

1927.

VICTORIA.

STATE RIVERS AND WATER SUPPLY COMMISSION.

TWENTY-SECOND
ANNUAL REPORT.

1926-27.

PRESENTED TO BOTH HOUSES OF PARLIAMENT PURSUANT TO THE PROVISIONS OF
THE WATER ACTS.

APPROXIMATE COST OF REPORT.

Preparation (not given) ..											£ s. d.
Printing (275 copies) ..	..	..	..	..	..	..	..	..	..	..	<u>72 0 0</u>

By Authority:

H. J. GREEN, GOVERNMENT PRINTER, MELBOURNE.

No. [36.— 2s.].—12412.

STATE RIVERS AND WATER SUPPLY COMMISSION.

WM. CATTANACH, CHAIRMAN,

E. SHAW, COMMISSIONER,

R. H. HORSFIELD, COMMISSIONER.

During the portion of the year the Chairman was absent at the Pan Pacific Conference and elsewhere, Mr. George Laing, with the concurrence of the Government, acted as a Commissioner.

ANNUAL REPORT, 1926-27.

In compliance with the provisions of the Water Acts, the State Rivers and Water Supply Commission submits the following Report and Statement for the Financial Year 1926-27, and Estimates for the ensuing year.

WORKS UNDER CONTROL OF COMMISSION.

The following statement gives a brief description, summary of cost, and other particulars relative to the undermentioned works controlled by the Commission.

A.—FREE HEADWORKS.

DESCRIPTION OF WORKS.		Capital Debit at 30th June, 1927. Exclusive of cost of Loan Flotation.
1. Broken River Works :—Casey's Weir and offtake, with about 59 chains of channel to the Broken Creek; Gowangardie Weir with offtake sluice	£	14,853
2. Goulburn River Works :—Weir on the Goulburn River, about 9 miles above Murchison; channel therefrom, about 23½ miles, to Waranga Reservoir; and that Reservoir (but exclusive of the work of its enlargement)		739,552
3. Kerang North-West Lakes Works :—Weir on the Loddon River at its confluence with the Pyramid Creek; regulating weirs at the effluence from the Loddon of the Sheepwash and Washpen Creeks; channel from the Washpen Creek regulator to Reedy Lake, Middle Lake, Third Lake, Lake Charm, Race-course Lake, Cullen's Lake, Kangaroo Lake, and Lake Tutchewop, and to the Little Murray River, with water storage works at these lakes		21,657
4. Kow Swamp Works :—Intake from the Murray River with regulator, at the effluence of the Gunbower Creek; channel thence to the Kow Swamp Reservoir; and that Reservoir; channel along the northern side of the reservoir; channel from the outlet of the reservoir, about 23½ miles, to the left bank of the Loddon River		187,708
5. Lake Lonsdale Reservoir :—Reservoir at Lake Lonsdale, on the Little Wimmera River, near Ledcourt		49,054
6. Loddon River Works :—Laanecoorie Weir, on the Loddon; Bridgewater Weir, on the Loddon; Kinypanial Weir, on the Loddon		167,636
7. Long Lake Pumping Works :—Inlet to Lake Baker, from the Little Murray River; water storage works at Lake Baker and Long Lake, with channel connecting these lakes; pumping plant at Long Lake, with rising main thence about 7 miles to allotment 10M, parish of Kooem; system of main distributary channels, about 85 miles in length		27,346
8. Lower Wimmera Compensation Works :—Drung Drung Weir, on the Wimmera, near allotment 29, parish of Longerenong; Dimboola Weir, on the Wimmera, near Dimboola township; Antwerp Weir, on the Wimmera, at Antwerp Station homestead; Jeparit Weir, on the Wimmera, near Jeparit township		8,558
Total		1,216,364

B.—MAIN SUPPLY WORKS.

IRRIGATION AND WATER SUPPLY DISTRICTS, WATERWORKS DISTRICTS,
AND FLOOD PROTECTION DISTRICTS.

Cost Apportioned and to be Apportioned to Districts benefited.

Name of Work.	Capital Debit at 30th June, 1927.	Tentative Debits to Districts, 1926-27.	
Goulburn Main Channels (Free Headworks excluded)—	£	£	
1. East Goulburn Main	271,371	Rodney	120,000
2. Waranga Reservoir to Campaspe	317,579	Tragowel Plains	100,000
3. West of Campaspe	422,864	Rochester	74,000
4. Goulburn Main Channel Distributaries	255,386	Tongala	58,000
		Shepparton	57,000
		Deakin	24,000
		Echuca North	17,000
		Dingee	15,000
		Stanhope	15,000
		South Shepparton	9,000
	1,267,200		489,000
			1,267,200
Goulburn Storages—			
5. Sugarloaf Reservoir	1,379,696		
6. Waranga Reservoir Enlargement	598,062		
	1,977,758		1,977,758
Bacchus Marsh and Werribee Schemes—			
7. Ballan Tunnel	18,916	Werribee	8,000
8. Pykes Creek Reservoir	66,509	Bacchus Marsh	77,425
9. Melton Reservoir	85,150	Werribee	85,150
	170,575		170,575
Maffra-Sale Scheme—			
10. Glenmaggie Reservoir and Channels	907,410	Irrigation Districts to be debited later	907,410
Red Cliffs Scheme—			
11. Main and Distributary Channels	737,905	Irrigation District Progressing Debit	400,000
Millewa District—			
12. Main and Distributary Channels	370,881	Waterworks Districts to be debited later	370,881
Flood Protection Districts—			
13. Kooweerup and Cardinia	320,288	Lower Kooweerup and Cardinia	145,000
14. Goulburn Levees	58,554		
	378,842		378,842
Carried forward			7,026,935

WORKS UNDER CONTROL OF COMMISSION—*continued.*

Capital Debt
at 30th June,
1927,
Exclusive
of Cost of Loan
Flotation.

Brought forward

£
7,026,935

C.—IRRIGATION AND WATER SUPPLY DISTRICTS.

Distributary Works within Districts under the control of the Commission.

Name of District (Including Urban Divisions).	Total Capital Expenditure.	Capital Written Off by Acts 1625 and 1651.	Redemption Paid to Treasury.	Capital Debit at 30th June, 1927.
	£	£	£	£
1. Bacchus Marsh	92,072	8,906	493	82,673
2. Boort	79,295	35,259	1,794	42,242
3. Campaspe	64,536	52,685	305	11,546
4. Cohuna and Gannawarra ..	346,170	82,376	1,338	262,456
5. Deakin	90,930	34,748	2,144	54,038
6. Dingee	15,784	..	..	15,784
7. Dry Lake	1,704	686	299	719
8. Echuca North	21,410	..	..	21,410
9. Fish Point	13,104	..	..	13,104
10. Kerang	108,689	35,338	2,334	71,017
11. Koondrook	203,664	30,872	1,562	171,230
12. Leitchville	26,080	..	..	26,080
13. Merbein	205,908	..	133	205,775
14. Mystic Park	13,152	..	..	13,152
15. Nyah	102,288	..	..	102,288
16. Rochester	214,265	..	..	214,265
17. Rodney	575,999	149,949	8,967	417,083
18. Shepparton	125,278	..	476	124,802
19. South Shepparton	27,483	..	..	27,483
20. Stanhope	66,203	..	..	66,203
21. Swan Hill	156,904	19,799	371	136,734
22. Third Lake	23,582	..	..	23,582
23. Tongala	92,662	..	..	92,662
24. Tragowel Plains	290,204	124,534	527	165,143
25. Tresco	87,909	..	..	87,909
26. Werribee	94,769	..	10,242	84,527
	3,140,044	575,152	30,985	2,533,907

2,533,907

D.—WATERWORKS AND FLOOD PROTECTION DISTRICTS.

Distributary Works within Districts under the control of the Commission.

Name of District (Including Urban Districts).	Total Capital Expenditure.	Capital Written Off by Acts 1625 and 1651.	Redemption Paid to Treasury.	Capital Debt at 30th June, 1927
	£	£	£	£
1. Birchip	558,748	700	2,473	555,575
2. Sea Lake				
3. Tyrrell				
4. Wycheproof				
5. Carwarp	31,062	..	..	31,062
6. Coliban	1,388,458	..	..	1,388,458
7. Dandenong	33,818	5,128	1,506	27,184
8. Dering	6,073	..	..	6,073
9. Eureka	4,007	..	..	4,007
10. Karkaroc	168,717	..	2,893	165,824
11. Kerang North-West Lakes ..	1,879	..	..	1,879
12. Long Lake	90,278	..	957	89,321
13. Mornington Peninsula ..	556,713	..	..	556,713
14. Ouyen	17,257	..	..	17,257
15. Pyramid Hill	3,272	..	1,300	1,972
16. Tyntynder	200,264	..	50	200,214
17. Upper Western Wimmera ..	61,501	26,567	3,450	31,484
18. Upper Wimmera United ..	76,071	10,918	4,499	60,654
19. Walpeup East	4,899	..	..	4,899
20. Walpeup West	28,159	..	..	28,159
21. Werribee	11,592	..	..	11,592
22. Western Wimmera	245,403	106,268	13,198	125,937
23. Wimmera United	177,231	25,474	10,231	141,526
24. Wonthaggi	69,611	..	9,071	60,540
25. Yelta	5,050	..	..	5,050
26. Wimmera Main Channels	353,778	..	..	353,778
27. Wimmera Storages—				
Fyans Lake	42,901	..	..	42,901
Taylors Lake	203,958	..	..	203,958
Pine Lake	113,814	..	..	113,814
Lake Whitton	10,334	..	..	10,334
28. Echuca Flood Protection ..	1,168	..	..	1,168
	4,466,016	175,055	49,628	4,241,333

4,241,333

Carried forward 13,802,175

WORKS UNDER CONTROL OF COMMISSION— <i>continued.</i>					Capital Debt at 30th June, 1927, Exclusive of Cost of Loan Flotation.
Brought forward					£ 13,802,175
E.—WATERWORKS TRUSTS DISTRICTS.					
DISTRICTS HELD IN TRUST BY THE COMMISSION.					
Name of Trust.	Total Advances by State.	Capital Written Off by Acts 1625 and 1651.	Redemption Paid to Treasury.	Capital Debt at 30th June, 1927.	
	£	£	£	£	
1. Avoca Water Trust—					
Rural District	9,890	2,494	2,227	5,169	
Urban District (Quambatook)	4,250	..	514	3,736	
2. Carrum Waterworks Trust	45,696	7,732	3,680	34,284	
3. Loddon United Waterworks Trust—					
Rural District	22,876	1,717	5,657	15,502	
Urban District (Mitiamo)	4,348	..	106	4,242	
	87,060	11,943	12,184	62,933	
Grand Total					£ 13,802,175

LANDS SUPPLIED WITH WATER WITHIN THE STATE.

The area of country lands within the State artificially supplied with water for domestic and ordinary use and for watering stock is, approximately, 23,188 square miles, equal to about 14,840,000 acres.

The area under irrigated culture for all kinds of crops was 406,532 acres, the largest yet recorded, being an increase of 62,847 acres over the area irrigated in the previous year, and 70,056 acres above the average of the previous five years. The area irrigated last year includes upwards of 17,000 acres watered under yearly permits granting authority to divert water from streams throughout the State.

The number of separate towns supplied, exclusive of the City of Melbourne and its suburbs, is as shown in the following statement :—

Controlling Authorities.	Number of Towns Supplied.	Estimated Population Served.
Commission	79	113,060
Waterworks Trusts	108	182,800
Local Governing Bodies	18	73,720
Totals	205	369,580

LANDS UNDER IRRIGATED CULTURE.

The two Statements hereunder show the extent of Areas Irrigated—(A) during last year in detail, and (B) during the last five years totalled for purposes of comparison.

(A) STATEMENT OF THE EXTENT OF IRRIGATION AND OF AREAS OF DIFFERENT KINDS OF CROPS WATERED—YEAR 1926-27.

Name of District.	Area Irrigated (Acres).							
	Cereals.	Lucerne grown for Pasture and Hay.	Sorghum and other Annual Fodder Crops.	Pastures.	Vineyards, Orchards, and Gardens.	Fallow.	Miscellaneous.	Total.
<i>Supplied from Goulburn State Works.</i>								
North Shepparton	500	800	..	250	60	..	..	1,610
Shepparton	240	2,520	760	1,526	9,160	170	80	14,456
South Shepparton	210	700	220	1,120	..	150	..	2,400
Rodney	617	31,177	265	12,117	8,453	1,074	439	54,142
Stanhope	260	9,623	268	362	326	140	14	10,993
Tongala	531	11,830	558	1,931	1,741	297	6	16,894
Rochester	460	24,607	1,404	8,449	2,230	319	383	37,852
Echuca North	8	1,469	348	2,368	1	252	109	4,555
Dingee	213	2,176	92	982	48	..	..	3,511
Tragowel Plains	10,820	728	5,097	28,687	17	585	484	46,418
Deakin	28	357	1	124	..	62	..	572
Boort	3,108	125	1,770	7,276	15	730	32	13,056
Totals	16,995	86,112	10,783	65,192	22,051	3,779	1,547	206,459
<i>Supplied from River Murray State Works.</i>								
<i>(a) Torrumbarry Weir.</i>								
Leitchville	560	1,882	457	1,302	..	177	20	4,398
Cohuna	1,407	8,928	1,855	4,600	127	377	1,536	18,830
Gannawarra	2,974	1,454	3,098	10,761	54	1,202	..	19,543
Koondrook	3,312	1,337	2,144	8,726	698	..	21	16,238
Swan Hill	3,694	3,984	1,428	4,805	3,357	357	49	17,674
Third Lake	691	101	184	1,531	2	..	..	2,509
Mystic Park	100	180	50	1,000	5	200	..	1,535
Tresco .. .. .	..	10	..	..	1,394	..	..	1,404
Fish Point	141	132	123	807	11	..	..	1,214
Kerang	4,885	864	3,355	18,652	12	593	33	28,394
Dry Lake	15	..	..	100	2	..	..	117
Kerang North-West Lakes	1,104	187	357	2,400	480	..	8	4,536
Lands supplied direct (outside Districts)	489	1,851	231	2,250	18	5	..	4,844
Totals	19,372	20,910	13,282	56,934	6,160	2,911	1,667	121,236
<i>(b) Direct from River.</i>								
Nyah	13	25	24	..	2,652	..	..	2,714
Red Cliffs .. .. .	..	25	..	..	8,750	..	..	8,775
Merbein .. .. .	..	30	6	..	7,468	..	27	7,531
Totals	13	80	30	..	18,870	..	27	19,020
Totals (River Murray State Works)	19,385	20,990	13,312	56,934	25,030	2,911	1,694	140,256
<i>Supplied from Loddon and Other Northern State Works.</i>								
Boort	777	31	443	1,819	4	183	8	3,265
Coliban	344	461	270	1,207	4,298	294	169	7,043
Campaspe	156	177	68	12	..	2	8	423
Western Wimmera	3	37	72	15	1,347	..	..	1,474
Totals	1,280	706	853	3,053	5,649	479	185	12,205
<i>Supplied from Southern State Works.</i>								
Bacchus Marsh	98	1,705	122	567	228	197	..	2,917
Werribee	200	5,400	40	550	215	30	500	6,935
Narre Warren .. .. .	..	..	..	..	309	..	..	309
Maffra	247	1,293	1,051	1,672	..	1,156	1,314	6,733
Totals	545	8,398	1,213	2,789	752	1,383	1,814	16,894
<i>Supplied from other Works.</i>								
First Mildura District .. .. .	..	165	148	..	11,440	..	261	12,014
Private Diversions—Kerang (Outside Districts)	180	110	217	1,097	10	..	..	1,614
Other Private Diversions throughout the State	2,270	3,240	2,950	2,660	4,110	1,440	420	17,090
Totals	2,450	3,515	3,315	3,757	15,560	1,440	681	30,718
Grand Totals, 1926-27	40,655	119,721	29,476	131,725	69,042	9,992	5,921	406,532
Grand Totals, 1925-26	57,987	116,753	37,340	51,345	69,108	5,102	6,050	343,685

(B) COMPARATIVE STATEMENT OF THE EXTENT OF IRRIGATION, 1922-23 TO 1926-27.

	Area under Irrigation (Acres).				
	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.
Goulburn State Works	166,022	144,131	179,720	175,313	206,459
River Murray State Works	112,656	112,829	135,470	112,775	140,256
Loddon and other Northern State Works	31,158	31,050	19,258	14,882	12,205
Southern State Works	7,885	8,193	8,560	10,593	16,894
Mildura and Private Diversions	33,006	28,355	32,495	30,122	30,718
Totals	350,727	324,558	375,503	343,685	406,532

VALUATIONS, RATES, FLOOD PROTECTION CHARGES, AND COMPULSORY IRRIGATION CHARGES.

The statements which follow set forth the whole of the districts supplied by the Commission with water for domestic and ordinary use and for watering cattle or other stock, together with the annual value of the lands and tenements in such districts, and the rates, flood protection charges, and compulsory irrigation charges made in all districts. An estimate of the number of persons dwelling in such districts is also appended.

During the year rates were, for the first time, made in the new Urban Waterworks Districts of Chillingollah, Lalbert, Marnoo, Nandaly, and Waitchie, and for a half-year in the Urban Districts of Hastings and Woorinen; rates were also made for the first time in the Fish Point and Maffra Irrigation Districts; while in the Dering and Narre Warren Waterworks Districts rates were also, for the first time, made.

In the Leitchville, South Shepparton, and Third Lake Irrigation and Water Supply Districts compulsory irrigation charges were also, for the first time, levied. The Waterworks District of Tyrrell was subdivided into the Tyrrell and Dering Waterworks Districts.

In thirty districts the lands were, for the purpose of making and levying rates, arranged in divisions (not more than three in number), in accordance with the relative benefits derived by such lands from the works. The Lower Kooweerup and Cardinia Flood Protection Districts, where the charging is on an acreage basis, were similarly divided into three divisions. As heretofore on the urban portion of the Coliban system, a minimum and tapering rate has been made, while the Carrum Waterworks Trust District has, as in past years, been arranged in five rating divisions in accordance with the relative benefits derived by such lands from the works.

Under the powers conferred by Section 5 of the *Water Act* 1916, a minimum annual rate on the basis of £10 13s. 4d. per 640 acres was fixed by the Commission on the first division lands of the Birchip, Carwarp, Karkaroc, Long Lake, Sea Lake, Tyntynder, Tyrrell, Upper Western Wimmera, Upper Wimmera United, Western Wimmera, Wimmera United, Wycheproof, and Yelta Waterworks Districts, while in the Carwarp Central District the minimum was fixed at £16 per 640 acres, in Eureka District at £18 13s. 4d. per 640 acres, in Dering and Lower Millewa Districts at £21 6s. 8d. per 640 acres, and in the Walpeup West Waterworks District at £3 6s. 8d. per 640 acres.

In twenty-one districts the Commission made and levied compulsory irrigation charges, while in five Flood Protection Districts and in five Waterworks Trusts Districts taken over by the Commission a rate or charge was also made. Details of all rates and charges made are set out hereunder:—

A.—VALUATIONS, RATES, AND FLOOD PROTECTION CHARGES.

Districts Supplied with Water for Domestic and Ordinary Use and for Watering Cattle or other Stock.	Annual Value of Lands and Tenements.	Rate in the £1 made during Year ended 30th June, 1927.	Period of Rate.	Estimated Number of Persons dwelling in District.
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IRRIGATION AND WATER SUPPLY DISTRICTS.

