) Aeneral. Information regarding the origin and constitution of this Trust will be found in Official Year Book No. 12, pp. 970 et seq. In 1928, the length of sheds in the port was 20,427 feet, covering an area of $1,207,656$ square feet. The quantity of material raised by the dredging and excavation done in the improvement of the river and bay amounts to $89,735,401$ cubic yards. The Trust has expended $£ 339,633$ in reclaiming land within its jurisdiction.
(b) Finances. The following table gives particulars of the revenue and expenditure of the Trust from 1924 to 1928 inclusive. Up to 3lst December, 1928, the total capital expenditure amounted to $£ 7,582,143$.

MELBOURNE HARBOUR TRUST.-FINANCES, 1924 T0 1928.

| Particulăis. |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Revenue.

| Rates, rents, etc. |  | . | $\stackrel{\mathfrak{f}}{711,558}$ | $\begin{gathered} £ \\ 712,733 \end{gathered}$ | $\begin{gathered} £ \\ 739,460 \end{gathered}$ | $\underset{799,075}{\mathfrak{f}}$ | $\begin{array}{\|c} £ \\ 707,899 \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Interest .. |  | . | 669 | 285 | -79 | - 43 | 2,149 |
| Other receipts | $\ldots$ | $\ldots$ | 17,095 | 23,213 | 20,394 | 20,549 | 21,239 |
| Total |  | $\cdots$ | 729,322 | 736,231 | 759,933 | 819,667 | 731,287 |

Expenditure.

| Management and general expenses | $\stackrel{\mathfrak{f}}{74,086}$ | $\stackrel{£}{85,655}$ | $\stackrel{\mathfrak{f}}{98,717}$ | $\stackrel{£}{97,289}$ | $\stackrel{\mathfrak{f}}{96,854}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Interest .. .. . . | 131,674 | 151,891 | 159,353 | 161,197 | 182,492 |
| Total | 205,760 | 237,546 | 258,070 | 258,486 | 279,346 |
| Less standing charges added to works | 43,749 | 48,128 | 49,309 | 55,588 | 58,092 |
| Total | 162,011 | 189,4]8 | 208,761 | 202,898 | 221,254 |
| Wharfage and other refunds | 4,879 | 3,761 | 3,683 | 2,623 | 3,352 |
| Consolidated revenue of Victoria | 140,382 | 136,494 | 143,002 | 148,282 | 143,648 |
| Flotation of loans expenses | 5 | 10 | 15 | 8 | 3,500 |
| Maintenance | 130,234 | 166,610 | 142,917 | 148,680 | 137,504 |
| Total expenditure | 437,511 | 496,293 | 498,378 | 502,491 | 509,258 |
| Surplus on revenue account. | 291,811 | 239,938 | 261,555 | 317,176 | 222,029 |
| Less depreciation and renewals account and sinking fund | 213,000 | 213,000 | 213,000 | 213,000 | 213,000 |
| Net surplus on revenue account | 78,811 | 26,938 | 48,555 | 104,176 | 9,029 |

Captal Expenditure.

| Land and property | $\ldots$ | $\ldots$ | 548 | 37,699 | 30,962 | 20,144 | 10,869 |
| :---: | :---: | :---: | ---: | ---: | ---: | ---: | ---: |
| Deepening waterways | $\ldots$ | $\ldots$ | 137,488 | 145,808 | 169,053 | 204,536 | 261,634 |
| Wharves construction | $\ldots$ | $\ldots$ | 194,318 | 285,072 | 129,382 | 246,587 | 161,235 |
| Approaches construction | $\ldots$ | $\ldots$ | 25,483 | 46,130 | 15,412 | 35,619 | 78,249 |
| Other harbour improvements | $\ldots$ | 23,826 | 18,631 | 40,416 | 15,735 | 17,253 |  |
| Floating plant | $\ldots$ | $\ldots$ | $\ldots$ | 3,192 | 97,354 | 9,221 | 125,690 |
| General plant | $\ldots$ | $\ldots$ | $\cdots$ | 3,440 | 2,718 | 4,891 | 5,045 |
| Total | $\ldots$ | $\ldots$ | $\ldots$ | 388,295 | 633,412 | 399,337 | 653,356 |
|  |  |  |  |  |  |  |  |