	Valuation by Commission. £	Divisions.				
		1st.	2nd.	3rd.		
		s. d.	s. d.	s. d.		
1. BACCHUS MARSH ..	15,006	1 0	..	..	1st July, 1926, to 30th June, 1927	792
2. BOORT ..	18,035	2 0	1 0	..	" " "	1,100
3. CAMPASPE ..	11,190	2 0	1 0	0 6	" " "	576
4. COHUNA ..	20,639	2 0	1 0	..	" " "	1,187
5. DEAKIN ..	56,545	1 8	0 10	0 5	" " "	1,900
6. DINGEE ..	3,543	1 0	..	..	" " "	200
7. DRY LAKE ..	250	(No rate made)			" " "	11
8. ECHUCA NORTH ..	5,655	1 0	0 6	..	1st July, 1926, to 30th June, 1927	556
9. FISH POINT ..	1,562	1 0	..	..	" " "	150
10. GANNAWARRA ..	18,156	2 0	1 0	..	" " "	590
11. KERANG ..	22,101	2 4	1 2	0 7	" " "	1,060
12. KOONDROOK ..	20,622	2 0	1 0	..	" " "	1,200
13. LEITCHVILLE ..	6,500	2 0	..	..	" " "	250
14. MAFFRA ..	10,869	1 0	..	..	" " "	304
15. MERBEIN ..	26,462	1 0	..	..	" " "	3,500
16. MYSTIC PARK ..	4,622	1 0	..	..	" " "	125
17. NYAH ..	5,842	1 0	..	..	" " "	1,000
18. ROCHESTER ..	64,020	1 0	0 6	0 3	" " "	3,976
19. RODNEY ..	144,809	1 0	0 6	0 3	" " "	5,525
20. SHEPPARTON ..	34,295	1 0	..	..	" " "	2,220
21. SOUTH SHEPPARTON ..	6,379	1 0	..	..	" " "	170
22. STANHOPE ..	15,085	1 0	..	..	" " "	760
23. SWAN HILL ..	28,320	1 0	..	..	" " "	1,290
24. THIRD LAKE ..	2,586	2 0	..	..	" " "	150
25. TONGALA ..	25,627	1 0	..	..	" " "	2,150
26. TRAGOWEL PLAINS ..	39,362	1 0	0 6	..	" " "	1,650
27. WERRIBEE ..	17,401	1 0	..	..	" " "	665

WATERWORKS DISTRICTS.

28. AXE CREEK ..	1,628	2 0	..	..	1st July, 1926, to 30th June, 1927	250
29. BIRCHIP ..	40,419	2 4	1 2	0 7	" " "	2,600
30. CARWARP ..	9,397	3 10	1 11	0 11½	" " "	770
31. CARWARP CENTRAL ..	1,119	5 0	2 6	..	" " "	230
32. DERING ..	2,437	6 0	3 0	1 6	" " "	200
33. EUREKA ..	1,597	4 0	2 0	1 0	" " "	105
34. HARCOURT ..	7,043	1 6	..	..	" " "	600

A.—VALUATIONS, RATES, AND FLOOD PROTECTION CHARGES—continued.

Districts Supplied with Water for Domestic and Ordinary Use and for Watering Cattle or other Stock.	Annual Value of Lands and Tenements.	Rate in the £1 made during year ended 30th June, 1927.			Period of Rate.	Estimated Number of Persons dwelling in District.
WATERWORKS DISTRICTS—continued.						
	Valuation by Commission.	Divisions.				
		1st.	2nd.	3rd.		
		£	s. d.	s. d.		
35. KARKAROOC	115,925	2 2	1 1	0 6½	1st July, 1926, to 30th June, 1927	4,000
36. KERANG N.W. LAKES	6,604	0 6	" " "	550
37. LONG LAKE	67,760	2 10	1 5	0 8½	" " "	1,900
38. LOWER MILLEWA ..	12,680	5 0	2 6	1 3	" " "	2,000
39. NARRE WARREN ..	1,104	1 0	" " "	85
40. SEA LAKE	66,939	2 8	1 4	0 8	" " "	2,350
41. TYNTYNDER	54,247	3 4	1 8	0 10	" " "	3,200
42. TYRRELL	80,758	3 4	1 8	0 10	" " "	4,600
43. UPPER WEST'N WIMMERA	64,970	1 6	0 9	0 4½	" " "	1,660
44. UPPER WIMMERA UNITED	94,704	1 6	0 9	0 4½	" " "	2,200
45. WALPEUP EAST ..	26,276	0 9	0 4½	..	" " "	1,550
46. WALPEUP WEST ..	76,138	0 7	0 3½	..	" " "	3,600
47. WERRIBEE	6,747	2 0	" " "	140
48. WESTERN WIMMERA ..	305,691	1 2	0 7	0 3½	" " "	8,975
49. WIMMERA UNITED ..	279,845	1 2	0 7	0 3½	" " "	6,600
50. WYCHEPROOF	67,672	2 4	1 2	0 7	" " "	2,500
51. YELTA	2,140	3 4	" " "	150
URBAN DIVISIONS AND DISTRICTS.						
	Municipal Valuation.					
	£		s. d.			
52. BACCHUS MARSH ..	14,386	..	1 6	1st July, 1926, to 30th June, 1927	1,830	
53. BERRIWILLOCK ..	1,619	..	3 6	" " "	160	
54. BERWICK	3,670	..	2 0	" " "	650	
55. BEULAH	4,191	..	2 3	" " "	575	
56. BIRCHIP	5,763	..	2 0	" " "	955	
57. BITTERN	268	..	3 0	" " "	70	
58. BRIM	1,369	..	4 0	" " "	240	
59. CARRUM	68,059	..	1 4	" " "	6,300	
60. CHILLINGOLLAH ..	417	..	5 0	" " "	80	
61. COHUNA	8,969	..	1 9	" " "	790	
62. COROP	290	..	2 0	" " "	90	
63. CRANBOURNE ..	2,370	..	2 0	" " "	230	
64. CULGOA	1,353	..	3 6	" " "	155	
65. DANDENONG	50,536	..	1 3	" " "	4,200	
66. DIMBOOLA	13,459	..	1 6	" " "	1,525	
67. DINGEE	497	..	4 0	" " "	90	
68. FRANKSTON	39,813	..	1 4	" " "	4,750	
69. HASTINGS	1,784	..	1 6	1st Jan., 1927, to 30th June, 1927	325	
70. HOPETOUN	5,118	..	2 3	1st July, 1926, to 30th June, 1927	575	
71. JEPARIT	7,731	..	1 9	" " "	810	
72. JUNG JUNG	896	..	3 0	" " "	150	
73. KOONDRICK	3,501	..	2 6	" " "	475	
74. LAKE BOGA	2,282	..	3 0	" " "	350	
75. LALBERT	989	..	5 0	" " "	150	
76. LASCELLES	930	..	3 6	" " "	130	
77. LEITCHVILLE ..	1,854	..	3 0	" " "	208	
78. LOCKINGTON ..	1,261	..	3 6	" " "	216	
79. MANANGATANG ..	2,200	..	3 6	" " "	185	
80. MARNOO	1,714	..	3 6	" " "	300	
81. MERBEIN	5,905	..	3 6	" " "	700	
82. MINYIP	5,062	..	3 0	" " "	800	
83. MORNINGTON ..	29,193	..	1 6	" " "	1,985	
84. NANDALY	301	..	6 0	" " "	100	
85. NATIMUK	3,729	..	1 6	" " "	570	
86. NYAH	805	..	2 6	" " "	170	
87. NYAH WEST	4,945	..	2 9	" " "	270	
88. OUYEN	9,642	..	2 6	" " "	850	
89. PIANGIL	1,874	..	4 0	" " "	200	
90. PYRAMID HILL ..	2,557	..	3 0	" " "	530	
91. RAINBOW	9,384	..	1 9	" " "	920	
92. REDCLIFFS	5,617	..	4 0	" " "	720	
93. RUPANYUP	4,909	..	3 0	" " "	700	
94. SEA LAKE	6,501	..	2 3	" " "	595	
95. SOMERVILLE	1,502	..	2 6	" " "	255	
96. SOUTH FRANKSTON ..	6,843	..	2 9	" " "	345	
97. SPRINGVALE	17,922	..	1 6	" " "	1,500	
98. STANHOPE	756	..	4 0	" " "	255	
99. ULTIMA	3,329	..	3 0	" " "	375	
100. WAITCHIE	400	..	5 0	" " "	80	
101. WATCHEM	2,129	..	3 0	" " "	250	
102. WERRIBEE	17,405	..	1 6	" " "	1,470	
103. WONTHAGGI	33,319	..	1 6	" " "	8,000	
104. WOOMELANG	2,464	..	2 9	" " "	420	
105. WOORINEN	502	..	2 0	1st Jan., 1927, to 30th June, 1927	50	
106. WYCHEPROOF	7,689	..	2 0	1st July, 1926, to 30th June, 1927	775	

A.—VALUATIONS, RATES, AND FLOOD PROTECTION CHARGES—*continued.*

Districts Supplied with Water for Domestic and Ordinary Use and for Watering Cattle or other Stock.	Annual Value of Lands and Tenements.	Rate in the £1 made during year ended 30th June, 1927.	Period of Rate.	Estimated Number of Persons dwelling in District.
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COLIBAN SYSTEM.

	Municipal Valuation. £	s. d.		
107. COLIBAN	364,637	On Valuations up to £300 .. 1 6 (Minimum 20s.) From £301 up to £700 .. 1 3 From £701 on 1 0 Vacant lands .. 1 6	1st July, 1926, to 30th June, 1927	61,000

WATERWORKS TRUSTS.

	Municipal Valuation. £	s. d.		
108. AVOCA	40,012	.. .. 0 4½	1st January, 1927, to 31st December, 1927	1,340
109. MITIAMO (URBAN) ..	926	.. .. 4 0	" " "	190
110. QUAMBATOOK (URBAN)	3,311	.. .. 2 9	" " "	320
111. CARRUM	28,804	1st Division .. 3 8 2nd Division .. 1 10 3rd Division .. 1 0 4th Division .. 0 10 5th Division .. 0 3	" " "	1,500
	Valuation by Commission. £			
112. LODDON UNITED ..	117,660	1st Division .. 0 8 2nd Division .. 0 4 3rd Division .. 0 2	" " "	3,700

FLOOD PROTECTION DISTRICTS.

	Valuation by Commission. £	s. d.		
113. ECHUCA (HIGH-ST.)	1,454	.. .. 2 0	1st July, 1926, to 30th June, 1927	80
114. CARDINIA ..	35,299	1st Div. (p.ac.) 3 0 2nd Div. (p.ac.) 1 6 3rd Div. (p.ac.) 0 9	" " "	900
115. LOWER KOOWEERUP }	54,834	1st Div. (p.ac.) 2 0 2nd Div. (p.ac.) 1 0 3rd Div. (p.ac.) 0 6	" " "	2,600
116. KANYAPELLA ..	14,494	1st Div. (p.ac.) 0 7 2nd Div. (p.ac.) 0 3½	" " "	68
117. LOCH GARRY ..	40,886	Per acre .. 0 6	" " "	230

B.—COMPULSORY IRRIGATION CHARGES.

Irrigation and Water Supply District.	Area of District in Acres.	Area at present Irrigable in Acres.	Water Rights apportioned (including Extra Rights) in Acre-feet.	Compulsory Charge per Acre-foot of Water Right.	Period of Charge.
1. BACCHUS MARSH ..	6,684	3,360	3,360	22s. 6d.	1st October, 1926, to 30th April, 1927
2. COHUNA ..	34,692	22,286	22,369	6s.	1st September, 1926, to 30th April, 1927
3. DINGEE ..	6,270	4,628	4,628	7s.	" " " "
4. ECHUCA NORTH ..	13,544	5,547	5,547	7s. 6d.	" " " "
5. GANNAWARRA ..	52,625	20,226	20,276	6s.	" " " "
6. KOONDROOK ..	61,117	18,830	18,830	6s.	" " " "
7. LEITCHVILLE ..	9,816	8,047	2,689	7s.	" " " "
8. MERBEIN ..	8,388	7,845	19,511	24s.	1st August, 1926, to 30th April, 1927
				Min. 60s. per acre	
9. MYSTIC PARK ..	18,182	9,112	3,036	6s.	1st September, 1926, to 30th April, 1927
10. NYAH ..	3,678	3,082	7,647	20s.	1st August, 1926, to 30th April, 1927
				Min. 50s. per acre	
11. ROCHESTER ..	160,614	50,421	50,559	6s.	1st September, 1926, to 30th April, 1927
12. RODNEY ..	267,638	188,964	52,419	6s.	" " " "
13. SHEPPARTON ..	24,681	21,410	21,410	6s.	" " " "
14. SOUTH SHEPPARTON	13,902	11,405	2,871	8s.	" " " "
15. STANHOPE ..	26,007	18,929	17,675	6s.	" " " "
16. SWAN HILL ..	35,414	20,097	20,097	6s.	" " " "
17. THIRD LAKE ..	13,120	4,397	2,932	7s.	" " " "
18. TONGALA ..	37,559	27,574	24,583	6s.	" " " "
19. TRAGOWEL PLAINS	188,655	134,068	26,870	7s.	" " " "
20. TRESKO ..	3,882	2,680	6,700	16s.	1st January, 1926, to 31st Dec., 1926
				Min. 40s. per acre	
21. WERRIBEE ..	9,983	7,895	7,917	12s.	1st October, 1926, to 30th April, 1927

CONTRACTS.

STATEMENT OF CONTRACTS ENTERED INTO DURING THE YEAR ENDED 30TH JUNE, 1927.

No.	Name of Contractor.	Work or Supply.	Amount (Loan and Vote).
			£ s. d.
2379	Mephan Ferguson Pty. Ltd. ..	Mild Steel Pipes, Lower Millewa ..	7,777 15 0
2380	Australian Cement Ltd. ..	90,000 bags cement ..	23,250 0 0
2381	Thompsons Engineering & Pipe Co. ..	Erection Pumping Plant, Lower Millewa ..	6,426 2 6
2382	F. Finteln ..	Firewood, Merbein ..	1,150 0 0
2383	T. Riordan ..	Firewood, Merbein ..	1,125 0 0
2384	J. Dorman ..	Firewood, Merbein ..	1,228 0 5
2385	F. Johnson ..	Firewood, Merbein ..	1,100 0 0
2386	C. S. Parker ..	Firewood, Merbein ..	1,762 10 0
2387	F. Russell ..	Firewood, Merbein ..	1,489 12 2
2388	W. Russell ..	Firewood, Merbein ..	2,381 5 0
2389	B. Hennessy ..	Firewood, Merbein ..	281 15 0
2390	H. A. Fogarty ..	Firewood, Tresco ..	325 0 0
2391	P. O'Halloran ..	Firewood, Nyah ..	429 13 6
2392	P. M. Mannix ..	Firewood, Nyah ..	431 7 6
2393	G. C. Holm ..	Nullawil Earthen Storage ..	619 7 6
2394	G. Tucknott ..	Murphy Loop Channel ..	144 15 9
2395	C. Tucknott ..	Murphy Loop Channel ..	131 6 9
2396	N. W. Friberg ..	Erection Cottage, Cohuna ..	89 0 0
2397	H. L. Walter ..	Erection House, Tatura ..	85 0 0
2398	Murphy Bros. ..	Woorinen Earthen Storage ..	550 5 0
2399	J. Mannix ..	Firewood, Nyah ..	1,105 11 3
2400	I. J. Shields ..	Firewood, Merbein ..	1,170 16 8
2401	H. C. Young ..	Erection Two Houses, Rochester ..	140 0 0
2402	Australian Cement Ltd. ..	80,000 bags Cement ..	20,666 13 4
2403	National Portland Cement Ltd. ..	10,000 bags Cement ..	2,752 6 4
2404	Hume Pipe Co. (Aust) Ltd. ..	Reinforced Concrete Pipes, Castlemaine ..	275 11 0
2405	Australian Wood Pipe Co. ..	Wood Stave Pipes, Bendigo ..	811 19 11
2406	G. Wakefield ..	Firewood, Merbein ..	900 0 0
2407	R. Angove ..	Firewood, Nyah ..	439 8 0
2408	C. L. McCrohan ..	Congupna No. 3 Channel ..	203 5 0
2409	C. L. McCrohan ..	Congupna No. 3 Channel ..	228 15 5
2410	W. P. Smith ..	Congupna No. 3 Channel ..	220 10 1
2411	W. P. Smith ..	Congupna No. 3 Channel ..	205 11 2
2412	A. D. Allender ..	Congupna No. 3 Channel ..	183 8 9
2413	C. Fraser ..	Congupna No. 3 Channel ..	224 2 4
2414	Mooney & Abrahams ..	Congupna No. 3 Channel ..	281 2 0
2415	C. Fraser ..	Congupna No. 3 Channel ..	249 1 4
2416	Mooney & Abrahams ..	Congupna No. 3 Channel ..	220 15 3
2417	E. Sims ..	Congupna No. 3 Channel ..	187 18 11
2418	E. Sims ..	Congupna No. 3 Channel ..	204 18 1
2419	E. Sims ..	Congupna No. 3 Channel ..	218 15 11
2420	J. Powrie ..	Congupna No. 3 Channel ..	240 10 0
2421	J. Powrie ..	Congupna No. 3 Channel ..	221 1 5
2422	G. Baldi ..	Sternberg Channel, Rodney ..	330 17 4
2423	W. P. Smith ..	Sternberg Channel, Rodney ..	274 5 5
2424	J. Vearing ..	Sternberg Channel, Rodney ..	346 1 6
2425	Australian Wood Pipe Co. ..	Wood Stave Pipes, Bendigo ..	732 18 9
2426	J. James ..	Erection Cottage, Werribee ..	88 10 0
2427	A. J. Bell ..	Firewood, Nyah ..	1,125 0 0
2428	Perry Engineering Co. ..	Four Steam Locomotives, Hume Reservoir ..	10,680 0 0
2429	Perry Engineering Co. ..	24 Steel Trestles, Mildura Weir ..	12,336 0 0
2430	James Dryden ..	Katandra No. 3 Channel ..	98 5 0
2431	James Dryden ..	Katandra No. 3 Channel ..	96 19 0
		Carried forward ..	108,238 15 3

STATEMENT OF CONTRACTS—*continued.*

No.	Name of Contractor.	Work or Supply.	Amount (Loan and Vote).
			£ s. d.
		Brought forward	108,238 15 3
2432	D. Friar	Katandra No. 3 Channel	198 5 4
2433	National Portland Cement Ltd. ..	500 tons Cement	2,477 1 8
2434	Australian Cement Ltd. ..	3,500 tons Cement	16,275 0 0
2435	Mooney & Abrahams	Katandra No. 3 Channel	76 16 9
2436	John Danks & Son Pty. Ltd. ..	C.I. Pipes & Fittings, Wonthaggi	2,328 18 6
2437	Graham Campbell Ferrum Co. ..	C.I. Pipes & Fittings, Wonthaggi	427 19 0
2438	John Danks & Son Pty. Ltd. ..	G.W.I. Pipes & Fittings, Wonthaggi	506 2 8
2439	A. J. Moyle	Cartage Pipes & Fittings, Wonthaggi	28 0 0
2440	Gannon & Dennis	Excavation Pipe Trenches, Wonthaggi	534 9 4
2441	F. Williamson	Laying & Jointing Pipes, Wonthaggi	192 11 11
2442	Powney & Moore	Congupna No. 3 Channel	220 9 9
2443	Jas. McDougall	Congupna No. 3 Channel	407 13 7
2444	T. L. McGowan	Congupna No. 3 Channel	250 0 0
2445	G. Billingham	Congupna No. 3 Channel	181 5 0
2446	J. Beattie	Congupna No. 3 Channel	267 0 0
2447	C. Tucknott	Congupna No. 3 Channel	219 12 9
2448	G. Billingham	Congupna No. 3 Channel	222 8 9
2449	Wm. H. Osborn	Waranga Western Main Channel Extension	634 14 2
2450	Wm. H. Osborn	Waranga Western Main Channel Extension	783 3 0
2451	W. H. Townsend	Waranga Western Main Channel Extension	609 3 4
2452	H. Otten	Waranga Western Main Channel Extension	436 7 2
2453	H. Otten	Waranga Western Main Channel Extension	492 6 0
2454	Samuel Fitch	Sternberg Channel, Rodney	324 15 6
2455	Samuel Fitch	Sternberg Channel, Rodney	752 0 8
	Sundry small contracts at piece-work rates —Distributary channels .. ..	.. ..	215,165 0 0
	Total .. ..	.. ..	£352,248 0 1

DIRECT LABOUR.