(ii) Geelong Harbour Trust. (a) General. The Geelong Harbour Trust was constituted in 1905, and is under the control of three Commissioners appointed by the Governor in Council. The Commissioners have vested in them the Port of Geelong, which includes that portion of Port Phillip east of a line from the right bank of Little River at its mouth south-easterly to a point in line with the east side of Mercer-street, Portarlington. This area comprises Corio Bay, Portarlington, and some miles of Bay frontage. In addition, certain lands abutting upon the River Barwon and Barwon River Heads are vested in the Commissioners and form part of the Port. The Commissioners have established facilities for the export of grain, frozen meat, and other produce, and have also constructed extensive abattoirs and freezing works. A large amount of money has been expended in the reclamation of waste lands, and on part of such lands a dairy farm with a complete system of drainage and irrigation has been established.
(b) Finances. The following table gives financial details for the years 1924 to 1928:-

GEELONG HARBOUR TRUST.-FINANCES, 1924 TO 1928.

| Year. |  |  | Loans. | Sinking Fund. | Revenue. | Expenditure. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | £ | £ | £ | £ |
| 1924 | . | . | 591,000 | 36,912 | 61,356 | 52,315 |
| 1925 | . . | . | 591,000 | 41,167 | 70,730 | 57,027 |
| 1926 | . . | . | 591,000 | 45,746 | 67,073 | 66,230 |
| 1927 | $\cdots$ | . | 599,716 | 47,658 | 65,631 | 99,948 |
| 1928 | . | . | 622,105 | (a) | 57,411 | 55,056 |

(a) Not available.
(iii) Harbour Boards. The Harbour Boards Act of 1927 provides for the constitution of Harbour Boards for the following ports :-Gippsland Lakes ; Welshpool; Warrnambool ; Port Fairy; Portland. These ports have, hitherto, been under the control of the Department of Ports and Harbours of Victoria. The first board to be constituted under this Act is the Warrnambool Harbour Board. (See Victoria Gazette, 6th June, 1928, page 1595.)
3. Queensland.-(i) Bowen Harbour Board. (a) General. The Bowen Harbour Board consists of seven members, of whom two are appointed by the Governor in Council and the remainder elected by the electors of the Town of Bowen and adjacent shires. The district under its jurisdiction comprises the area within the boundaries of the Town of Bowen, the Shires of Prosperine and Wangaratta, and division I. of the Shire of Ayr.
(b) Finances. The capital expenditure for the year 1928 was $£ 13,019$, while for the same period the receipts were $£ 12,443$ and the expenditure $£ 13,019$.
(ii) Bundaberg Harbour Board. (See Official Year Book No. 20, page 140.)
(iii) Cairns Harbour Board. (a) General. The Cairns Harbour Board consists of twelve members, representing the city of Cairns and eight adjoining shires. The wharves at Cairns, which are all under the control of this Board, are of reinforced ferro-concrete, and 1,900 feet in length, and form an unbroken quay line of 1,500 feet partly connected with railway communication along front of same where considered advisable for handling direct ex trucks. A log paddock with a jetty wharf, equipped with off loading ramps for handling floater logs, separates the recently constructed 400 feet of reinforced concrete wharfage, known as the Overseas Wharf, from the lower quay. This new structure will greatly relieve the congestion experienced in previous years during the busy season. This wharf has full railway communication at front and rear thereof. The Board have opened negotiations with the sugar mills and shipping companies for the further installation of electric conveyors throughout the wharf sheds for the handling of cargo generally. Mechanical sugar-handling conveyors have been installed in sugar shed at a cost of over $£ 38,465$. The wharves are electrically lighted and furnished with railways and crane services, including one 8 -ton electric portal crane costing over $£ 5,000$ especially installed for handling sinker logs. There is a special railway wharf with facilities for handling floater logs. A cold storage plant has been built at a cost of $£ 9,000$.
(b) Finances. During the year 1928, the gross revenue of the Board was $\mathfrak{£} 59,836$, derived from harbour, berthage, and miscellaneous dues, etc.
(iv) Gladstone Harbour Board. (a) General. The Gladstone Harbour Board is composed of seven members, two of whom are appointed by the Governor in Council and five elected by the electors of the town of Gladstone and the sbires of Calliope and