The construction of the larger works is still being mainly carried out by “Direct Labour.” The principal payments during the year were on the following works:—

Works.	Amount.
River Murray Storages (Hume Reservoir and Mildura Lock Weir)	£134,154
Goulburn Main Channels	133,691
Wimmera Mallee System	105,175
Sugarloaf and Waranga Reservoirs	83,658
Maffra District (Glenmaggie Reservoir) and Sale District	72,767
Merbein, Millewa, Red Cliffs, Carwarp, and Walpeup Districts	67,746
Coliban and Other Districts	50,763
Kooweerup, Cardinia, and other Flood Protection Districts	37,497
Mornington Peninsula	21,134
Bacchus Marsh and Werribee Districts	11,587
Mallee Tanks, Clearing Roads (Mallee)	10,380
Total	£728,552

WORKS CARRIED ON OR COMPLETED DURING THE YEAR ENDED 30TH JUNE, 1927.

COLIBAN DISTRICT.

In order to meet the increasing demand for water in Bendigo and with a view to improving the pressures in all parts of the city, the construction of a new service reservoir at Specimen Hill was commenced. This reservoir will have a capacity of 70,000,000 gallons. It will be supplied from the existing works and will be connected to the City service by a main pipe of large diameter. It is expected that this work will be sufficiently advanced to allow of it being put into operation in the summer of 1927-28. Very substantial improvement of the reticulation of Bendigo has also been effected by the laying of new pipes ranging up to 12 inches in diameter.

The irrigation services generally have received special attention and have been materially improved. At Spring Gully, Bendigo, the work of enlarging the reservoir is well in hand, and the race supplying the reservoir has been regraded and enlarged. This will make replenishment much easier and more expeditious than it has been in the past and will greatly benefit the system depending upon the reservoir for irrigation supplies. In addition, the Huntly Channel, which carries the water sent from Spring Gully, has also been remodelled.

A very considerable amount of work also has been carried out in enlarging and regrading the main Bendigo Channel; in the lining of portions with cement concrete; and in the substitution of concrete structures for some of the large timber flumes.

In the Harcourt District Langs Tunnel, on the main channel, which is not of sufficient capacity, is being converted into an open cutting which will carry much larger volumes. The conversion work is already well advanced, and will be effective in the coming season. A considerable amount of other work has also been done in the Harcourt District in the lining of channels with cement concrete in places liable to cause trouble by seepage.

The works that have been carried out in the Coliban District in the past few years have been mainly directed towards increasing the capacity of the storages and the enlargement and improvement of the principal channels. It has to be recognized, however, that most of the distributary channels were designed to meet the requirements of mining activities in the old days and that they do not satisfactorily meet present requirements which relate almost solely to irrigation; and many channels were located in country that cannot be made water-tight except at great cost. As water for irrigation under suitable conditions is becoming of more importance to the welfare of the district, the existing system of distribution will be improved so as to meet the new irrigation conditions.

The Commission is giving serious and full consideration to the situation which is fast arising as the result of the rapid development of the Bendigo and Castlemaine districts in agricultural pursuits, especially those of the nature of intense cultivation.

IRRIGATION AND WATER SUPPLY DISTRICTS.

RODNEY DISTRICT.

During the year under review a total area of 54,142 acres in the Rodney District was irrigated, including 31,000 acres of lucerne and approximately 8,000 acres of orchards, there being an increase of 1,000 acres of lucerne. There was a small decrease in the area of orchards irrigated, this being due, no doubt, to the process of "changing over" to more suitable varieties of fruit. Although the summer and autumn were abnormally dry and irrigation was extended some six weeks later than in the previous year, there was ample water for all purposes.

The new Waranga-Kyabram Main Channel, some 20 miles in length, has been completed and a full and regular supply of water is now assured for the western portion of the district which includes the parishes of Girgarre East and Kyabram, and the whole of Wyuna Estate.

A loop channel, 6 miles in length, is being constructed generally along the route of the old Sternberg Channel to connect the Waranga-Kyabram Main Channel with the Waranga-Deakin Channel to supplement the supply to Tongala District. Six spur channels, totalling about 2 miles in length, have been constructed to supply lands not previously commanded, bringing the total channel mileage in Rodney District up to 626 miles. A loop channel 1 mile in length is being constructed between the Cussen and Kavanagh Channels to improve the supply to lands in the parishes of North Mooropna and Coomboona.

Surveys have been made of several other proposed channels and remodellings of existing channels with a view to making the channel system capable of dealing with the ever-increasing demand for water. Four timber bridges on main channels at important road crossings have been replaced by concrete arch structures. Many other old timber structures, such as checks and culverts, have also been replaced during the year by concrete structures, and all new distributary channels are now equipped with Dethridge meters.

About 20 miles of channels have been remodelled and enlarged, and further works of this nature are in view. Alterations, rendered necessary by the erection of high-tension electric transmission lines, have been made to the Commission's private telephone system, and additional exchange connexions between water bailiffs' residences and local telephone exchanges have been effected.

Crawford's Estate of 356 acres has been subdivided into four blocks, which have been allotted to closer settlers. Houses for these settlers are now in course of construction, as well as channels to supply their blocks. Two miles of the abandoned McKenzie Channel on the road have been filled in, the work being done conjointly with the Shire Council.

The progress of the district is steady and sound, the area under lucerne for dairying and sheep-raising showing a steady increase. Dairy farmers are realizing the value of well bred stock, and the district can boast of many splendid stud herds of Jersey, Ayrshire, Red Poll, and Friesian cattle. During last season the total quantity of fruit processed by the Kyabram and Ardmona Canneries was 7,456 tons.

DISTRICTS ADMINISTERED FROM SHEPPARTON CENTRE.

In the Shepparton District, the principal work carried out during the year was the extension of the drainage system throughout, a length of 5 miles of seepage drains and 6 miles of surface drains being added. The topping up of 2 miles of channel was also effected. New structures built include eight regulators, eight channel bridges, and several outlets. Necessary repairs and maintenance work were carried out. In the North Shepparton area, the new channels have been further extended, the Kaarimba Main Channel being now constructed for a length of 23 miles. Congupna No. 2 Channel, 15 miles in length, has been completed. Congupna No. 3 Channel is in course of construction, and 8 miles have been completed. On this channel, in addition to the usual channel structures, a 5-foot barrel syphon of reinforced concrete was constructed under the Congupna Creek.

A drainage system comprising 7 miles of main drains was constructed to serve Harper's and Gribben's Closer Settlement Estates. This drainage system is now in operation and working successfully. The supply to the South Shepparton District was further improved by the construction of additional spurs, aggregating $1\frac{1}{2}$ miles in length, and the raising of portions of the banks of the existing systems.

The construction of the distributary channels and the various structures connected therewith for the supply of water for the irrigation of lands in the southern portion of the area of about 9,000 acres at Katandra purchased by the Commission for Closer Settlement have been completed, and water was available for settlers during last irrigation season. These works comprise upwards of 17 miles of concrete-lined channels, together with culverts, checks, registering outlets, and minor structures, all of reinforced concrete. Work was commenced on the construction of the distributary channels for the supply to the northern portion of this subdivision and is well advanced. These channels, about 16 miles in length, are being constructed as earthen channels. Practically all structures, including numerous reinforced concrete checks and drops, culverts and subways, have been built; and it is expected that water will be available before the forthcoming irrigation season. In order to ensure this, several gangs, totalling about 180 men, were employed. The completion of these channels renders practicable a supply to the greater portion of the area of 9,000 acres referred to above which is proposed to be constituted an irrigation district at an early date.

SWAN HILL DISTRICT.

In the Swan Hill District 60 chains of main channel and 1 mile of spur channel were lined with concrete. Four miles of drainage channel were constructed and 4 miles of existing drain cleaned out and improved. Thirty chains of pipes were laid for drainage purposes.

Twenty-five culverts and checks were built and fifty-five orifice boxes for Grant Michel meters were replaced by Dethridge meters. A spillway was constructed at Woorinen from the main channel to the lake. This work comprised an offtake, 4 chains of lined channel, and a syphon under the road.

Three miles of main channels were cleaned and all necessary repairs and maintenance work were carried out.

There was a heavy demand for water during the last irrigation season; and, notwithstanding the very dry season, all demands for water were met.

DISTRICTS ADMINISTERED FROM KERANG CENTRE.

In the Kerang Districts the irrigation of crops and pastures was commenced early in August, the rainfall of the preceding month being insufficient to maintain growing conditions. Towards the latter part of August and in September light showery weather caused, in many sections, a cessation of irrigation operations. The complete absence, however, of any useful falls of rain during the following seven months gave rise to a very large demand for water throughout the district, and necessitated the running of full streams in all sections. Although there was, during February and March, a greatly diminished flow in the River Murray at Torrumbarry Weir, the Commission, by careful regulation, was able to give all irrigators a full supply. Frequent conferences of officers representing the head office and the districts drawing supplies from Torrumbarry Weir were held at Kerang during the irrigation season for the purpose of apportioning supplies and regulating storages and private diversions from streams.

Further improvements were effected to the Kerang District irrigation system during the year. The work of installing meter outlets, to replace old timber open outlets, was proceeded with in the Wandella section. Modern reinforced concrete head checks, syphons, and culverts, to replace decayed timber structures in various parts of the district, were built. In addition to the remodelling of several minor distributary channels, new spurs with regulating structures and culverts were constructed to serve allotments 14c, 15, 19, and 35, parish of Meran (Wandella section) which allotments were included in the Kerang District. No. 7 Wandella Channel was deviated and extended to serve land to the east of Lake Elizabeth. An old iron flume over a narrow depression on this channel was replaced by a subway.

In order to more effectively control the Gunbower West Main Channel at Flannery's a new concrete regulator having three 5-foot openings was built. The old timber flume which conveyed the waters of Macorna North Distributary No. 10 over a flood depression at Hall's was dismantled and removed, and a new 36-inch reinforced concrete syphon 140 feet in length was built in its place. Another flume of minor section on the Kerang East distributary over the Calivil Creek near the Kerang-Echuca main road was replaced by a pipe subway. At the extremity of No. 10 Macorna North Channel on the Pyramid Creek frontage and at the No. 2 Kerang East Channel escape works were installed for the safe working of these channels. The Commission's telephone line between Macorna and Gunbower West along the Macorna Channel was reconstructed, and new poles, wires, and insulators were erected and fitted as required. The line was extended a short distance along the Gunbower West Main Channel reserve to connect with the Postal Department's new line, thus enabling the Commission to abandon approximately 2½ miles of its original private line between Macorna Post Office and the Macorna bailiff's quarters.

In the Koondrook District, the work of cleaning out the main and distributary channels was continued. In addition to the concreting of a section of Northern Spur No. 14A, several distributary channels were remodelled, cored, and treated to prevent leakage. At Murrabit approximately 4 miles of seepage drains were excavated and graded to the drainage system. On the Loddon River frontage, at the extremity of the Benjeroop Main Channel, escape works were built comprising a double bar concrete regulator, a 30-inch pipe conduit, and an outfall apron, fan shaped, to give a full discharge in thin film at low summer level.

In order to more effectively command the higher levels of Tye's and Cox's Estates, and portion of the Murrabit Estate, a 15-cusec flume was carried across Reedy Creek at Gonn Crossing and connected with the Northern Main Channel and existing Spur No. 14, which latter has now been remodelled. This system of supply, which has proved very satisfactory, displaces the lower section of Reedy Creek as an irrigation carrier, leaving the creek free to receive general district drainage at all times.

Drainage works to serve the Murrabit Closer Settlement Estates and other lands comprising an area of about 5,000 acres situated along the River Murray between Gonn Crossing, Murrabit West, and North Myall were completed and are in operation. The aggregate length of the main and branch drains is approximately 25 miles, and the structures throughout are of the full-waterway type, provision having been made for deepening should this become necessary in the future. The system is divided into two sections known as the high-level and low-level, the low-level having as its outfall the existing works on the River Murray at Tye's Estate, whilst the high level, which includes a section of Reedy Creek, has been provided with an outfall at the Barr Creek, about 4 miles from Murrabit. This section of the high-level outfall drain, together with structures, was recently completed. The existing pumping plant at Tye's Estate drainage outfall was overhauled, and a new liner fitted to the suction gas engine, together with a new piston and engine head. The tests under full load were entirely satisfactory.

The Left Branch Channel was extended 2 miles to serve lands in the Gannawarra No. 2 District not commanded from Pyramid Creek headworks, and at the extremity of the system at Barr Creek, south of Capel's Crossing, a reinforced concrete escape culvert and regulator were constructed.

At Benjeroop, the weir across the Little Murray River was in operation during the summer, heading up the water sent down from Torrumbarry Weir, via the Pyramid Creek and Loddon River for the Swan Hill District.

In anticipation of an early demand for water following the dry winter, the Kerang North-West Lakes were brought to full supply level in August, and were maintained at that level by water drawn from Torrumbarry Weir, there having been no appreciable flow in the Loddon River during the year.

DISTRICTS ADMINISTERED FROM COHUNA CENTRE.

The year 1926-27 proved exceptionally dry; and it became apparent early in the season that very careful handling of supplies would be necessary. The system of holding weekly conferences of officers in charge of districts drawing their supplies from Torrumbarry Weir, inaugurated during the previous season, was continued, with the result that the Torrumbarry system was used to best advantage. All districts received full supplies to the extent of their water rights, and there was ample additional water available for sales, although the period from October, 1926, to June, 1927, was the driest for some 50 years.

Satisfactory progress has been made during the year with the construction of works in the districts administered from Cohuna Centre. The conversion of the Barr Creek from an irrigation channel to act in its natural capacity as a drain was completed, and the new system of supply to the Gannawarra District came into operation at the commencement of the irrigation season. This involved the construction of a reinforced concrete syphon 6 ft. 6 in. in diameter and 100 feet long, the diversion of the Barr Creek over the syphon, and the construction of a banked channel over the old creek bed, which entailed about 15,000 cubic yards of earthwork. Three new regulators were also constructed, four were remodelled, and two occupation bridges and one road bridge were built. The scheme has proved entirely successful and is the largest of its kind yet carried out in connexion with drainage in this district.

Besides the drainage works in connexion with the Barr Creek conversion, two important drains designed to give speedier outlets to the lowered Barr Creek have been completed. These drains involved the excavation of 40,000 cubic yards of earthwork. A similar drain, involving the excavation of 15,000 cubic yards of earthwork, is now in course of construction.

In the Cohuna District four important road bridges were constructed to replace old ones; and several new occupation bridges were built. All necessary repair and maintenance works were carried out. In the Gannawarra District a new concrete escape was constructed from the main channel to the Barr Creek and has proved of great value.

The replacing of orifice outlets by Dethridge meters has been continued in both districts, and 115 of these are now installed.

In the Leitchville District the excavation of channels for the drainage scheme, involving about 100,000 cubic yards of earthwork, was completed; and six road bridges and eighteen occupation bridges were constructed. A three foot diameter pipe crossing, 75 feet in length, was

installed under the Cohuna Main Channel to connect with the outfall drain to Barr Creek. It is expected that all structures in connexion with Leitchville District Drainage Scheme will be completed during the coming year.

In the Cohuna and Leitchville Urban Districts improvements and extensions of pipe reticulation were carried out.

DISTRICTS ADMINISTERED FROM LODDON CENTRE.

The irrigation season 1926-27 was marked by a continuance of abnormally dry conditions. However, increased supplies enabled an exceptionally heavy demand for water for irrigation to be met. The total quantities of water supplied to the Tragowel Plains and Boort Districts were the highest yet recorded. Moreover, many areas were watered for the first time. Owing to the failure of local rainfall there was a widespread demand for water for filling dams for domestic and stock use; several thousand dams were filled and many refilled. The value of the artificial water supply to the district was clearly demonstrated, as it undoubtedly prevented serious loss.

During the year a commencement was made with the extension of the Waranga Main Channel west of the Loddon in accordance with the scheme of distribution prepared consequent on the completion of the Sugarloaf Reservoir on the Goulburn River.

The chief feature for the season was the increase in the capacity of the Goulburn System, west of the Piccaninny Creek, from a maximum of 260 to over 400 cusecs. This was due to the enlarging of the Waranga Western Main Channel from the Piccaninny Creek to the offtake of the Tandarra-Calivil Main Channel, and the completion of that channel, which is 26 miles long, with a maximum capacity of 300 cusecs, and which came into operation for the first time in September, 1926. The supply to the No. 1 Main Channel area of the Tragowel Plains District, or rather more than half that district was thus fully provided for. This not only gave Tragowel Plains an increased supply, but released most of the capacity of the Waranga Western Main Channel for delivery of supplies to Calivil and Boort Districts. The remodelling of the No. 1A Distributary Channel has been pushed on, a deviation of a mile of channel to avoid a swamp was put in hand, and a connexion 2 miles long, with necessary structures, has been completed from the No. 1A Main Channel to the Tragowel Plains No. 2 Main Channel in order that the latter channel may be supplied direct from the Tandarra-Calivil Main Channel, thus releasing an additional 60 cusecs capacity of the Waranga Western Main Channel for the supply of districts west of the Loddon.

Good progress has been made with the work of replacing the old timber structures in Tragowel Plains District. About 90 timber checks have been replaced with concrete ones, 75 bridges with pipe culverts and twenty with concrete bridges, while nine old wooden subways have been replaced by pipe syphons. The benefit of this work in reducing loss of water and cost of maintenance is already being felt, and further replacements are being carried out as opportunity offers. The work is, however, somewhat handicapped, as it is only possible to work on the main channels during the few winter months, when work and carting of materials are hampered by wet weather and bad roads.

A total of some 20 miles of channel has been remodelled, and a number of small branch channels and structures installed to supply new lands in the district. Several bad beds of combungie and rushes have been dug out.

The question of sending surplus and drainage water from Tragowel Plains into Kerang District is receiving attention. To enable any surplus water in the No. 1 Main Channel to be discharged into the Macorna Channel, for use lower down, the banks of the former channel have been raised and strengthened for the last 50 chains of its length. The old timber flood regulator on the Nine Mile Creek at its effluence from the Serpentine Creek has been replaced by a concrete one, and several other Channel structures were similarly replaced.