Miriam Vale. The works under the control of the Board are (i) Auckland Point Jetty and Wharf, constructed of reinforced concrete and wood, together with a two-way traffic approach and jetty for the handling of local cargo, the berth being 775 feet long, with an average depth alongside of 26 feet; (ii) the municipal wharf in Auckland-street; (iii) wool dumping plant on Auckland Point Jetty, consisting of two hydraulic dumps, capable of doing either single or double dumping; (iv) three large cargo sheds, each 140 feet by 30 feet; (v) 15 -ton electric crane for coal and timber.

A 93 -feet wooden extension to the Auckland Point Jetty has been approved and the construction is proceeding.
(b) Finances. The total capital expenditure to the end of 1928 amounted to $£ 91,480$. The revenue for 1928 was $£ 5,421$, and the expenditure $£ 4,808$.
(v) Mackay Harbour Board. (a) General. The Mackay Harbour Board consists of nine members elected by the electors of the city of Mackay and the shires of Pioneer, Sarina, Mirani and Nebo. The erection of mooring piles near the mouth of the river was completed during the year. This work will greatly facilitate the despatch of the large sugar exportations by the Adelaide Steamship Company's vessels, and the erection has been leased to the said company.
(b) Finances. Capital expenditure for the year 1928 was $£ 17,222$; receipts totalled £17,292; total expenditure amounted to $£ 23,795$.
(vi) Rockhampton Harbour Board. (a) General. The Rockhampton Harbour Board consists of eleven members, of whom seven are elected by the electors on the rolls for the city of Rockhampton, the town of Mount Morgan and the shires of Fitzroy and Livingstone. The remaining four are elected by the councillors of groups of inland shires.

In the port of Rockhampton, which comprises the tidal area of the Fitzroy River as far as the entrance to Keppel Bay, there are three principal places where steamers may lie and discharge cargo, viz., (i) Rockhampton itself, (ii) Port Alma, where the oversea steamers berth, and (iii) Broadmount, originally built for the oversea trade some yeare ago. The wharves at these three places are connected by rail with Rockhampton and with the main central line. The Board undertakes the work of improving the navigable channels throughout the estuary and river, and of maintaining the wharves at Port Alma and Rockhampton.
(b) Finances. The revenue for the year 1928 was $£ 27,581$; and the expenditure was $£ 25,778$, which included $£ 1,321$ interest on loans and overdraft.
(vii) Townsville Harbour Board. (a) General. The Townsville Harbour Board is composed of nine members, of whom two are appointed by the Governor in Council, and the remaining seven are elected by the electors of Townsville and adjacent towns and shires. All harbour works and conveniences for the use of shipping are under the control of the Board.
(b) Finances. The total expenditure since the inception of the Board is $£ 1,809,380$, while the receipts for the year 1928 were $£ 76,071$ and the expenditure $£ 62,920$.
4. Westeriii Ausiraiia.-(i) Fremantle Haroour Trust. (a) General. Fremantle Harbour is controlled by a Board of five Commissioners appointed by the Governor in Council. A description of the works was given in a previous Year Book (see No. 12, p. 973). Since'that account was written, the inner harbour and entrance channel have been dredged to a depth of 36 feet below the lowest known low water. The berthage accommodation at all the quays has also been deepened to 36 feet.
(b) Finances. The following table gives financial data for the years 1924 to 1928 :-

FREMANTLE HARBOUR TRUST.-FINANCES, 1924 T0 1928.