The works to supply an extension of about 14,000 acres east of the district, including Gash's Estate, have been completed, and about 5,000 acres allotted water rights. Further extensions to serve 7,000 acres should be completed by next season. To this end, 11 miles of channel, three syphons totalling 230 feet in length, two railway crossings, fifteen bridges, twelve checks and about 40 meters have been constructed and installed and the old No. 2 Distributary Channel is being remodelled for about 13 miles.

A channel 2 miles long, including three pipe syphons, has been constructed to serve about 1,200 acres of fertile country near the Loddon River, in the parish of Loddon.

The meter wheels throughout the district have been overhauled and painted, and other necessary maintenance work has been carried out.

In Boort District, four syphons, twelve wooden bridges, and six old stops have been replaced with concrete, and others repaired. About 5 miles of old channel have been remodelled. The work of installing meter outlets throughout the district, with a view to the allotment of water rights, is nearing completion. A commencement has been made with the remodelling of the main channels in view of the better supply now available.

A site has been purchased in Boort township for a district depot, and a large storage shed and workshop and several smaller buildings have been erected. Space has been reserved for offices and quarters.

In the proposed Calivil District, the Calivil No. 1B Channel was completed. This channel, with about seven miles of branches, supplies the northern portion of the land acquired by the Commission for Closer Settlement purposes. It also carries the supply to the No. 2 Distributary Channel for the new extensions of Tragowel Plains District, and has already greatly relieved the No. 1 Main Channel. The construction of the Calivil No. 5 Channel and branches, in all about 8 miles long, to supply about 5,400 acres in the parish of Calivil, is now in hand. Some 50,000 cubic yards of earthwork and twelve structures are completed, and it is expected to complete the whole before the end of December next. Structures have been installed to supply portion of this district from the old Tragowel Plains Channels. A regulator is being constructed in the Waranga Western Main Channel at 87m. 70c. to divert water for the southern portion of the district, and extensive surveys for the location of new channels have been carried out. Portion of this district was, this year, irrigated for the first time, and shows splendid results.

In Dingee District necessary works of maintenance have been carried out, and also surveys in connexion with drainage. The banks of the Waranga Western Main Channel have been beached with stone or brushlined at points where wind action was causing scour.

In the Loddon United Trust District about 9 miles of channel have been cleaned out, and several structures repaired or replaced. A pipe syphon 60 feet long and 2 miles of channel have been constructed to serve new areas. The Barraport dam has been cleaned out and enlarged by 1,200 cubic yards and repairs made to pumps and pump stands on other dams in the district. The work of filling dams in this Trust District during the season was very heavy, but was greatly expedited by the new channel systems.

Repairs and alterations have been carried out in the Urban Districts. At Pyramid, 18 chains of 6-inch cast iron main and 20 chains of 3-inch were laid to improve the pressure in the township reticulation, and several small extensions were made. At Mitiamo a new windmill has been erected, a 2,000 cubic yard dam and 60 chains of channel have been excavated, and necessary repairs carried out. A small block of land has been purchased to extend the Pyramid Depot and a blacksmith's shop, truckshed and timber rack have been erected.

Three more bailiffs' residences have been connected by telephone.

DISTRICTS ADMINISTERED FROM ROCHESTER CENTRE.

The extension of the channel system to supply the additional area of 16,800 acres mentioned in last Annual Report has now been completed. The total length of channels for this area, which comprises practically the whole of the parish of Pannooabamawm, is 30½ miles.

The construction of the Restdown-Wharparilla Main Channel (which is to supply the Restdown Channel, and supplement the Echuca Estate Channel and the Bamawm Extension Channel) is progressing steadily. The 4½ miles of new work to supply the Echuca Estate Channel is complete; the remodelling and enlarging of 3¾ miles of the Echuca Estate Channel is in hand; and the earthworks of the next section (2¼ miles) to carry the supply to the Bamawm Extension Channel, are completed. The remodelling work has been expedited by the use of a new type two-way mud scoop, designed and built locally.

Drainage works carried out, during the year, consisted of 2½ miles of extensions of the Bamawm Drainage Channels and 34 chains of 6-inch agricultural pipe interception drain constructed parallel to the Bamawm Estate Channel. As a prevention against seepage, 3,500 square yards of concrete lining were placed where supply channels are located through loose

sandy country. Portions of the Bamawm Drainage Channel No. 1 were deepened; and, as several irrigators are preparing to tile-drain their citrus lands, the question of deepening the drainage channels by 2 feet to give a lower outfall level for each block, is being considered. There have been requests for further drainage channels in the Bamawm and Nanneella areas, and surveys for those in the Bamawm area are in progress.

To provide for a larger flow, remodelling of the Waranga Western Channel is being carried out. This work so far consists of the raising of beaching and enlarging and strengthening banks to safely carry the larger stream.

In the Campaspe District four wooden bridges were replaced with concrete structures and necessary maintenance work was effected at the Campaspe Weir.

In the portion of Echuca North District administered from Rochester, work was confined to maintenance of the channel system.

In the Lockington Urban district there has been a steady development. Meters have been installed on all tenements and a satisfactory service has been maintained.

DISTRICTS ADMINISTERED FROM TONGALA CENTRE.

The Main Deakin Drainage Channel has been completed during the past year from 21 miles to its upper end at 35 miles 32 chains; and the necessary structures were installed, including some 50 bridges complete with railings and spillways. This main channel is now ready to deal with drainage from the Kyabram-Rushworth Road at the south-east of the Stanhope District to its lower end at the River Murray near Echuca. Work is now being carried out for the provision of surface drainage for Stanhope District. To date, Spur Channels Nos. 1 to 6, 19½ miles in all, have been excavated and the necessary structures are being installed. During the ensuing year it is expected that this drainage work will be completed for the Stanhope District, and the construction of the necessary spur channels for surface drainage of the Tongala District will then be undertaken.

In the Tongala District the principal work of the year consisted of the remodelling of No. 3 Spur Channel to give a better supply to McDonald's, Taylor's and McLeod's Estates on the North-eastern part of the District. Minor repairs to bridges and pug trenching of short sections of different spurs to prevent seepage have also been carried out. The total extent of Water Rights in the District was increased during the year by 1,027 acre feet. This was due to the bringing into the District of 1,346 acres, comprising Pell's and Colbert's Estates at the south-east corner of the District, and to the graduated increase of water rights to other properties already in the District.

During the year, plots to test the cultivation, manuring and irrigating of pastures and lucerne were established in the District. The work was carried out in co-operation with the Department of Agriculture. These plots are giving good results and should be conducive to better agricultural methods in the District.

There are now three herd testing groups operating under the Tongala herd-testing association. This is having a marked beneficial effect on the standard of herds in the District.

In Echuca North District, the Main Supply Channel to that District for a distance of 40 chains was cleaned and topped up to give a better supply to settlers there.

In the Deakin District the supply channels for Pell's and Colbert's Estates were completed. This work entailed the construction of a total length of 9 miles of channel. The area so served has been included in the Tongala District.

In the Stanhope Urban District the mains were extended by laying 800 feet of 1-inch pipe to supply properties in the south-east corner of the township.

BACCHUS MARSH AND WERRIBEE DISTRICTS.

In the Bacchus Marsh Irrigation District the main distributary channel to supply all lands on the eastern side of the Lerderderg River has been enlarged for a distance of 13 chains.

In the Hopetoun area a small distributary, known as the Cemetery Channel, to supply portion of the Soldier Settlement, has been concrete lined for a length of 32 chains; and 2 measuring wheels, 1 occupation crossing, 20 concrete outlets and 1 storm water syphon were constructed.

The Woolpack Inn Channel has been filled in with earth and excavated for 10 chains ready for concrete lining ; and one measuring wheel was installed in the Rothberg Channel. To improve the supplies to the Tullamore Orchards, seven concrete measuring wheel boxes, with the necessary outlets and checks, were installed. On the Main Supply Channel 344 square yards of concrete lining were completed, and the old boundary fences have been pulled up and new fencing erected for a distance of 79 chains ; while a new distributary channel, 5 chains in length, near the Bacchus Marsh Gas Company's works, was constructed to replace an old pipe syphon.

To prevent seepage, due to the gravelly nature of the soil, the Darley Channel at Darley township was cement lined for a length of 3 chains. Concrete piers were placed in the timber occupation bridge, its decking was raised and the approaches filled in.

Owing to the erosion of the banks of the Lerderderg River a deviation of the Lerderderg West Concrete Channel was necessary to carry out additional protection works at Anderson's Bend, and further protective works to save the banks were carried out, consisting of 60 stone and timber cribs, battering down 10 chains of river banks and planting willows. All the protective works carried out by the Commission on the Werribee and Lerderderg Rivers are in excellent condition ; the willows planted at these works are making very strong growth. Each year these willows are pruned and layered.

In connexion with the " Gorge to Gorge " Scheme for the supply of an additional area of 1,000 acres not commanded by the existing works, the permanent survey for 5 miles of channel was completed. The construction work through the Werribee Gorge has been completed. This includes 2 regulating gates, 4 concrete storm water shoots and 68 chains of concrete lining. In addition to these works 4 miles of channel earthworks were completed, 38 chains of pipe trench were excavated, and 12 chains of 24-inch diameter cement pipes were laid and jointed. To carry off storm waters from the steep sidings, 27 storm shoots and crossings combined were completed and 2 miles 60 chains of storm drains were excavated.

On the western slopes of Pykes Creek Reservoir, 3,000 *Pinus insignis* seedlings were planted. The trees planted in the year 1924-25 are in a healthy condition and are making excellent growth, many now reaching to a height of 6 feet.

The Commission has made Bacchus Marsh the central workshop for the construction of meter wheels, and 1,076 were made last year and sent to the various Districts under the control of the Commission.

In the Werribee Irrigation District the main works carried out during the year have been the lining of several channels, with concrete 2 inches thick, to facilitate delivery and prevent waste ; and existing drainage channels were deepened so that sub-soil water may drain away rapidly. One hundred and eleven chains of the Spur Channel 1k, 45 chains of Spur Channel 5k, and 7 chains of the Main Distributary Channel were lined with concrete ; whilst 10 chains of Spur Channel 6k were ploughed and remodelled.

Drainage Channel 3D was deepened for a distance of 60 chains to give more effective drainage from Section K. The drainage channel through allotments 64 and 65, Section D, was deepened for a distance of 41 chains to its junction with Spur Channel 7, which was then converted into a drainage channel, a new channel for irrigation purposes being cut. The drainage channel through allotments 21 and 25, Section G, was cleaned out.

The bridge over the Main Channel at Tarneit road was redecked. Minor repairs to the gates and tunnel at Melton Dam were carried out as well as all necessary maintenance works.

The rainfall on the catchments governing the storage reservoirs for both Bacchus Marsh and Werribee was so low last year that it was found necessary to regulate and somewhat restrict the distribution of water ; but, notwithstanding this, full water rights were supplied. The occurrence of such a low rainfall period has now undoubtedly to be considered and its effect be met. This probably can best be done by a more careful use of water by means of lined channels and the elimination of all causes leading to waste.

In the Werribee Urban District, improvements and extensions of pipe reticulation were effected; whilst, to meet the wishes of small landholders on Section J, who are mostly engaged in poultry farming, an extension of the main from Wedge-street was made, 2-inch galvanized iron piping along Loch-avenue being laid down for a distance of 2,904 feet. As this area is outside the Urban District a special charge is made for water supplied by agreement.

In the Werribee Waterworks District, notwithstanding the low rainfall referred to above, three runs of water were made and satisfactory supplies were delivered. This was highly appreciated by farmers within this district. Outside this Waterworks District many farmers were compelled to cart water for eighteen months of the past two years.

MERBEIN DISTRICT.

In continuing channel improvement works in the Merbein District, 60 chains of earthen ditching have been remodelled and lined with cement concrete. In addition to this, the carrying capacity of a further 50 chains of concrete lined main channel has been increased by raising its banks. The pumps are thus enabled to deliver their maximum discharge without risk of overflow. This channel improvement work has made possible a general speeding up of the water distribution.

Several old timber culverts have been replaced with reinforced concrete pipes and, on the main roads, decks have been widened from 16 feet to 24 feet.

Maintenance work has been continued throughout the year and, in connexion with the repair of concrete channel lining, experiments have been carried out with a bituminous emulsion for sealing cracks and for waterproofing porous concrete. Satisfactory results have been obtained and further experiments will be made during the coming year.

Owing to the exceptional climatic conditions watering was not normal, and it was found necessary to start the pumps on seven occasions in order to meet the requirements of the District. Of these only three were for full waterings, the others being for special supplies for portions only.

In the Merbein Urban District maintenance work has been carried out throughout the year. During the coming year it is proposed to replace some 80 chains of defective concrete main by wood pipe. This will minimise the cost of maintenance and greatly increase efficiency.

RED CLIFFS DISTRICT.

During the past year, the work of lining the channels with cement concrete was continued. The lengths of new channel lining totalled $7\frac{1}{4}$ miles, representing a superficial area of 56,200 square yards. Of the total length of 124 miles of constructed channels in the Settlement, 114 miles are now lined, and, as a result, 99 per cent. of the total number of blocks in the Settlement are protected from seepage from the channels. Several concrete structures were completed during the year. These included outlets, regulators and culverts.

The irrigation of the Settlement proceeded satisfactorily, all occupied blocks receiving full supplies.

The total area now planted to vines and citrus in the Red Cliffs Soldier Settlement is 8,750 acres. A large additional area came into bearing this season; and practically all the planted area is now yielding crops. The total yield of dried fruits from Red Cliffs for the 1927 season was approximately 11,000 tons. During the year, demonstrations of pruning, dipping and general cultural practices were arranged. These were followed up by personal visits, and demonstrations, by Supervisors, on individual blocks.

As in previous years the Commission arranged for the bulk purchase and distribution of harvesting and other block requisites, including chaff. The goods so supplied during the year included 2,568 tons of chaff, 744 fifty-yard drying racks, 33,120 dip tins, 2,720 bolts of hessian, 9,540 sweat-boxes, 285 tons of galvanized iron, 32,800 bricks and 650 fire-bars; and the bulk purchase of these items has effected large savings for the settlers concerned.

The efforts of the Export Control Board to dispose of the large export pack expeditiously, and at reasonable prices, are being followed with interest by all concerned. There is a very strong feeling amongst growers and packers that the Control System for marketing fruit offers the only satisfactory solution of the difficulties encountered in earlier years. There was also a general belief that more efficiency, and consequent cash savings, would be the outcome of concentrating packing operations amongst a fewer number of sheds.

From returns to hand at 30th June, 1927, settlers have been able to pay over £30,000 on account of water rates, and over £46,000 on account of advances made by the Commission to produce and harvest the crops.

The township of Red Cliffs is still steadily developing. During the year several new shops and residences were erected and the reticulation was considerably extended, 2,667 feet of 4-inch wooden pipe and 836 feet of 2-inch G.I. pipe being laid down.

NYAH DISTRICT.

The length of supply channels lined with cement concrete in this District has been extended during the year by the completion of 40 chains of additional lining, bringing the total length so lined to 33½ miles. Thirty chains of concrete lining along the Main Central Channel and branches have been treated with a bituminous coating to prevent seepage, and satisfactory results have been obtained. Progress has been made with the deepening of drains, and beneficial results have followed. Further drainage work in hand includes the laying of 90 chains of 9-inch and 6-inch pipe drain to serve allotments in Tyntynder West. A length of 11 chains of this drain has been completed.

The irrigation of the settlement, during the year, has been satisfactory notwithstanding the dry conditions prevailing.

Over 3,000 tons of dried fruits were packed by Nyah packing sheds during the 1926-27 season. The fruit has been of good quality and the outlook is reassuring.

Steady progress has been made in the settlement and in the township of Nyah West. A new brick Post Office, completed and opened during the year, has greatly improved postal facilities.

MYSTIC PARK DISTRICT.

Throughout the year irrigators in this District received supplies by gravitation from Lake Kangaroo which, in spite of the extraordinarily dry conditions, was maintained at full supply level by careful regulation of supplies from Torrumbarry Weir. Work has been commenced on a new reinforced concrete channel regulator and an offtake on the Main Channel at the junction with Spur No. 1, and the excavation for some 80 chains of new channel has been put in hand.

TRESCO DISTRICT.

During the year, some 33 chains of channel have been lined with cement concrete, the total length of lined channels in this District now being about 10½ miles. A further length of 58 chains of channel remodelling has been carried out and some 44 chains of concrete lining have been treated with a bituminous coating to prevent seepage from the channels. Three channel regulators, 2 road culverts, 2 occupation crossings and five outlets have been constructed.

Owing to dry weather conditions it was found necessary to provide six waterings, the last, a late Autumn watering, being carried out for citrus.

Returns from the Tresco Fruitgrowers Co-operative Association show that the Doradillo crop for the season 1926-27 yielded 1,640 tons. The 1926 orange crop amounted to 18,700 cases and, up to date, 5,000 cases of the 1927 orange crop and 5,000 cases of other fruits have been forwarded to market. Good quality sultanas have been produced at Tresco, and some growers are changing over from other forms of production to vines. The yield for 1926-27 was 62 tons as compared with 27 tons for 1925-26.

FISH POINT DISTRICT.

The works for the supply of water to the newly constituted Fish Point District mentioned in the last Annual Report have been completed. From a reinforced concrete regulator on Lake Tutchewop, a channel of 200 cusecs capacity has been constructed to Lake Boga, a distance of

4½ miles. This channel enables water from the Torrumbarry Distribution System to be delivered through the Kerang Lakes to Lake Boga and thence to the Little Murray and back to the River Murray itself and will considerably improve the quality of the Lake Boga water from which Tresco District draws its supplies. From this Tutchewop-Boga Channel water is diverted by reinforced concrete regulators into the main channel supplying the Fish Point District. The area of the new district is 5,762 acres of which 3,876 acres are commanded by about 12 miles of main and distributary channels. The construction of these channels and the necessary structures of reinforced concrete have been completed and water was supplied to landholders during the last irrigation season. Some 2,886 acres have been watered during the year and good progress has been made in the district. Settlers are extending their supply channels; and it is expected that a much larger area will be brought under irrigated culture during the coming year. In addition to the headworks, a reinforced concrete regulator of five 6-foot openings at Lake Tutchewop, has been constructed, together with a large number of other structures, including regulators, bridges, and checks.

MAFFRA-SALE IRRIGATION DISTRICT.

Steady progress has been made during the year with the works of this highly important scheme which aims at giving full irrigation supplies to the large area of 80,000 to 100,000 acres of suitable lands commanded in the Maffra-Sale Districts, and adjacent areas. This large area of valuable land, much of which is of the highest class, is not at all favourably situated as regards rainfall, and the experience of many years has made it abundantly clear that it is necessary to supplement the natural rainfall by considerable volumes of irrigation water if full use is to be made of the land. Requests are being made on all sides for early extensions of the scheme, and the Commission is arranging for channel extensions as rapidly as possible.

The large concrete dam on the Macalister River is practically complete, and arrangements can be made to store the whole volume of 150,000 acre feet during the coming year if required. Practically the whole of the rich Boisdale flats have been reticulated, mostly with concrete lined channels. Some 7,000 or 8,000 acres of this area are now in a position to receive supplies and the greater portion was watered during the year. The main and distributary channel systems giving supplies to Airlie, Cobain's, Lyons's, and many other estates adjacent to Sale, totalling about 6,000 acres which have been purchased by the Commission for Closer Settlement purposes, as well as other lands in the vicinity, which are requiring irrigation supplies, have been advanced materially, so that irrigation supplies can be given during the coming season to an area of some 15,000 acres in this locality which has been constituted and will in future be known as the Sale Irrigation and Water Supply District. Settlement in this area is proceeding rapidly, and it is expected that great use will be made of the water during the coming year by settlers.

During the year, at the request of the landholders, a special effort was made by the Commission to reticulate as much as possible of the large and very valuable Newry river flats, which alone total some 10,000 acres. A large portion of this area was given a much appreciated supply during the year and every endeavour will be made to extend the channel system so as to practically command the whole of the area during the coming season, thus increasing the area of the Maffra Irrigation District to 20,000 acres, making the present total area supplied by this system 35,000 acres. This area is being further extended in response to a strong petition from landholders around Tinamba, lying south of the Macalister River, for the provision of irrigation supplies for their lands. To this end the Commission has arranged to put in hand forthwith the main channel leading from the Glenmaggie Storage through Alec's Downfall and along the southern bank of the river, and also to construct the branch channels necessary to serve the locality indicated with as little delay as possible. It is hoped that water will be available for a large portion of the area during, at least, the latter part of the coming irrigation season when it will be most appreciated.

Proposals for the supply of water by the Commission from the main channels of the scheme into a local storage basin at Slavin's Hill for the reticulation of the town of Stratford have been accepted by the Urban Trust about to be constituted at that place. A commencement with the supply works will be made by the Commission with as little delay as possible so that works of reticulation can be arranged for and carried out in the town as early in the coming summer as possible. Investigations are also being made in regard to proposals for supplies on similar lines to the towns of Sale, Maffra and Heyfield with a view of giving those rising centres the abundant and unlimited gravitation supplies of good water which are so essential to their uninterrupted progress.

INVESTIGATION OF NEW IRRIGATION AND WATER SUPPLY PROPOSALS.

Further investigations are being carried out in connexion with the proposed addition to the Fish Point District of lands adjoining that district and between Lake Tutchewop and the Little Murray River.

Investigations of the proposal to irrigate the Piangil Flats by pumping from the Murray River were completed during the year; but the scheme was found to be too costly, and was rejected by the landholders owing to the high annual charges involved. At their request, a smaller scheme to irrigate 1,000 acres only was prepared. This scheme also was found to be too costly, and landholders were advised accordingly.

The Coreena Pumping Scheme for a domestic and stock supply to high lands to the north of Annuello, mentioned in last Annual Report as being submitted to the landholders concerned, has been accepted by them and a petition signed by the great majority of the settlers within the area has been received with the request that the works of the scheme be carried out as soon as possible. Steps are now being taken for the constitution of a Waterworks District and the carrying out of the works.

The dry conditions prevailing during this year and the previous two years have shown clearly the necessity for making adequate provision to meet the requirements of the upper Campaspe and Loddon areas lying south of the Main Waranga Western Channel and, therefore, not commandable by it. A system of supply to these lands providing water primarily for full domestic and stock purposes, and later for the irrigation of selected areas on a developmental basis, is essential if the steady progress of these districts is to be maintained. The Commission is, therefore, making full investigations into the question as to whether adequate storages on the upper reaches of both the Campaspe and Loddon Rivers could be provided to meet both present and future demands. It is now believed that the possibilities of the proposed site on the Campaspe River at Eppalock are much greater than previously anticipated, and that a very large storage might be created at this place at a cost so low as to permit of a large "carry over" storage being built, which would be of the greatest advantage to the whole of the area west of the Campaspe. The Commission believes that if it were possible to build such a storage it could be utilized to special advantage by supplementing the Main Western Channel from the Goulburn.

Similarly, if a suitable storage on the Loddon could be located, it would assist very materially towards perfecting the whole scheme of supply to the areas above indicated. The Commission is, therefore, expediting the necessary investigations into the practicability of obtaining a suitable site on the river, above Laanecoorie, to ascertain whether a large storage could be created at a reasonable cost.

The specially dry conditions referred to above have also very seriously affected the Bellarine Peninsula during the past two or three years, and it has been made abundantly clear that the development of the whole of this important district and the progress of such rising seaside resorts as Portarlington, Queenscliff and Point Lonsdale, Barwon Heads and Ocean Grove, Torquay, and Anglesea, are being seriously retarded for want of a comprehensive scheme giving an abundant assured water supply for all domestic and stock requirements throughout the area. At the unanimous request of representatives from all interests concerned, full investigation was made into a project tentatively proposed by the Commission, which provided for the utilization of the head waters of the Upper Barwon River and its tributaries, the catchments of which lie in the well-watered Otway Ranges. At the present time the City of Geelong draws its supply from a limited catchment at the head of the Eastern Moorabool River, over which the annual rainfall is low, especially in dry years. Upon examination being made into the position of Geelong and its immediate surroundings as regards water supply it became evident that a much more abundant and sure supply was essential to meet the requirements of that important and rapidly developing centre. It was established that a full supply to meet all future requirements of Geelong and district could be given by gravitation at a low cost from the Upper Barwon Scheme, of which the main feature would be the establishment of a large storage basin, with an ultimate capacity of some 60,000 acre feet at those natural depressions known as Wurdee Boluc and Lake Gherang. Upon consideration of this fact by the Geelong Water Trust, the great advantages which could be derived from the Barwon project were fully realized. That body therefore decided to strongly support the scheme, and draw future supplies as required making, of course, adequate payments.

A complete scheme which provides for the demands of Geelong as well as for full reticulated supplies to all the seaside resorts set out above, ample domestic and stock supplies by channels to all rural districts as required, and irrigation supplies by pipes under pressure to selected areas especially in the southern environs of Geelong, has, therefore, been prepared and is being submitted to all interested bodies who appear to be fully appreciating the great value the scheme will be to the whole of the district governed.

A full investigation will be made during the coming year into a comprehensive scheme for giving reticulated supplies to the important Western District towns of Camperdown, Cobden, and Terang, as well as other centres en route. It is believed that it will be possible to submit a proposal to those interested, on lines which will enable such an abundant supply to be given as will ensure the rapid continuous development of this important area.

WATERWORKS DISTRICTS.

CARWARP DISTRICT.

In this District a further length of 12 miles of channel has been constructed to serve new country in the parish of Nurnurnemal, bringing the total length of the channel to 13½ miles.

With the exception of a few allotments served by channels in the southern end of the District, the whole of the District was supplied with water from the Red Cliffs pumps during the summer months. The completion of certain works at Red Cliffs has now enabled water to be delivered to Carwarp District in the winter months and, for the future, waterings will be carried out during these months only so as to secure that economical distribution of water which is imperative in all Mallee Districts. Pumping for this purpose commenced in June of this year and excellent progress has been made with the distribution of the water.

CARWARP CENTRAL DISTRICT.

The works for the supply of water for domestic and stock purposes to the lands in this District have successfully served their purpose.

A reticulated system for the new Urban District of Carwarp has been completed and water was turned into the mains during the year.

YELTA DISTRICT.

Yelta Waterworks District has been extended during the year to include some 29 square miles of settled country in the parishes of Yelta and Tulillah. To serve this area a channel, known as the Western Channel, has been constructed. This channel is supplied from the Merbein District Channel System and extends westward for a distance of 13 miles. Forty-five chains of this channel have been lined with cement concrete to prevent erosion on steep grades, and eight pipe culverts have been installed at road crossings.

In the older portion of the District special attention has been given to the destruction of rabbits along the channel banks. The close co-operation of the settlers with the Commission will, however, be necessary in order to eradicate the pest. Owing to the particularly dry summer, channels required a great deal of cleaning out before the watering which was carried out satisfactorily during the late autumn.

WIMMERA-MALLEE WATER SUPPLY.

During the past two years the Wimmera-Mallee areas have experienced one of the driest periods recorded, consequently the conditions were unfavourable for the running of water in the channels of the system. Nevertheless, the whole of the channels which total 5,200 miles in length were run giving full supplies for domestic and stock purposes to the 11,000 square miles of country commanded by the system.

Full supplies of water were also furnished to a number of towns controlled by local Waterworks Trusts within the Wimmera-Mallee districts as well as to the steadily increasing number of towns with full reticulation systems which are directly controlled by the Commission within the area, and are now 31 in number, as follow :—

Berriwillock	Dooen	Manangatang	Nyah West	Ultima
Beulah	Hopetoun	Marnoo	Ouyen	Waitchie
Birchip	Jeparit	Minyip	Quambatook	Watchem
Brim	Jung Jung	Nandaly	Rainbow	Woomelang
Chillingollah	Lalbert	Natimuk	Rupanyup	Woorinen
Culgoa	Lascelles	Nullawil	Sea Lake	Wycheproof.
Dimboola				

The Commission has continuously urged landholders to provide ample tank accommodation on their blocks, and it is gratifying to note the steady marked improvement in the capacity of the storages now provided on their holdings by landholders. Many of these are of sufficiently large dimensions to permit of considerable use being made of them by providing water for homestead gardens.

WESTERN WIMMERA, UPPER WESTERN WIMMERA, WIMMERA UNITED,
UPPER WIMMERA UNITED, AND KARKAROOC DISTRICTS.

The boundaries of the Wimmera United, and Upper Wimmera United Districts have been extended to include the country commanded by those distributary channels from the Charlton Main Channel now complete. In all some thirty-three miles of branch channels to supply these new areas, and to improve the service to small portions in the older parts of the districts, have been constructed during the year; and surveys for additional channels to supply further areas east of Donald and north-west of Horsham are being made at the request of landholders who desire water for their holdings.

The Charlton-Wycheproof Main Channel was completed; and is being used for this season's watering. As anticipated, it is proving of great value in providing additional supplies to Tyntynder and Long Lake Districts. The Corack East Channel some 30 miles in length has been completed and will be run this year. About 10 miles of the Avoca Channel have been completed and contracts let for a further length of $7\frac{1}{2}$ miles.

Many channels throughout these districts have been remodelled. In addition to the regular maintenance work it has been found necessary, in order to preserve the efficiency of the system, to remodel some 50 miles of existing channels, and further work of this nature will be undertaken.

In the Urban Districts of Dimboola, Hopetoun, Minyip and Rainbow, the reticulation systems have been extended to cope with the continued development of these towns; while new storages for Rainbow and Jeparit are being arranged for to provide additional supplies to meet the increasing demands on the reticulation at both places.

A scheme for the reticulation of the township of Yaapect has been prepared and submitted to the residents through the Karkarooc Shire Council with a view to its acceptance.

BIRCHIP, WYCHEPROOF, SEA LAKE, DERING, EUREKA, AND TYRRELL DISTRICTS.

During the year, 88 miles of new channels have been constructed chiefly in the newly constituted Dering District and in the western portion of the Tyrrell District in the vicinity of Walpeup. Portion of the latter area will receive its full supply during the current watering.

A large portion of the High Level supply area of the Dering District was satisfactorily watered for the first time, during the year, and further extensions of channels in this area have been made so as to complete the channel reticulation of the district, and permit the whole of it being watered during the present pumping season.

An area east of Wycheproof, which will be commanded from the extension of the Charlton Channel System has been added to Wycheproof District. Surveys of channels to supply this area are practically complete and channel construction is in progress. This area includes a considerable extent of country held by soldier settlers.

The enlargement and remodelling of the Tyrrell West Channel, which is the main water carrier to the northern portion of this area, has been steadily advanced during the year. This work, which is very important, will be continued as opportunity offers.

Extensions and improvements to the reticulation systems of the townships of Wycheproof, Ouyen, Berriwillcock, Sea Lake, and Woomelang, have been carried out chiefly to provide supplies for new buildings. At Woomelang and Berriwillcock new storages for the Urban Districts are being constructed to provide additional supplies to meet rapidly increasing demands.

A new scheme for the reticulation supply of the township of Patchewollock has been accepted by the residents and the works will be put in hand at an early date. Proposals have also been made to the residents of the townships of Speed, Tempy and Chinkapook with a view to the carrying out of pipe reticulation schemes for these towns as desired.

The works of the new pipe reticulated water supply for the township of Nullawil have been carried out and the scheme is now in satisfactory operation.

LONG LAKE AND TYNTYNDER DISTRICTS.

The Tyntynder District has been further extended to include newly settled areas at its northern extremity which received supplies of water by channel, for the first time, during the year.

Some 10 miles of channels have been constructed in this area. As the extreme limits of supply by gravitation have practically been reached in this district, the future construction of channels must be confined principally to internal branches. Notwithstanding the large amount of extra work entailed in cleaning and preparing channels for the season's watering on account of the heavy sand drifts due to the exceptionally dry conditions, the whole of the channels in the above area were fully watered without serious delay.

Extensions to reticulation systems in the Urban Districts of Lake Boga and Quambatook were carried out, as also the remodelling and extension of the Waitchie township reticulation.

The works for the new Urban District of Woorinen were completed during the year and supplies were for the first time made available for the township in January last.

MORNINGTON PENINSULA DISTRICTS.

During the year, the whole of the Mornington Peninsula Scheme derived the full benefits expected from the tapping of the Bunyip River. Notwithstanding an abnormally dry period, ample water of good quality was available for all purposes throughout the large area.

Considerable extensions to the existing reticulation systems of the townships of Dandenong, Berwick, Cranbourne, Noble Park and Spring Vale and the bayside towns from Aspendale to Frankston and Mornington were carried out. Numerous applications for further extensions are being continually received and investigated.

The new Toomuc-Bunyip Main Supply Line, involving $25\frac{1}{2}$ miles of open channel and 8 miles of 2 foot pipes, tapping the head waters of the Bunyip River, proved conclusively the great value of that stream as a source of supply for the Mornington Peninsula areas. A full flow was maintained during the whole of the summer.

The reticulated supply to the township of Hastings from the Naval Base Pipe Line was completed and is working satisfactorily. It is intended to proceed immediately with the reticulation of the township of Pakenham. Schemes for the supply of Bunyip, Garfield and Longwarry and the bayside towns of Mount Martha, Crib Point, Dromana, Rosebud, Rye, Sorrento, and Portsea are being investigated.

The abnormally dry season demonstrated forcibly the great value of the Toomuc-Bunyip Main Supply Line for the irrigation under pressure of the small intense cultivation allotments established on the Closer Settlement Estates at Upper Narre Warren known as Troup's, Killeen's, and Crawley's. The settlers used water very freely and obtained good crops as the result of this irrigation.

The work of reclaiming and preparing the 2,700 acres of land purchased by the Commission in the Hallam Valley along the Main Gippsland railway line between Berwick and Dandenong, for subdivision under Closer Settlement conditions into small blocks irrigated under pressure for intense culture, is now well advanced. About 1,800 acres of the estates known as Wilson's, Sweeney's, Phillips's, Moran's and Wauchope's have been drained, cleared and well subsoiled with special tractor drawn subsoil ploughs, and then well cultivated and fenced, the blocks now being in first class order enabling settlers to produce profitable crops immediately occupation takes place. These areas have been subdivided into about 100 blocks of areas ranging from 10 to 25 acres each, and on them the erection of houses for the settlers has now commenced. Approximately 9 miles of roads in the settlement have been formed and graded and necessary bridges and culverts constructed. Some $4\frac{1}{2}$ miles of road have been gravelled and are ready for traffic. The water supply to the blocks will be undertaken forthwith. Judging from experience gained in the Narre Warren Settlement, this scheme with extensions from time to time as required, will, on account of its satisfactory and certain water supply, prove of great value to the Metropolis in meeting the steadily increasing demands for a supply of market garden and other produce, and should do much to prevent those shortages which periodically occur and cause so much inconvenience.

PLAN OF MORNINGTON PENINSULA SUPPLY SCHEME.

A general plan of this important scheme of supply showing its development to date is inserted. On the plan are shown to scale positions of main sources of supply, the Bunyip River and tributaries, all storage reservoirs, and local service basins, together with details of all main races and main lines of pipe supply. All towns with reticulated supplies and all proposals for extensions arranged for or being investigated are also shown, as well as the location of the irrigated settlements referred to above.

WONTHAGGI DISTRICT.

A marked improvement in the supply to the higher portions of the town of Wonthaggi was effected by the construction of a reinforced concrete tank 68 feet in height with a capacity of 130,000 gallons. The tank is supplied from the service basin by an electrically driven pump delivering 25,000 gallons per hour.

Notwithstanding the extreme dryness of the year an ample supply of water was available to the district.

The reticulation of North Wonthaggi is proceeding satisfactorily and will be completed at an early date. This work will provide a domestic supply to 200 houses in this area.

NORTHERN MALLEE WATER SUPPLY.

In the area of Mallee Country adjoining that supplied by the Wimmera-Mallee Scheme, but above the levels of its channels, steady progress has been made, during the year, with the valuable work of clearing and grubbing roads and providing additional bores, catchment tanks, and other means of water supply.

BORES.

During the year, one additional bore was put down in this area in the parish of Koonda. Salt water was struck at 301 feet and again at 480 feet and boring was continued to 540 feet where better quality water was obtained. This water rose to within 63 feet of the surface and was found to be suitable for grazing stock, analysis showing it to contain approximately not more than one ounce of common salt to the gallon. The total number of successful public bores in the Northern Mallee is now 99.

TANKS.

Seven new tanks of a total capacity of 24,619 cubic yards were constructed in this area during the year. Of these three of a total capacity of 9,460 cubic yards are in the Millewa country. The total number of tanks in the Mallee, including those in this area, is now 260, with a total storage capacity of 1,209,617 cubic yards, equal to 204,425,000 gallons.

WINDMILLS.

The windmills and hand pumps erected on the bank of the River Murray for the purpose of supplying Soldier Settlers on the Murray Frontage have continued to operate satisfactorily and have been of great value during the past dry summer.

ROADS.

During the year, 397 miles of roads have been grubbed, including 310 miles in the Millewa country, bringing the total length of roads grubbed and cleared by the Commission in the Mallee to 5,562 miles. Two hundred and forty-four sandhills of a total length of 31½ miles have been improved for heavy traffic by rubbing with local limestone.

The road embankments across the inlet and outlet of the Karadoc Swamp, mentioned in last Annual Report, have been completed and have already proved their usefulness in excluding floodwaters from the Swamp and in providing access to holdings within the Swamp.

LOWER MILLEWA WATERWORKS DISTRICT.

The works of the scheme required for the full domestic and stock supply to about 1,000,000 acres adjacent to the Red Cliffs—Meringur Railway and extending as far as the South Australia Border have been so far advanced that the whole scheme can be completed expeditiously when the balance of these lands is made available for settlement.

Almost the whole of the new country within ten miles of the Northern Millewa Railway from Red Cliffs to Meringur (a distance of 51 miles) has been selected, and successful applicants are now living on most of the allotments, which will be chiefly used for wheatgrowing. The reticulation of this area by channels for its domestic and stock supply is practically completed, and the constituted district has been further extended to include recently allotted lands which are now being supplied with water for the first time.

During the year, the third annual watering was successfully carried out, many new areas receiving their first supplies; and the fourth annual watering is in full swing.

The installation of a new pumping plant $1\frac{1}{2}$ miles from Yarrara Railway Station has been completed. This plant will relift water for the supply of some 320 square miles of land of even and excellent quality lying south from Werrimull. This area is too high to be commanded from the first or low-lift system. The watering of this high-lift system is now being carried out. Two crude oil engines, having a combined capacity of 370 horse-power, have been installed to pump the water required through 1 mile 68 chains of 30-inch diameter steel main to a height of 135 feet from which point it is distributed by channels, many of which have been constructed during the year. The use of crude oil as motive power at this pumping station was advisable owing to the distance of the plant from the permanent firewood supplies along the River Murray. This plant has been so arranged that it will form a unit of any larger plant required in the event of settlement in the country to the south towards Sunset. It is proposed that the country comprising this high-lift system, which is temporarily included in the Lower Millewa District, be constituted a new district to be known as the Upper Millewa District.