(ii) Bunbury Harbour Board. (a) General. The Bunbury Harbour Board consists of five members, appointed by the Government. The jetty is 4,900 feet long, with berthage accommodation of 2,700 feet on the west side and 3,000 feet on the east side and is electrically lighted. Vessels can load alongside to depths ranging from 16 to $27 \frac{1}{2}$ feet. Five electric cranes and one steam gantry crane, each of 3 tons' lifting capacity, are available.
(b) Finances. Details for the last five years are given hereunder. Surplus revenue is paid into Consolidated Revenue Fund to meet interest and sinking fund :-

BUNBURY HARBOUR BOARD.-FINANCES, 1924 TO 1928.

5. Tasmania.-(i) Marine Board of Hobart. (a) General. The Marine Board of Hobart consists of nine wardens elected by the ship-owners of the Port of Hobart and the importers and exporters of goods into or from any port within the jurisdiction of the Board. The Board has jurisdiction over all ports, harbours and waters within the limits of the coast line from South-West Cape round the southern and eastern coasts to Cape Portland, and within all islands adjacent to such coast line. The duties of the Board are to maintain all wharves within its jurisdiction which are not vested in another authority or belonging to any private person, to construct new wharves where necessary, and to improve the navigation where desirable.
(b) Finances. The following table gives details for the years 1924 to 1928 :-

MARINE BOARD OF HOBART.-FINANCES, 1924 TO 1928.

| Year ended30 th June- | Capital Debt. | Revenue. |  |  | Expenditure. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\begin{gathered} \text { Harbour } \\ \text { Mmprove- } \\ \text { ments, } \\ \text { Debentures, } \\ \text { etc. } \end{gathered}$ | General. | Total. | Harbour Improve ments. | $\begin{aligned} & \text { Interest } \\ & \text { and } \\ & \text { Sinking } \end{aligned}$ Fund. | General. | Total. |
|  | $\pm$ | ¢ | £ | £ | £ | £ | £ |  |
| 1924 | 86,806 | 2,456 | 37,465 | 39,921 | 15,787 | 6,180 | 20,304 | 42,271 |
| 1925 | -86,302 | 300 | 38,764 | 39,084 | 4,192 | 6,220 | 25,644 | 36,056 |
| 1926 | 78,526 |  | 39,223 | 39,223 | 62.5 | 6,208 | 27,211 | a 41,150 |
| 1927 | 66,820 |  | 40,831 | 40,831 | 1,407 | 5,566 | 23,012 | a 40,985 |
| 1928 | 41,073 |  | 41,276 | 41,276 | 1,914 | 4,734 | 23,384 | a 37,032 |

(a) Including $£ 7,106$ from revenue in reduction of loans in 1926, $£ 11,000$ in 1927, and $£ 7,000$ in 1928.
(ii) Marine Board of Launceston. (a) General. The Marise Board of Launceston consists of five wardens, three elected by the ratepayers of the city of Launceston and two by ratepayers of the municipalities within the Tamar District. The jurisdiction of the Board extends from Cape Portland along the north coast of Tasmania to Badger Head. The chief work carried out has been to deepen the channel of the River Tamar to 16 feet and to maintain the wharves. An important work completed in 1923 was the removal to a depth of 30 feet of Porpoise Rock, situated 4 miles from the entrance of the port. A deepwater port has been provided at Bell Bay with a depth of 40 to 45 feet alongside. The wharfage accommodation at Launceston exceeds 2,000 feet.
(b) Finances. The following table gives details for the years 1924 to 1928 :-

MARINE BOARD OF LAUNCESTON.-FINANCES, 1924 TO 1928.

(iii) Marine Board of Burnie. The length of the breakwater is 1,250 feet, with a depth up to 42 feet at low water, and a wharf alongside, 630 feet in length by 91 feet wide, with a depth at low water from 24 to 40 feet. There are two other timber wharves 600 feet and 400 feet long respectively. The receipts for the year ending 30 th June, 1928 , were $£ 22,236$, and the expenditure $£ 22,318$, including $£ 14,500$ interest on loans.