Six additional public storages having a total capacity of 66,000 cubic yards have been constructed. There are now 31 public storages with a total holding capacity of 286,000 cubic yards situated at railway stations and other centres throughout the district. About 213 miles of channels were also constructed during the year making a total of 563 miles constructed to date in the Lower Millewa District. Many of these are main channels and can be extended southwards to the adjacent Crown lands when made available for settlement.

A proposal for a pipe reticulated water supply for the township of Werrimull has been accepted by the residents of that rapidly growing township. A commencement has been made with the construction of the works which it is anticipated will be completed and ready for use early in the coming summer.

The administrative centre for the district has been transferred from its temporary location at Lake Cullulleraine to a more centrally situated site in the township of Werrimull, where a permanent office has been established.

The provision of specially large tanks by settlers on their lands to hold their yearly requirements continues on very satisfactory lines. This wise co-operation on the part of the landholders must undoubtedly prove an important factor in the successful settlement of this country.

DRAINAGE AND FLOOD PROTECTION SCHEMES.

KOOWEERUP AND CARDINIA.

In order to afford immediate protection from the danger of overflow of the Main Canal of the Kooweerup District, the first stage of the enlargement of the No. 4 Yallock Drain to Cora Lynn was completed, and at Cora Lynn the road embankment on the south-east side of the Canal was raised for a distance of some 12 chains, protective fencing being erected. These works now afford a much greater degree of protection from flooding to all that area situated between the Main Canal and the Southern Boundary Drain.

The important Main Yallock Creek Outlet works were carried well on towards completion. The western levee banks along the creek were continued to Bayles, and substantial progress was made with the enlargement of the upper end of the existing drain as far as No. 5 Road. This great improvement in the Main Yallock Creek Outlet will enable the required final enlargement of the No. 4 Yallock Drain leading to the outlet to be undertaken early in the coming year.

Substantial progress was also made with the work of enlarging the No. 5 and No. 6 Yallock Drains in order to secure not only the more effective drainage and protection of the adjacent flats, but to permit the scope of operations to be later on extended so as to embrace the area lying easterly between Longwarry-Modella road and the foothills drained by the King Parrot Creek. Some 70 chains of the No. 5 Yallock Drain and about 90 chains of No. 6 Yallock Drain have been completed.

Early in the year the enlargement of the 10-Mile (or Ararat Creek) Drain was completed to its junction with the Northern Boundary Drain.

In the Garfield-Iona area marked improvements have been effected by the completion of Walkers Drain across the Garfield-road; by the enlargement of the outlet into the Main Canal; and by the regrading of the 13-Mile and 14-Mile Drains. Proposals for the extension of minor drains to serve the area in the vicinity of the Garfield township are now under consideration.

The work of enlarging the upper portion of the Lang Lang River from the new cut at Heath Hill has been almost completed, and a junction will shortly be made with the previously enlarged outlet section of the river. Pending the completion of this work, a temporary levee was constructed by horse teams to provide a fair protection against the overflowing of the river on the north, or swamp, side. Lower down the river a substantial protective bank was built for a distance of some 30 chains between the railway line and the Main Coast Road, and a new cut was excavated across an existing bend in the old river course, just above the Coast Road, which will greatly improve discharge during high flows.

During the year in the Kooweerup District approximately 260,000 cubic yards of earthwork were removed chiefly by mechanical excavators, only one-seventh being done by horse teams. Timber bridges, mostly pile driven, have been constructed or extended for a total length of 450 feet; 6 miles of fencing have been erected; 500 feet of concrete pipes—15 inch to 24 inch diameter—have been laid for drainage outlets; and miscellaneous work, including the clearing of approximately 30 acres for works in progress, has been carried out.

All necessary maintenance work in the district has been carried out, including the cleaning and remodelling of some 37 miles of subsidiary and minor drains. All scrub and impeding growths along the Main Canal Reserve were removed from the Bay upstream for a distance of 14 miles.

In the Cardinia District the reconstruction of the Tooradin Inlet Drain was extended a further distance of 80 chains, and this work is now completed for a total length of $3\frac{1}{2}$ miles. About a mile of new drain has also been cut along the course of the depression known as "Gum Scrub Creek" in a north-westerly direction from its junction with the Toomuc Channel. The total length of this drain to the vicinity of Officer road as proposed is about 2 miles; and its completion will make profitable the cultivation of a large area, including a considerable proportion of Crown lands hitherto unproductive in consequence of repeated floodings.

At Dalmore, the enlargement and deepening of the Toomuc Catch Drain has been extended 160 chains to the junction of Hagelthorns Drain by a Dragline Excavator. This machine will at an early date be utilized in the construction of the lateral drain to connect with McGregors Catch Drain.

On the western side of the district substantial progress has been made with the construction of the Tooradin Channel; a further length of 2 miles to Lynes road having been completed by the use of a bucket dredge, assisted through short difficult sections by horse teams. The completion of this work to intercept the Clyde Creek and watercourses in the vicinity is most essential for the satisfactory protection of the western part of the district. In the construction of this channel, provision has been made for its enlargement, when desired, into a main contour channel to tap the Cardinia Channel and divert its flood flows direct to the sea, thus giving full protection to the Dalmore area.

Throughout the Cardinia District, of a total of 240,000 cubic yards of earthwork, at least 200,000 cubic yards have been excavated by machinery; timber bridges for a total length of 215 feet have been constructed; 5 miles of fencing have been erected; and miscellaneous work, including pipe outlets and the clearing of some 20 acres for works in progress, has been carried out, as well as all necessary maintenance work.

ECHUCA.

The works for the protection of the properties within the Echuca (High-street) District have again served the purpose for which they were designed and constructed.

LOCH GARRY.

The works carried out for the protection from flooding of lands within the Loch Garry Flood Protection District have effectively served their purpose during the year.

KANYAPELLA.

During the whole of the exceptionally dry season experienced last year, the works on Warrigal Creek have satisfactorily maintained water supplies in this creek for the use of landowners, whilst affording complete protection from flooding to the lands within the District.

CARRUM.

The work of protecting the lands in the Carrum area, north of the Eumemmerring Main Drain, from flooding caused by the Eumemmerring Creek overflowing McDonalds embankment, is now sufficiently well advanced to afford a very considerable measure of protection to this area. The construction of the first section of this drain and the formation of an embankment on its north side from "Elliott's Lookout" to Wells road have been continued and completed by the use of a bucket dredge and this work has been linked up with that portion of the same section previously completed from Patterson River outlet to Wells road. A cut has been made at the southern end of McDonalds bank to enable the Eumemmerring Creek flood waters to freely enter the new canal, which is of ample capacity, thus preventing the topping of McDonalds bank even at this stage by any but very exceptional floods.

It is proposed later on to raise McDonalds bank and the southern embankment of the Eumemmerring Main Drain from "Elliotts Lookout" to Wells road in order to provide complete protection to the areas on both sides of the Eumemmerring Drain. In the meantime a bucket dredge is being employed to continue the enlargement of the Eumemmerring Creek from "Elliotts Lookout" mainly along its existing course to the Cranbourne road, where it will link up with the Hallam Valley Main Canal, thus providing a satisfactory direct outlet to the sea for the whole of the flood waters from Eumemmerring Creek and its tributaries. The dredge has now crossed the Main Dandenong to Frankston road, completing $2\frac{1}{2}$ miles of this work. It is anticipated that this enlarged waterway will be available for use during the coming year.

MURRAY LEVEES.

During the year the members of the Interstate Committee of Representatives on Murray Levee Proposals, comprising officers of the New South Wales Water Conservation and Irrigation Commission and the State Rivers and Water Supply Commission, met at Melbourne and at various points along the River Murray where levee banks were proposed. Numerous applications to erect levee banks were received from both States and were dealt with by the Committee.

Approved reclamations above the junction of the Murray and Little Murray Rivers now amount to approximately one-third of the total allowed in the agreement entered into by the two States. Careful watch is being kept on the behaviour of the river to ascertain the efficiency of these reclamations on the flood levels, so that, if necessary, the agreement may be reviewed.

RIVER EROSION, DRAINAGE, AND GENERAL.

During the year, applications for permission to carry out flood protection, drainage, and other works have not been numerous owing to the dryness of the season. Investigations have been made in connexion with applications received, and in many cases permission has been given under the provisions of the *Water Act* 1915 for the carrying out of approved works by the parties interested at their own cost.

Plans of the Tarwin River flats, mentioned in last Annual Report, were completed during the year, and a scheme of flood protection and drainage was prepared. Particulars of this scheme were forwarded to the landholders for their consideration; but, owing to the very high annual charges involved in connexion with a complete scheme, they requested that a smaller scheme be investigated. In accordance with the request, a minor scheme has been prepared, and particulars have been supplied to the interested landholders. This scheme, however, also necessitates a high annual charge on the areas benefited by the proposed works.

The preparation of plans from the surveys of the Latrobe River flats are in progress.

RIVER GAUGING.

As provided by Section 32 of the *Water Act* 1915, the work of gauging and recording the flows of the principal rivers and streams of the State has been continued. The returns of volumes stored in reservoirs have been made available weekly for publication.

During the year, gauging stations have been established on the Eastern and Western Branches of the Barwon River at Forrest and on Goodmans Creek at Darley. The number of gauging stations in the State is now 62.

DIVERSION OF WATER.

In the exercise of the right of the State to the use and flow, and to the control of water, in rivers, creeks, streams and watercourses, lakes, lagoons, swamps, and marshes, supervision has been maintained over all such waters.

Though the weather conditions were very favourable to the artificial application of water for irrigation, the use of water by private diverters was somewhat less extensive than in previous years under like conditions. Nevertheless the number of applications for authority to divert water from streams throughout the State has been well maintained.

On account of the very dry summer and consequent low flow in various streams, it was found necessary during February, March, and April to restrict and regulate private diversions from the River Murray between Bundalong and Piangil, and from the Plenty River and Dandenong Creek. These restrictions and the regulation of diversions were carried out with little inconvenience to the diverters, and satisfactory results were obtained.

The authorized diversions now in force are:—

Yearly permits	..	..	..	1,579
Flood permit	..	..	..	1
Licences	..	..	..	18
				<hr/> 1,598 <hr/>

GOULBURN HEADWORKS AND MAIN CHANNELS.

These works comprise the Goulburn Weir; the Goulburn-Waranga Channel, extending from the Weir to Waranga Reservoir, a distance of $23\frac{1}{2}$ miles; the Waranga Reservoir; the Waranga-Rodney Channel, a distance of $4\frac{1}{2}$ miles; the Main Channel, extending westerly from the Waranga Reservoir to the Loddon River, a distance of 98 miles; the Tandarra-Calivil Main Channel extending from 64 miles 69 chains on the Waranga Western Main Channel north-westerly to Tragowel Plains, No. 1 Main Channel, a distance of 26 miles; and the Main Eastern Channel, which extends from the Goulburn Weir to the Katandra area, a distance of $49\frac{1}{2}$ miles. The total length of main channels is 202 miles. The Irrigation Districts supplied are South Shepparton, Shepparton, Katandra, Rodney, Deakin, Tongala, Stanhope, Rochester, Echuca North, Dingee, Tragowel Plains, and Boort.

A break in the high embankment of the Waranga Western Main Channel at 30 miles 45 chains on 3rd March, 1927, caused a temporary cessation of supply. Repairs were put in hand immediately and proceeded continuously to completion. Gradually increasing supplies were made available as the progress of the work from time to time permitted.

The work of enlarging the Eastern Goulburn Main Channel has proceeded throughout the year, and good progress has been made. Two Dragline Excavators and one Bucket Dredge have been employed continuously. The capacity of the channel has been increased from the Goulburn Weir to the Muddy Creek Syphon, a distance of about 10 miles. Gravel and beaching stone have been carted to Muddy Creek for the purpose of enlarging the existing syphon. Work has been carried on, during the year, without any interruption to the irrigation supplies.

The Waranga Western Main Channel is being enlarged to meet the requirements of the proposed extensions in Rochester, Calivil, Tragowel Plains, and the extension of this channel west of the Loddon River. This work was commenced during the year, two Dragline Excavators being employed. At Wanalta it is proposed to obtain, at an early date, two additional machines for this work. Final surveys have been completed and plans prepared for the first 6 miles of the Waranga Western Main Channel Extension west of the Loddon River. Several sections of earthwork in the first 2 miles are in course of construction, contracts having been let therefor, and tenders have been invited for the excavation of the remaining sections to 6 miles.

NEW STORAGES.

SUGARLOAF RESERVOIR.

The dam for this reservoir is situated on the Goulburn River below the junction of the Delatite River, about 18 miles from Alexandra. The bed of the river at the site is at an elevation of about 700 feet, the datum being low-water Hobson's Bay. The design now being carried out, with the slightly increased height recently adopted, will store water to a height of 823 feet above the same datum, and will have a capacity of 306,000 acre feet. Surveys made show that a storage basin to the elevation of 875 feet above datum, with capacity of 918,000 acre feet, could be constructed, when requirements call for this additional increase—having in view that there are other sources of supply which probably could be more rapidly and cheaply made available.

The dam constructed consists of a diaphragm wall of reinforced concrete, built from bedrock (which in places is 75 feet below ground surface) to crest level, a wall of clayey material on the upstream side of the diaphragm, and supporting masses of rock quarried from the adjacent hills. The diaphragm, together with the concrete wing and approach walls at the Sugarloaf end, is now completed to the level required (for storage of 306,000 acre feet) having a maximum height of 139.75 feet above the river bed. The clay filling on the upstream side of the concrete diaphragm has been completed. The rock-fill on each side of the diaphragm has been built up to the required height for the entire length of the bank.

The stems for the gates at the second (emergency or power) outlet, as well as the hydraulic lifters for operating these gates, were delivered and have been placed in position. The machinery in connexion with the lifters is now being installed.

The State Electricity Commission is now erecting the 13 ft. 6 in. diameter steel power pipe to lead the discharge from the emergency or power outlet to the turbines connected with the generators. By arrangement with that Commission, the Water Commission has, up to date, carried out the concrete work in connexion with the supports for the power pipe and the foundations for the turbines and generators.

Very good progress was made during the year with building up the concrete crest of the spillway, so as to increase the storage capacity. Early in November, 1926, the possible storage capacity had been raised to 238,000 acre feet, an increase of 103,000 acre feet since June, 1926, and 208,000 acre feet of water were actually stored by the beginning of December last. By the middle of April, 1927, the work was so far advanced as to render available for the coming season the full storage capacity of 306,000 acre feet. The excavation of rock in the upper portion of bywash channel is practically completed; and that in the lower portion, through which the water flowing over the crest will return to the river, will be completed during the ensuing year. There still remains some concrete to be poured along, and adjoining, the toe of the dam, and probably later on, some further concreting in the bywash channel may be considered advisable.

WARANGA RESERVOIR ENLARGEMENT.

During a violent windstorm on 17th November, 1926, the embankment was subjected to probably the heaviest wave action in its history. With the exception of the dislodgment of the stone facing in a few isolated places, temporary repairs to which were immediately effected, no damage was caused. Permanent repairs were carried out as soon as conditions permitted.

The maximum depth of water stored in the Reservoir during the year was 30 feet 6½ inches, being 5½ inches below the designed full supply level. The behaviour of the embankment under this condition was in every way satisfactory.

The whole embankment is being fenced off as a prevention against the trespassing of stock.

WIMMERA STORAGES.

Considerable progress was made with the construction of the first and second stages of the Pine Lake Reservoir. The work of beaching the embankment of the first stage, involving the placing of 13,000 cubic yards of stone, was completed, and the Reservoir is now ready to be filled to a capacity of 34,000 acre feet. The earthwork of the second stage of the embankment, involving 300,000 cubic yards to increase the storage capacity to 52,000 acre feet, was considerably advanced during the year, 175,000 cubic yards of earthwork being placed in position. It is expected that the work will be completed during the coming year.

This material increase in the present capacity of the Wimmera storages will undoubtedly prove of great value in the near future in meeting the increasing demands on the scheme due to the steady development in the capacity of storages provided by individual landholders for farm purposes as well as those built for public and town supply requirements.

TOTAL STORAGES IN STATE.

In 1902 the total capacity of storages in the State was 172,000 acre feet. The present capacity is 1,161,640 acre feet, and when the Wimmera Storages and Glenmaggie Reservoir are complete the total capacity will be about 1,279,640 acre feet. The Hume Reservoir, in course of construction, will also contain 2,000,000 acre feet, half of which can, subject to the provisions of the River Murray Agreement, be credited to the State of Victoria. The following statement sets out the capacities of the various storages in the State :—

EXISTING STORAGES.								Capacities in Acre feet.
<i>Goulburn System—</i>								
Goulburn Weir	..	..	..	..	..	..	..	20,700
Waranga	..	..	..	..	..	..	..	333,400
Sugarloaf	..	..	..	..	..	..	..	306,000
								<hr/> 660,100
<i>Loddon-Murray System—</i>								
Laanecoorie	..	..	..	..	..	..	..	14,000
Kerang North-West Lakes	..	..	..	..	..	..	..	92,000
Kow Swamp	..	..	..	..	..	..	..	40,860
Lake Boga	..	..	..	..	..	..	..	28,000
Long Lake	..	..	..	..	..	..	..	3,820
								<hr/> 178,680
<i>Wimmera-Mallee System—</i>								
Lake Lonsdale	..	..	..	..	..	..	..	45,480
Wartook	..	..	..	..	..	..	..	23,800
Fyans Lake	..	..	..	..	..	..	..	17,100
Taylor's Lake	..	..	..	..	..	..	..	30,000
Pine Lake (part of 62,000 acre feet)	..	..	..	..	..	..	..	34,000
Lower Wimmera Weirs	..	..	..	..	..	..	..	2,870
Batyo Catyo (Avon Regulator)	..	..	..	..	..	..	..	5,000
Lake Whitton	..	..	..	..	..	..	..	1,300
Earthen Storages, Township Reservoirs, and Mallee Tanks	..	..	..	..	..	..	..	5,320
								<hr/> 164,870
<i>Maffra-Sale System—</i>								
Glenmaggie Reservoir (part of 150,000 acre feet)	..	..	..	..	..	..	..	80,000
<i>Coliban System—</i>								
Upper Coliban	..	..	..	..	..	..	..	25,500
Malmsbury	..	..	..	..	..	..	..	12,300
Subsidiary Reservoirs	..	..	..	..	..	..	..	5,070
								<hr/> 42,870
<i>Werribee System—</i>								
Pykes Creek	..	..	..	..	..	..	..	14,850
Melton	..	..	..	..	..	..	..	17,000
								<hr/> 31,850
<i>Mornington Peninsula System—</i>								
Beaconsfield, Frankston, and Mornington Reservoirs	..	..	..	..	..	..	..	1,560
Service Basins	..	..	..	..	..	..	..	160
								<hr/> 1,720
<i>Miscellaneous—</i>								
Wonthaggi	..	..	..	..	..	..	..	1,550
								<hr/> 1,550
Total capacity of existing Storages								<hr/> 1,161,640

ADDITIONAL STORAGE BEING PROVIDED BY WORKS IN COURSE OF CONSTRUCTION.

<i>Wimmera-Mallee System—</i>								
Pine Lake (balance of 62,000 acre feet)	..	..	..	..	..	..	..	28,000
Green Lake	..	..	..	..	..	..	..	20,000
								<hr/> 48,000
<i>Maffra-Sale System—</i>								
Glenmaggie Reservoir (balance of 150,000 acre feet)	..	..	..	..	..	..	..	70,000
<i>Murray System—</i>								
Hume Reservoir, at junction with Mitta River, half share	..	..	..	..	..	..	..	1,000,000
								<hr/> 1,000,000
Total capacity of Storages, when works in hand are completed								<hr/> 2,279,640

RIVER MURRAY WATERS AGREEMENT WORKS.

GENERAL OUTLINE.

The scheme of works provided in the River Murray Waters Acts, passed by the Governments of the Commonwealth and of the States of New South Wales, Victoria, and South Australia, comprises storages on the Upper River Murray and at Lake Victoria, locks and weirs in the course of the River Murray from its mouth to Echuca, and also locks and weirs on the lower part of the River Murrumbidgee. The Acts also provide that, for purposes of construction, the Minister of Public Works of New South Wales shall be the Constructing Authority for that State ; that, for South Australia, the Commissioner of Public Works shall be the Constructing Authority ; and that the State Rivers and Water Supply Commission shall be the Constructing Authority for Victoria.

A conference of the members of the River Murray Commission and the engineers representing the three Constructing Authorities was held at Hume Reservoir on 12th August, 1926, as a result of which the following resolution adopted at that meeting was conveyed to the four Contracting Governments, viz. :—

“ That the members of this Conference of Engineers, after full consideration of the relative costs and the benefits which would be derived from reservoirs of different capacities, unanimously agree to recommend to their respective Governments that the Hume Reservoir be proceeded with to completion to a capacity of 2,000,000 acre feet, subject to the proviso set out in Resolution No. 4 adopted at the conference of Ministers held on the 9th August, 1924, viz. :—Provided that if the reservoir be increased above the capacity of 1,100,000 acre feet it be understood that the additional water shall be used for meeting the present allocation obligations under the River Murray Agreement and as a reserve for dry years, such reserve to be used at the discretion of the River Murray Commission.”

Following upon correspondence which passed between the four Contracting Governments, a decision was finally arrived at that the capacity of the Reservoir be increased to 2,000,000 acre feet, and the River Murray Commission was so advised on the 31st December, 1926.

During the year the Constructing Authority for New South Wales has been engaged on the section of the Hume Reservoir works within its territory. In this section good progress has been made with the work, which has been almost wholly confined to the preparation of the foundations for the spillway and south wing wall within the coffer-dam enclosing the bed of the river channel and to placing concrete therein.

A commencement has been made by the New South Wales Authority with the concreting of the lock chamber within the first coffer-dam on the Weir-lock No. 10 at Wentworth.

The site for the Weir and Lock No. 15 at Euston has been decided upon, and plans prepared by the New South Wales Authority have been approved by the River Murray Commission.

The Constructing Authority for South Australia has been engaged on works at various sites from Blanchetown to Lake Victoria ; Weir-locks Nos. 1, 3, 5 and 9 have been completed ; Nos. 2 and 4 are approaching completion ; No. 6 has been commenced ; and the storage works at Lake Victoria have been completed with the exception of minor works in connexion with the inlet and outlet channels.

The State Rivers and Water Supply Commission, the Constructing Authority for Victoria, has finished the weir-lock at Torrumbarry, and is now carrying out the following works under the Agreement.

HUME RESERVOIR.

During the year, the construction of the main embankment and one of the extension embankments was continued. 392,000 cubic yards of earthwork were placed over a length of 1,500 feet, the average height of the main embankment over this length being now approximately 50 feet above the level of the river flats; and, towards the end of the year, the filling of an additional 400 feet of main embankment nearer to the river was commenced; 3,300 cubic yards of rock were excavated from the core trenches of these embankments; 4,447 cubic yards of concrete and 32½ tons of steel were placed in the core wall; and 17,100 cubic yards of gravel were transported from Chiltern to the works. Three steam locomotives, three concrete mixers, nine winches, a motor truck, two pile-driving machines and hammers, and a quantity of steel rails were added to the plant.

The design of the bridge over the River Murray for the Bethanga District was completed; a camp to accommodate about 100 men was established at the site of the bridge; and the construction of the piers was commenced. Good progress has been made with the work; a temporary bridge, for constructional purposes, was built over the river; the excavations for the foundations of six of the ten piers were completed and the excavations for two other piers commenced; all the concrete piles required were cast; the piles for the foundations of one of the five piers which require such piles were driven; and a commencement was made with the concreting of three piers. The work carried out included 3,700 cubic yards of foundation excavations, 900 cubic yards of concrete in piers, and the casting of 280 concrete piles of which 33 were driven in the foundations of one of the piers.

Investigation work to determine the best location for a new diverting weir on the Upper Murray to supply new irrigation areas from Hume Reservoir is being continued.

No. 11 WEIR AND LOCK, MILDURA.

During the year practically all the work in connexion with the lock and canal was completed. In the navigation pass, the first coffer-dam on the Victorian side of the river was dismantled, the second coffer-dam, on the New South Wales side, was constructed, unwatered, and all permanent work therein completed. All permanent works in the river are now completed. These comprise the movable weir trestle track right across the river, the concrete aprons in the river bed both upstream and downstream of this track, the steel sheet pile diaphragms beneath these aprons, and the concrete abutments—one on either side of the river. The dismantling of the second coffer-dam is in progress. The steel trestle units of the movable weir are under construction at the contractor's works and their delivery on the trestle track above flood level at Mildura is due shortly. Further work has been carried out including 47,000 cubic yards of earthwork, 10,380 cubic yards of concrete, 93 tons of steel reinforcement, 6,600 square yards of stone beaching, 1,250 lineal feet of bearing piles, and 10,400 square feet of steel sheet piling; and 30,900 tons of materials were transported to the works. It is expected that this weir-lock will be brought into operation in the beginning of the year 1928.

TORRUMBARRY WEIR AND LOCK.

During the year the weir and lock have again been in successful operation. The movable weir has remained in position since it was so placed on the 19th November, 1926, the low river and continuity of irrigation requirements necessitating this.

WORKS CONTROLLED BY OTHER AUTHORITIES.

(Under General Supervision of the Commission.)

SEWERAGE IN COUNTRY DISTRICTS.

The Bendigo Sewerage Authority has completed the reticulation of the No. 1 (City) Area and is now engaged in the construction of sewers for the reticulation of the No. 2 (Quarry Hill) Area. Approximately 2,500 tenements are now connected to the sewers. Plans for improved treatment works to purify the sewage before disposing of it on the land have been prepared, and it is intended to commence, at an early date, the construction of these works.

The Ballarat Sewerage Authority is making satisfactory progress with the construction of its works, some 800 tenements being now connected to the sewer system. The treatment works which are designed on the separate sludge digestion system are operating satisfactorily.

The Colac Sewerage Authority has the construction of the sewers, pumping station, and treatment works well advanced, and will shortly be in a position to permit the connexion of tenements.

The Horsham Sewerage Authority is carrying out the detailed survey of the town preparatory to proceeding with the design of the works. The Swan Hill Waterworks Trust was constituted a Sewerage Authority, and is making arrangements for the detailed survey of the town. Applications for the constitution of Sewerage Authorities at Echuca, Lorne, and Mildura are under consideration. Other country centres contemplating the installation of sewerage systems are Ararat, Bairnsdale, Benalla, Kyneton, Maryborough, Wangaratta, and Warrnambool.

COUNTRY WATER SUPPLIES.

Under the general supervision of the Commission many important works were carried out by Waterworks Trusts and local Governing Bodies of which there are now 106 and 18 respectively.

The Alexandra Waterworks Trust has installed a new Electric Pumping Plant to provide an improved supply to the town.

The Ararat Borough Council increased the water storage at Mt. Cole Reservoir to 90 million gallons by raising the existing wall 17 feet.

The Bairnsdale Waterworks Trust, which recently erected a concrete water tower, is now installing a new pumping plant and settling basins in order to provide an improved supply.

The Boort Waterworks Trust is constructing a reinforced concrete tank of 200,000 gallons.

The Coleraine and Casterton Waterworks Trust has practically completed the construction of works, and both these towns are now receiving an ample supply of water under good pressure.

The Inglewood Borough Council installed a pumping plant on the Loddon River from which the water is pumped through 5 miles of pipe to the storage reservoir at the town.

The Kyabram Waterworks Trust constructed a new storage basin of 2,000,000 gallons capacity which is filled from the Commission's local channel.

The Lancefield Waterworks Trust is constructing an additional reservoir on Garden Hut Creek.

The Macedon Waterworks Trust has supplemented the supply from its reservoir by the construction of a pipe line to the Willimigongon Creek.

The Maryborough Waterworks Trust is proceeding with the renewal of its main pipe line. Contracts for the first section of 52,000 feet have been let.

The Mooroopna Waterworks Trust is constructing an elevated concrete tank of 100,000 gallons capacity to enable a supply to be maintained to the canning factory and the district hospital.

The St. Arnaud Borough Waterworks Trust has commenced the construction of a storage reservoir of 180,000,000 gallons capacity to provide reserve storage for dry years.

The Shepparton Urban Waterworks Trust, having completed the new pumping plant, is now proceeding with a programme of extensive improvements to the reticulation system.

The Toora Waterworks Trust has extended its works to supply Port Franklin.

The Traralgon Waterworks Trust has accepted a tender for a concrete tank to supply the higher levels of the town, and is also carrying out improvements to the reticulation system.

The Violet Town Waterworks Trust has renewed the main pipe line from the Honeysuckle Creek to the township.

Pipe extensions and other works have been carried out at Benalla, Charlton, Colac, Donald, Elmore, Hamilton, Horsham, Kerang, Kilmore, Leongatha, Murchison, Riddells Creek, Rushworth, Warracknabeal, and Yea.

Proposed water supply schemes for Bridgewater, Bruthen, Foster, Heyfield, Portland, Port Fairy, Stratford, and Tallarook were investigated.

Steps are being taken for the Shire of Donald and the West Charlton Waterworks Trusts' Districts to be taken over by the Commission, which is now supplying the areas formerly controlled by the Trusts.

GENERAL.

LANDS UNDER CLOSER SETTLEMENT IN IRRIGATION DISTRICTS.

The main feature of the year in connexion with Closer Settlement in irrigation areas has been the readiness with which land-seekers have taken up blocks in the newly acquired areas subdivided and made available by the Commission at Katandra, Maffra, and Sale—under the provisions of the Migration Agreement between the Imperial, Commonwealth, and State Governments—and at Hallam Valley, the market gardening settlement recently established by the Commission, near the metropolis.

Altogether 239 applications for irrigable farms were approved by the Commission, the demand being fairly consistent throughout the year. The successful applicants comprised 24 discharged soldiers, 154 local civilians, and 61 land-seekers from oversea.

The principal development has taken place at Katandra and North Shepparton in the East Goulburn area, where 25 properties containing in all 13,400 acres of lands eminently suitable for irrigation had been purchased by the Commission, and temporarily leased during the construction of the new distributary channels for the service of these lands, and of large areas of privately-owned lands in the vicinity. Full irrigation supplies to these East Goulburn lands having been assured by the completion, during the year, of the Sugarloaf Reservoir to its storage capacity of 306,000 acre feet, and substantial progress having been made with the supply channel system, the Commission has now subdivided for settlement some 8,000 acres. Of this five subdivisions were made, of Katandra lands, aggregating 6,700 acres, and one at North Shepparton, comprising the two properties, known as Pinchbeck's Estate, of 1,280 acres. After making the necessary deductions for roads and channels, and for future township requirements, these six subdivisions yielded 88 Closer Settlement holdings, having an average area of 81 acres. The properties subdivided supported only seventeen families prior to their acquisition by the State. It is gratifying to note that 70 of these blocks have already been selected.

As stated above, the Katandra area is being developed under the Oversea Settlement Scheme, which provides that the Commission, although receiving the advances for development from the Imperial and Commonwealth Governments at a low rate of interest, may allot up to 50 per cent. of the holdings to local applicants. Under this provision, the Commission, up to date, has placed on Katandra land 32 local settlers and 35 from oversea.

The Maffra-Sale irrigated Closer Settlement area, has been further extended by the purchase of an additional area of 2,500 acres, including the Lyons's Estate of 803 acres, and several smaller properties. Those known as Hawkins's and Henebery's Estates, comprising about 480 acres, were subdivided during the year into nine holdings, most of which are already settled. The balance of the purchased area is now being prepared for subdivision, and houses, for the new settlers, are in course of erection. As the works for the distribution of water for irrigation have been completed (except as regards Mayhew's Estate) the arrangement by which some earlier soldier settlers, during the construction period, occupied one block as a permanent holding, and an adjoining block under a temporary lease, has been terminated, and a re-subdivision is now being effected by which final areas will be allotted on a permanent basis. The settlement, so far effected in this area, under the Migration Agreement, has been the placing, on irrigable farms, of 22 local settlers, and 29 from oversea.

The continued demand for blocks in the Hallam Valley Estates Irrigation Settlement, the location of which is shown on the plan inserted in this Report, was met by an extension which provided 28 additional blocks, averaging 17 acres each. Most of these holdings have been taken up; and, as the demand for this class of farm is apparently not yet satisfied, a further subdivision is being arranged. Two properties (Wilson's and Sweeney's) now being settled will provide for more than fifty times the number of families residing on them prior to purchase by the State.

The following statement shows the lands purchased and subdivided by the State, and the extent of settlement on each estate. The subdivided portions of these estates are already supporting nearly eighteen times as many families as resided thereon prior to their subdivision for Closer Settlement.

Closer Settlement Estates.	Area of Lands purchased by the State in Acres.	Properties Subdivided.						
		Area in Acres.	Number.	Number of Families thereon when Purchased.	Subdivided into—		Number of Closer Settlement Blocks now occupied.	Present Increase in Number of Families.
					Number of Closer Settlement Blocks.	Average Area in Acres.		
Shepparton	14,170	14,170	33	29	389	34	370	341
East Goulburn	13,400	9,780	20	19	111	79	93	74
Rodney	3,230	3,230	8	5	55	57	41	36
Stanhope	21,500	21,500	7	13	290	63	260	247
Kyabram	4,600	4,420	9	12	69	62	65	53
Tongala	19,090	18,930	41	36	317	58	305	269
Koyuga	4,200	4,200	} Pt. 1	..	54	73	51	51
Cornelia Creek	2,500	2,500			19	161	17	17
Nanneella	9,040	9,040	18	8	125	70	119	111
Echuca	3,600	3,600	8	4	30	105	30	26
Bamawm	13,400	13,400	28	21	192	65	190	169
Dingee	500	500	3	1	20	23	15	14
Calivil	3,900	..	..	..	..	..	..	..
Cohuna	12,000	12,000	29	10	142	80	117	107
Koondrook	9,060	9,060	14	10	132	63	104	94
Swan Hill	12,500	12,500	34	16	329	36	308	292
Nyah	3,800	3,800	8	1	237	15	231	230
Merbein (Crown)	8,300	8,300	..	..	423	20	423	423
Red Cliffs	33,000	18,000	1	3	706	17	699	696
Bacchus Marsh	70	70	1	..	2	36	2	2
Werribee	10,000	10,000	1	11	233	36	229	218
Hallam	3,370	1,000	5	3	59	17	50	47
Maffra-Sale	10,570	7,000	15	16	142	45	101	85
Properties acquired under Sec. 20, <i>Closer Settlement Act</i> 1915, outside above Estates	215,800	187,000	284	219	4,076	42	3,820	3,602
	19,540	..	..	..	..	..	200	..
	235,340							

PROGRESS OF IRRIGATED CLOSER SETTLED DISTRICTS.

The development of irrigation in all parts of the world is one of slow but generally sure growth, and it is therefore gratifying to note that progress in the various irrigation districts of this State has been very satisfactory and compares most favorably with the records of like districts in other parts of the world. This progress is shown in many ways, but chiefly in the increase in the area irrigated in the State, in the increase in the value of stock, implements owned by settlers and permanent improvements effected by them, in the increase in the population, and the general prosperity of the towns in the irrigation areas.

The increase in population in the irrigation districts as a result of the intensive methods of agriculture has been most significant, especially at a time when there has been a decrease in the rural population of the State as a whole. Thus, since the constitution of the State Rivers and Water Supply Commission, although there has been a decrease in the rural population of the State outside the irrigation districts, there has been an increase of 30,000 in the irrigation areas.

That this is not due to any inherent qualities in the soil is shown by the fact that, whilst there has been a reduction of 31 per cent. and 25 per cent. in the population of the Shires of Tungamah and Numurkah respectively, which are without irrigation, there have been increases of 27 per cent. and 29 per cent. in the adjoining Shires of Rodney and Shepparton, which are irrigated.

In the Shire of Shepparton the increase has taken place mainly in the Closer Settlement area, which, as will be shown by the statistics hereunder, is a striking example of the increased national wealth brought about by the judicious expenditure of moneys on Closer Settlement and the provision of supplies of water for irrigation. The total area of Closer Settlement lands in the Shepparton District is some 14,170 acres, of which 9,200 acres were purchased and subdivided about fifteen years ago, and formed the original Shepparton Estate. The additional areas have been purchased and subdivided during the last few years, and although satisfactory progress is being made, it will of course be some time before the newer lands show the striking results of the older settled areas.

The original area prior to its purchase comprised 21 properties which supported, by wheat growing and sheep grazing, some twenty families. After purchase it was subdivided into 290 holdings, varying from 2 acres (agricultural labourers' lots) to farm allotments of 70 acres.

At the inception of the settlement dairying was the main industry ; but, as the opportunity offered, areas were planted to deciduous fruit, with the result that the production of fruit is now the main industry. During this developmental period lessees were not only unable to meet all their instalments as they became due, but needed advances to pay for permanent improvements, such as houses and farm buildings and fruit trees. These advances amounted in all to £45,000. As their holdings came into bearing, however, the settlers were able to further develop them, and also to pay off the arrears of instalments on land and of the moneys advanced. In some cases their holdings were made freehold by paying off all amounts before they became due.

The development of the Shepparton Settlement over this period may be best indicated by the following figures showing the position in the years 1916 and 1926 :—

	1916.	1926.
Value of improvements	£69,320	£230,000
Value of stock	£16,233	£31,000
Value of implements	£9,269	£23,000
Area under orchard	2,026 acres	5,000 acres
Amount paid off on land	£16,000	£46,000
Amount paid off on advances	£14,000	£25,000

At the same time there has been a considerable increase in the value of the land, with the result that, after adding this to the value of improvements, stock, and implements, the lessees' assets are at least £464,000, against which there is the liability to the State of only £128,000 for balances due for land and advances, leaving a net amount of £336,000, as against an estimated capital of £43,000 held by settlers when the blocks were allotted.

Other irrigation districts which contain a number of soldier and overseas settlers are progressing along similar lines ; but, because of their more recent settlement, are naturally not yet in the same position as those which have had a longer time to develop.

During the year, the number of settlers' co-operative companies has been increased by the formation of a co-operative packing company at Murrabit for the purpose of packing and placing on the market the citrus fruits from this area. Other packing and canning companies have had successful years. The Red Cliffs Co-operative Company, which is engaged in packing dried fruits, although subject to competition from privately-owned sheds, still processed the greater portion of the dried fruit from the area. In the same way the Co-operative Shed at Woorinen also secured the bulk of the business from its area. The canneries at Shepparton and Ardmona (Mooroopna) again had a successful season. However, owing to the ravages of thrip and the vagaries of the season, the quantity of fruit processed by the Shepparton cannery (5,445 tons) was slightly less than that processed in the preceding season, although more than in any season prior to that. In order to better cope with the supply of fruit at peak periods the Ardmona Cannery is increasing its plant by the addition of a concrete cool store, which will enable it to extend its period of seasonal operations both for peaches and pears and to keep up an even quality of its product throughout the season.