## § 7. Fire Brigades.

1. New South Wales.-(i) General. Under the Fire Brigades Act of 1909-27, a Board of Fire Commissioners consisting of eight members was formed, and fire districts constituted. The cost of maintenance of fire brigades is borne in proportions of quarter, quarter, and half by the Government, the municipalities, and the insurance companies concerned, but the expenditure must be so regulated that the proportion payable by the councils in a fire district shall not exceed the amount obtainable from 4 d . in the $£$ rate on the unimproved capital value of rateable land in the fire district: provided that the Board, with the consent of the Minister, and at the special request of the councils of the municipalities or shires constituting or forming part of a fire district or a majority in number of such councils may, as to that district, exceed the limit above provided.
(ii) Sydney Fire District. (a) Plant, etc. The Sydney fire distriot includes the City of Sydney and suburbs, comprising a total area of 246 square miles. On the 31st December, 1928, the Board had under its control in this district 75 stations, 598 permanent men, 260 partially-paid firemen, 2 steam and 75 motor fire engines, 163,000 feet of hose, and 662 telephone fire alarms. The length of wire used for telephone lines was 1,749 miles. There are in operation 324 sprinkler installations, 93 thermostatic alarms, 4 watchman's clock systems, and 290 private fire alarms.
(b) Finances. The subjoined table shows the receipts and disbursements of the Board for the past five years in respect of the Sydney Fire District :-

SYDNEY FIRE DISTRICT.-FINANCES, 1924 TO 1928.

| Year. | Receipts. |  |  |  |  |  | Disbursements. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | From Government. | $\begin{gathered} \text { From } \\ \text { Municipali- } \\ \text { ties. } \end{gathered}$ | From Fire Insurance Companies. | From Firms. | From other Sources. | Total. |  |
|  | £ | £ | £ | £ | £ | £ | £ |
| 1924 | 60,768 | 60,768 | 60,183 | 584 | 5,401 | 187,704 | 186,159 |
| 1925 | 60,768 | 60,768 | 60,093 | 675 | 5,154 | 187,458 | 196,672 |
| 1926 | 72,676 | 72,676 | 71,807 | 869 | 6,293 | 224,321 | 223,568 |
| 1927 | 59,193 | 59,193 | 116,226 | 2,160 | 7,311 | 244,083 | 240,072 |
| 1928 | 73,904 | 73,904 | 144,018 | 3,790 | 5,896 | 301,512 | 307,762 |

2. Victoria.-(i) General. The Fire Brigades Act of 1915 provides for a Metropolitan Fire Brigades Board, and a Country Fire Brigades Board, each consisting of nine members, with local committees in country districts. The income of each board is derived in equal proportions from the Treasury, the municipalities, and insurance companies.
(ii) Metropolitan Fire Brigade Board. (a) Plant, etc. On the 30th June, 1928, the Board had under its control 41 stations, 291 permanent men, 170 partially-paid firemen, 78 special service firemen, 66 men engaged in the workshops, 15 in the tailoring department and 9 clerks, I motor-drawn steam fire engine, 7 petrol motor fire engines, 40 combination hose carriages and pumps, 4 petrol motor combination appliances, 2 petrol motor salvage vans, 3 special service vans, 4 motor cycles, 11 petrol motor hose wagons, 1 petrol delivery wagon, 3 motor lorries, 1 chief officer's car, 1 deputy chief officer's car, 12 inspection and instructional cars, 16 hand hose reels, 3 extension ladders and fire escapes, 4 Pompier ladders, 44 hand pumps, 12 smoke helmets, 1 smoke jacket, 114,741 feet of hose.

The electrical equipment of the brigade now consists of 1,541 fire alarm call boxes, of which 391 are directly connected to public and other buildings, together with 1,228 anxiliary fire alarms, and the remaining 1,150 are street alarms. The number of street fire alarm circuits is 490 . In addition there are 273 sprinkler alarm installations connected by 144 circuits directly to the Brigade, and 34 buildings are protected by automatic fire alarm circuits. The total number of watchman's recording and detector clocks installed in Melbourne is now 109.
(b) Finances. The following table gives particulars for each year from 1923-24 to 1927-28 inclusive :-

METROPOLITAN FIRE BRIGADES BOARD, VICTORIA.-FINANCES, 1924 T0 1928.


Expenditure.

|  |  |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Salaries | $\ldots$ | $\ldots$ | 85,477 | 100,651 | 104,215 | 108,787 | 118,615 |
| Interest and sinking fund | $\ldots$ | 10,821 | 11,682 | 12,982 | 15,210 | 16,314 |  |
| Other expenditure | $\ldots$ | 59,172 | 68,880 | 80,277 | 85,928 | 93,101 |  |
| Total | $\ldots$ |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

(iii) Country Fire Brigades Board. (a) Plant, etc. At 30th June, 1928, there were 117 municipal councils and 106 insurance companies included in the operations of the Act. The brigades are composed chiefly of volunteers, but in the large centres a few permanent station-keepers and partially-paid firemen are employed. Complete fire alarm systems are installed in 27 of the larger provincial cities and townships. There were 147 registered brigades and 2,687 registered firemen at 30 th June, 1928. The equipment included 31 motor pumps, 27 motor tenders, 2 steam fire engines, and numerous manual engines and hose reels.
(b) Revenue and Expenditure. Revenue and expenditure for the years 1924 to 1928 (30th June) are given below :-

COUNTRY FIRE BRIGADES BOARD, VICTORIA.-REVENUE AND EXPENDITURE, 1924 TO 1928.

| Particulars. |  | 1924 (Six <br> Months to <br> 30th June). | 1925. | 1926. | 1027. | 1928. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Revenue |  | $\stackrel{f}{16,907}$ | $\stackrel{£}{25,133}$ | $\stackrel{£}{29,733}$ | $\stackrel{\text { ¢ }}{\text { ¢1,139 }}$ | $\stackrel{£}{33,326}$ |
| Expenditure |  | 16,432 | 23,684 | 31,113 | 29,948 | 33,309 |

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

- (ii) Fire Brigades Boards. (a) Plant, etc. At the end of the year 1927 there were fire brigades in 30 towns, with a total strength of 148 permanent men, 279 partly paid, and 97 volunteers. The plant included 45 motor, 3 steam, and 7 manual fire engines, 54 hose reels, consisting of 22 motor, 3 horse, and 29 hand reels, and 113,154 feet of hose. The total number of call points was 728. The Metropolitan Fire Brigade protects an area of 32 square miles and has a staff of 149 men . There are 199 fire alarm circuits, 311 street fire alarms, 15 private coded alarms not available to public, 69 automatic thermostats, 35 sprinkler installations, 12 push button alarms, and 19 direct telephone alarms.
(b) Revenue and Expenditure. The following table gives details for the years 1923 to 1927:-

FIRE BRIGADE BOARDS, QUEENSLAND.-REVENUE AND EXPENDITURE, 1923 TO 1927.

| Year. | Revenue. |  |  |  | Expenditure. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Trom Government. | From Local Authorities. | From Insurance Companies. | Total. | Salaries and Wages. | Buildings, Repairs, etc. | Plant, Stores, etc. | Total. |
|  | $\boldsymbol{f}$ | £ | £ | £ | £ | £ | £ | £ |
| 1923 | 16,054 | 15,094 | 22,455 | 64,190 | 35,803 | 12,336 | 10,166 | 64,597 |
| 1924 | 17,140 | 16,347 | 24,489 | 61,212 | 40,032 | 3,344 | 10,081 | 65,183 |
| 1925 | 18,485 | 18,597 | 27,928 | 73,295 | 41,280 | 3,970 | 11,461 | 71,330 |
| 1926 | 19,454 | 19,196 | 30,289 | 93,657 | 47,283 | 25,828 | 11,047 | 97,032 |
| 1927 | 20,768 | 21,069 | 30,990 | 90,995 | 50,035 | 17,846 | 10,194 | 93,590 |

4. South Australia.-(i) General. The Fire Brigades Act of 1913 and amendments provide for a Board of five members, and the expenses and maintenance of brigades are defrayed as to two-ninths by the Treasury, five-ninths by insurance companies, and two-ninths by the municipalities concerned.
(ii) Fire Brigades Board. (a) Plant, etc. At the end of 1928 there were altogether 26 fire brigade stations. The strength of the brigades consists of 112 permanent firemen and 99 auxiliary firemen. The plant consists of 1 steam fire engine, 12 motor engines, 18 motor hose carriages, 52,860 feet of hose, one $90-\mathrm{ft}$. turntable escape ladder, 2 telescopic curricle ladders, 2 fire escapes and petrol-driven fire float. There are 331 fire alarm circuits, 17 automatic systems, and 38 sprinkler installations.
(b) Revenue and Expenditure. The following table shows the revenue of the Board for the years 1924 to 1928 , the expenditure in each year being the same :-

5. Western Australia.-(i) General. Under the 1916 Act every municipal or road board district is constituted a fire district under the control of the Western Australian Fire Brigades Board. The income of the Board is derived as to two-eighths from Government, three-eighths from municipalities, and three-eighths from insurance companies.
(ii) Western Australian Fire Brigades Board. (a) Plant, etc. The whole of the brigades throughout the State are now controlled by the Western Australian Fire Brigades Board, and number 41. The staff at the 30th September, 1928, included a chief officer, deputy chief officer, third officer, district officer, motor engineer, electrical engineer, 12 other officers, 102 permanent, 16 partially-paid, and 480 volunteer firemen. The plant comprised 5 steam and 18 motor engines, 18 motor hose carriages, 35 reels, and 75,200 feet of hose. There are 353 private fire alarm circuits, 534 street fire alarms, 6 automatic systems, and 35 sprinkler installations.
(b) Finances. The following table gives details for the years 1924 to 1928 :-

WESTERN AUSTRALIAN FIRE BRIGADES BOARD.-FINANCES, 1924 T0 1928.

| Year ended 31st December- |  | Revenue. | Expenditure. | Estimated Value. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Land and Buildings. |  | Plant. |
|  |  |  | £ | £ | £ | £ |
| 1924 | $\cdots \quad .$. | 38,720 | 38,621 | 48,650 | 28,000 |
| 1925 | . . . | 50,341 | 46,539 | 60,440 | 29,590 |
| 1926 | . | (a) 36,314 | (a)37,990 | 65,700 | 32,200 |
| 1926-27 (b) | $\cdots$ | 50,468 | 50,997 | 66,000 | 33,000 |
| 1927-28 (b) | . | 55,048 | 54,021 | 68,600 | 36,900 |

(a) Nine months only.
(b) Year ended 30th September.
6. Tasmania.-(i) General. The municipal council of any municipality may, under the Act of 1920, petition the Governor to proclaim the municipality or any portion of it to be a fire district, each district to have a Board of five members. The expenses of each Board are borne in equal proportions by contributions from the Treasurer, the municipality concerned, and insurance companies insuring property within the district.
(ii) Hobart Fire Brigade Board. (a) Plant, etc. At the end of 1928 the staff consisted of 13 permanent and 12 partially-paid firemen. There were at that date also 2 motor pumps, I ladder and water tower combination, 1 extension and 1 curricle ladder, 2 motor hose carriages, 3 horse and 3 hand reels, 2 Pompier ladders, and 10,750 feet of hose. There are 24 fire alarm circuits, 60 street alarms, 15 auxiliary boxes, 3 automatic systems, and 3 sprinkler installations.
(b) Revenue and Expenditure. The revenue for the years 1927 and 1928 amounted to $£ 6,440$ and $£ 6,468$ respectively, expenditure being the same.


[^0]:    * Excluding the area of operations of the Hunter District Water Supply and Sewerage Board.

[^1]:    (a) In addition to interest on loans, the following payments have been made for interest on overdraft:-Year 1926, £96 11s. 6d.; year 1927, £17,007 14s. 4d.; year 1928, £24,00811s. 1d. These amounts have not been included in the flgures quoted in the table.