The suitability of the irrigation districts for dairying has again been demonstrated by the results in the State Competition for pure bred cows and in the reports of the Herd Testing Associations for grade cows.

In the former competition, which comprised herds from the whole State, two of the first three places were secured by herds from irrigation districts, and cows from the irrigation areas gave the highest individual yields for the 273 days' test in the mature class and also in some of the classes for younger cows. Further, at the last Royal Agricultural Show held in Melbourne, the *Weekly Times* prize for gross butter fat was won by Mr. R. Maher, a settler in the Tongala Irrigation District, and the same settler also won the "Payne" prize for the cow producing butter fat most economically.

It is interesting to note as further evidence of the reputation of the cattle in the Tongala Irrigation District that ten head were recently purchased in this district for export to Java for the purpose of improving the quality of the herds there.

The Herd Testing Association movement has also taken a firm hold in the irrigation districts. Thus of the 65 groups in the State, 21, or practically one-third, are in the irrigation districts. In the Tongala Association, which was one of the first to be formed, the results were so significant that the settlers soon saw the wisdom of testing, with the result that there are now four groups in the association in lieu of one at its inauguration. From returns available from the various associations it would appear that the Rochester record will rank very high, as four herds had an average production in the vicinity of 400 lbs. of butter fat per cow in the 273 days they were under test.

The grazing and fattening of sheep on lucerne have been also steadily maintained. The Stanhope District probably leads in this respect, as during the past year over 80,000 sheep were fattened in the area and trucked to the Melbourne market.

The development of market gardening at Werribee and Bacchus Marsh and in the new areas at Narre Warren and Hallam Valley has continued. A further development during the past season has been the building of glasshouses for the early production of tomatoes, cucumbers and similar vegetables. Flower growing is also developing, several of the settlers at Narre Warren devoting their whole attention to the growing of flowers for the Melbourne market. As already mentioned, additional areas in the Hallam Valley Reclamation Scheme have been made available and have been eagerly applied for.

The dried fruit areas had, during the last year, one of the best seasons ever experienced in the industry. The yield on the bearing areas of sultanias was very considerably above the average, being in the vicinity of two tons per acre, many blocks bearing considerably higher than this. The yields of lexias and currants were also considerably above the average. Growers were also fortunate in having a good drying season, which enabled the large crop to be processed without damage, giving a product of first quality.

During the year, settlement on the two schemes under the Migration Agreement with the Commonwealth and British Governments has been proceeding. A total of 118 settlers have been placed on the two areas of Maffra-Sale and Katandra; these comprise practically equal proportions of local men and settlers from oversea, a number of the latter being men who, arriving in Australia with limited capital, were able, after a few years, to earn and save the money necessary to take up holdings.

The Irrigation Research Committee, comprising representatives of the Department of Agriculture and the Commission, has continued its experiments. The results of the demonstration plots of the manuring of lucerne and the growing of pasture grasses have been distributed by means of leaflets and wireless talks, and there has consequently been a marked increase in the use of manures and the planting of grasses. This has doubtless resulted in a decided increase in the return per acre of lucerne throughout the various districts; but, as the greater portion of the lucerne is grazed, definite figures cannot be quoted.

The research work at Tresco has been continued, and it is hoped that as a result definite advice as to the best system of draining salted land will be shortly made available.

ADMINISTRATION.

EXTENSIONS AND EXCISIONS.

The Maffra Irrigation and Water Supply District was extended by the addition of some 27,000 acres not heretofore in any district, bringing the total area of the district up to about 35,000 acres. The district so enlarged was then sub-divided, and Maffra District, containing approximately 20,000 acres, and Sale Irrigation District, 15,000 acres, were constituted thereout.

Tragowel Plains Irrigation District was extended by adding about 22,130 acres, of which 20,000 acres previously formed part of Loddon United Waterworks Trust District, the balance not previously being in any district.

During the year, the South Shepparton Irrigation District has been extended by adding thereto an area of 19,800 acres not previously in any constituted district.

The Merbein Irrigation Area has been extended so as to include 80 acres severed from the First Mildura Irrigation Trust District and 1,750 acres not hitherto in any district, and about 300 acres already within the Merbein Waterworks District.

The Tongala Irrigation District has been extended by including therein about 7,900 acres, which previously formed part of Deakin Irrigation District.

The Rodney Irrigation District has been extended by the addition of 230 acres, which previously formed part of Deakin Irrigation and Water Supply District. Similarly, Rochester and Gannawarra Irrigation Districts were extended by adding thereto 140 acres and 180 acres, respectively, of lands not previously forming part of any district; whilst about 60 acres were excised from Swan Hill Irrigation District and added to Tyntynder Waterworks District.

The construction of the Glenorchy-Charlton Main Channel enabled the Commission to furnish supplies to the Waterworks Districts of the Shire of Donald and the West Charlton Waterworks Trusts, and to portions of the districts of the Shire of Kara Kara Waterworks Trust and the Avoca Water Trust, in lieu of the unsatisfactory supplies hitherto obtained from local catchments and by pumping from the Avoca River. With the concurrence of the Trusts concerned the two first-named Districts (comprising areas of 64,600 and 85,200 acres respectively) have been placed under the jurisdiction and control of the Commission, and with the Wimmera United Waterworks District were united so as to form one district, to be known as Wimmera United Waterworks District. By mutual consent Kara Kara and Avoca Trust Districts have been diminished to the extent of the areas receiving the improved supplies, and the Wimmera United District (as formed by the union of the three districts referred to above) and Wycheproof District have been correspondingly extended, while other necessary excisions and extensions of the Commission's Districts arising therefrom have been made.

The Karkarooc Waterworks District was extended by adding 15,800 acres not previously in any District. On the other hand, some 3,000 acres, too high to be supplied by gravitation, have been excised and added to the Dering Waterworks District, which is supplied by pumping.

The Tyrrell Waterworks District was extended by adding about 172,400 acres excised from Walpeup East Waterworks District and 2,600 acres not previously in any district. On the other hand, some 16,600 acres, too high to be supplied by gravitation, have been excised and constituted the Dering Waterworks District, which is now being supplied by a special pumping system.

The Eureka Waterworks District was extended by the inclusion of 640 acres excised from Tyrrell Waterworks District.

The Long Lake Waterworks District has been extended by the addition of 5,700 acres excised from the district of the Avoca Water Trust and 20,500 acres of lands not heretofore in any district.

The Yelta Waterworks District has been extended by adding 19,100 acres of lands not previously in any district.

The Lower Millewa Waterworks District has been extended by adding 254,000 acres of Mallee lands not previously in any district.

An area of about 600 acres supplied by pipe reticulation has been excised from Mornington Peninsula Waterworks District and constituted the Narre Warren Waterworks District.

NEW AND PROPOSED DISTRICTS.

The Fish Point Irrigation District, of about 6,000 acres, situate between Lake Tutchewop and the Little Murray River, and supplied from Torrumbarry Works, has been constituted.

Following the development of the Irrigation System governed by Glenmaggie Reservoir, the Maffra and Sale Irrigation Districts have now been constituted, as mentioned above.

The Dering Waterworks District, comprising 16,600 acres of high lands excised from Tyrrell Waterworks District, as mentioned above, has been constituted.

Marong Waterworks District, comprising a small area supplied from the Coliban System of works, has also been constituted.

A Waterworks District will be constituted during the ensuing year at Coreena Bend, on the River Murray, to embrace an area of 170 square miles, supplied by a pumping plant on the River Murray, which, with the main and distributary channels, is practically completed.

The construction of distributary works east of the Goulburn River provides supplies for domestic and stock purposes, and, to a large extent, for irrigation, for the service of an area of 36,000 acres adjoining Shepparton District on the north, and to another area of 6,000 acres comprising the subdivided blocks in the Katandra Closer Settlement Estate lying to the north-east of the larger area mentioned above. New districts will therefore be constituted to embrace these areas.

Similar development west of the Goulburn, in connexion with lands at Calivil purchased for Closer Settlement, and other suitable lands between Dingee and Tragowel Plains Irrigation Districts, will be followed later by the constitution of a new irrigation district to embrace these lands, containing in all about 33,000 acres.

The townships of Nullawil within Wycheproof Waterworks District, Woorinen within Long Lake District, Nandaly within Tyrrell District, Chillingollah and Waitchie within Tyntynder District, and Hastings within the Mornington Peninsula Waterworks District having been reticulated, were proclaimed Urban Districts.

As reticulation works are about to be commenced in the township of Patchewollock, Tempy, and Chinkapook within the Tyrrell District, Werrimull within Lower Millewa District, and Mount Martha within Mornington Peninsula District, Urban Districts will be proclaimed at an early date in respect to these towns.

STAFF.

During the year Mr. E. P. Kendall, District Engineer, was transferred from Tongala Centre to Maffra, which is the centre for the local administration of the new Irrigation and Water Supply Districts of Maffra and Sale. The vacancy at Tongala was filled by the transfer of Mr. H. E. Harding, from Werribee Districts. The engineering duties of the latter position were assigned to Mr. F. M. Engel, District Officer at Bacchus Marsh; and Mr. J. A. Miles, an officer of the Clerical Staff, was appointed District Secretary.

Mr. L. N. Welch, District Engineer at Murtoa, was transferred to Head Office; while Mr. N. F. Godkin, formerly on the Engineering Staff at Maffra, was appointed in his place.

Mr. T. H. Adamson was appointed Clerk and Collector of the newly-formed Lower Millewa District.

Mr. N. G. H. Ferguson, an officer of the Commission's Staff, was appointed Superintendent of Water Distribution.

The following officers retired during the year:—Messrs. E. Checchi, J. G. Douglas, C. B. Shearer, W. A. Horner, D. Henneberry, and F. H. Hicks.

FIRE INSURANCE.

The Commission has continued its policy of carrying the fire risk on its own buildings. The premiums thus saved now amount to £6,130.

RECEIPTS, DISBURSEMENTS, AND ESTIMATES.

The receipts for last year amounted to £462,451. This is the highest amount yet received and exceeds the collections for the previous year by £57,726. The revenue is received in approximately equal proportions from the Irrigation Districts and Waterworks Districts, in which no less than one hundred and thirty-seven separate rates and charges are annually made.

The disbursements from the Annual Vote totalled £248,524, which even with the great expansion of operations is only some £12,981 in excess of those for the preceding year. The loan expenditure amounted to £1,445,801, of which no less than £479,718 was expended on storage works. Full details of this expenditure are shown in another portion of the Report.

The receipts from the twenty-eight Irrigation and Water Supply Districts shown in detail in this Report amounted to £222,517 as against £174,848 received in the preceding year. After debiting the districts with working expenses and interest chargeable on completed works the deficit for the year amounted to £12,951 as against £12,031 for the previous year. It should be noted that as a result of the Loan Expenditure incurred, other Irrigation and Water Supply Districts can now be constituted, thus gradually making a number of such Loan Works revenue producing.

In the Coliban Districts the loss for the year was £24,809 as against £24,585 for the previous year. As previously pointed out the rating in these districts is limited by the Water Acts, and any appreciable reduction in this annual loss can only be achieved by a substantial advance in the progress of the whole area.

The number of Waterworks Districts under the direct control of the Commission, exclusive of the Coliban system, is steadily increasing, and there are now seventy-seven, inclusive of fifty-five town supplies. The receipts for last year were £169,998, and after debiting working expenses and the interest chargeable there was a loss of only £1,531 as against a loss of £1,826 for the previous year.

The Commission has also the control of five Flood Protection Districts, where the protective works are still uncompleted. The receipts from these districts amounted to £7,192, but the revenue will be substantially increased when the works in hand are completed.

The estimate of disbursements for the ensuing year are set down at £259,500, an increase of only £10,000 over those for the past year, while the estimated receipts are set down at £492,000, an increase of £52,000 over the estimate of £440,000 for the past year.

The Loan Liability of the State for Works for Water Supply at the close of the year was £19,106,572. Of this total £1,252,042 is for Free Headworks; £1,263,228 was Written Off; £147,046 was advanced to some early-formed Local Authorities; £312,343 has not been expended; £1,426,820 is represented by River Murray Works; and £4,566,867 by Uncompleted or Unallotted Works which are not revenue producing, details of which are set out separately in the Statement of Loan Liability in this Report. The balance of £10,138,226 is the sum in respect of which those benefited by the various works are this year liable for payment of interest.

The present Interest charges on loans amount to £844,224. Of this amount £131,435 is not chargeable to any districts, being debitable against Free Headworks, Amounts Written Off, and Unexpended Balances, and £63,044 is debitable against River Murray Works, while £201,785, although recorded for future charging, is not at present debitable, being interest on cost of Uncompleted or Unallotted Works which are not yet revenue producing, leaving £447,960 as chargeable against the Commission and other Authorities. The amount available last year from the Revenue of the Commission and other Authorities to meet such interest (after providing a sum of £30,009 for non-revenue producing works and services not chargeable to any districts) was £301,492 as set out in the statement on page 52.

FINANCIAL POSITION.

The Statement of Loan Liability on page 52 of this Report sets out the present aggregate financial position of Works both for Irrigation and Domestic and Stock Supply as well as for Flood Protection and Drainage Services.

That Statement shows in detail the extent of the State's liability, although a large portion represents Amounts Written Off and other Amounts irrecoverable, such as Free Headworks.

Taking the figures in the Report the position in regard to Non-revenue and Revenue producing works is:—

	£	£
Gross deficit including all Written Off and Irrecoverable Amounts ..	..	542,732
To which certain Amounts are debited for Pensions by Treasury ..	..	452
Making a total of .. .. .	..	543,184
Included in this is Interest on—Capital Written Off some twenty-eight years ago (£1,263,228) ; Cost of Free Headworks so declared twenty-two years ago (£1,399,088) ; and Expenditure on River Murray Works to date (£1,426,820), totalling ..	180,678	
Loss on Coliban District where Rate is limited by Water Acts in lieu of general Writing Off	24,809	
Services rendered by Water Commission chargeable to whole State or not at present chargeable to any District. (See page 45 of Report)	42,044	
Interest on Loan moneys in hand at Treasury	13,801	261,332
Deducting the above there remains to be accounted for a further sum of		281,852
At present there are Works under construction from which it is impracticable to obtain Revenue until completed or until districts connected with them have been settled so that Revenue could be collected. These comprise amongst others—Sugarloaf and Waranga Reservoirs; Maffra and Sale Irrigation Districts; new Goulburn Districts; Kooweerup and Cardinia Flood Protection Districts; and Millewa Domestic and Stock Scheme. The Interest on these would amount to		201,785
Leaving still to be accounted for a sum of		80,067
The Interest chargeable to Districts controlled by the Commission is fixed by the Water Acts at 4 per cent., which until recently was sufficient. The percentage now charged by the Treasury is £4 12s. 4d., and this represents approximately a sum of		52,117
Leaving after excluding Interest on Free Headworks, Amounts Written Off, River Murray Works, and other Items mentioned		27,950

From the above statement it will be seen that the excess of expenditure over revenue occurs mainly in connexion with the Works under construction. Prominent amongst these works are the Sugarloaf and Waranga Reservoirs, and although these storages are practically completed some time must elapse before the new lands to be supplied can be prepared and brought under irrigated culture. At the same time there is no doubt that the increased water supplies which can now be made available to the older districts will appreciably improve the revenue from these sources. The Maffra-Sale Irrigation Scheme which has been under construction for some years is now considerably advanced, and with ample water supplies available substantially increased revenue can be expected from these districts within the next few years. The expenditure on Uncompleted Works also embraces extensive schemes in the Millewa and Northern Mallee Areas where a water supply is essential in order to bring these lands under cultivation. These works are also well advanced, but a series of adverse seasons culminating in practically a complete crop failure in this portion of the State must for the present retard improvement in the finances of these districts.

Another item to which attention is drawn is the increased rate of Interest paid by the Treasury over that debited to water users in pursuance of the statutory provisions of the Water Acts. The rate payable by the State is now 12s. 4d. per centum higher than the rate which the Commission is empowered to charge to the districts under its control. As previously pointed out, however, the statutory rate charged to districts for a great number of years showed an excess over that paid by the State and the higher average rate now being paid by the State has only arisen in recent years and is mainly attributable to the heavy conversions of earlier loans which have become necessary.

The Receipts for last year amounted to £462,451, which is the largest sum yet received, and is approximately £58,000 more than the collections for the previous year. For the present year the estimates show an advance of £52,000 over those for 1926-27. These figures indicate a substantial progress in the revenue, which the Commission is confident will be more than maintained in the future.

RECEIPTS AND DISBURSEMENTS.

STATEMENT of Moneys received and disbursed during the year ended 30th June, 1927.

Works.	Receipts.	DISBURSEMENTS, exclusive of Interest, Redemption, and Depreciation Charges.			Excess.	
		From Annual Votes and Special Appropriation.	Deduct Capital and Other Disbursements not Chargeable to Districts.	Net Disbursements on Maintenance and Management.	Receipts over Net Disbursements.	Disbursements over Receipts.
	£	£	£	£	£	£
Coliban	45,024	15,036	...	15,036	29,988	...
Other State Works—						
Broken River	6	456	...	456	...	450
Goulburn	1,042	3,435	...	3,435	...	2,393
Kow Swamp	512	1,434	...	1,434	...	922
Lake Lonsdale	466	987	...	987	...	521
Loddon River	6	518	...	518	...	512
North-West Lakes	364	477	...	477	...	113
Irrigation Districts	222,517	121,264	12,035	109,229	113,288	...
Waterworks Districts	116,787	51,755	...	51,755	65,032	...
Urban Districts and Divisions	53,211	14,125	...	14,125	39,086	...
Flood Protection Districts... ..	7,192	903	...	903	6,289	...
Licences, Diversions, Miscellaneous	15,324	13,036	...	13,036	2,288	...
	462,451	223,426	12,035	211,391	255,971	4,911
Not Revenue Producing—						
River Gauging, Surveys and Re- ports, New Projects ... ..	...	5,387	...	5,387	...	5,387
Waterworks Trusts	...	...	...	...	...	...
Boring for Water, Road Clearing, Mallee and Land Settlement } Cost of Admin- istration	...	11,249	...	11,249	...	11,249
Loan Works ... ..	...	8,462	...	8,462	...	8,462
Totals ..	462,451	248,524	12,035	236,489	255,971	30,009
Amount available to meet Redemption and Depreciation					£2,000	
Amount available to meet Interest, as per page 52 of Report, after deduct- ing £12,035 not chargeable to Districts					£223,962	

COLIBAN SYSTEM.

STATEMENT of Moneys received and disbursed during the year ended 30th June, 1927 ;
and of Interest charged at the rate of 4 per cent. on Capital Debts.

District.	Capital Debit at 30th June, 1927.	Receipts.	Disbursements and Interest Charged.			Excess.	
			Disbursements.	Interest.	Total.	Receipts over Disbursements and Interest.	Disbursements and Interest over Receipts.
	£	£	£	£	£	£	£
Coliban	1,379,667	43,379	13,782	54,446	68,228	...	24,849
Axe Creek	1,750	428	329	70	399	29	...
Harcourt	7,040	1,217	925	281	1,206	11	...
Totals	1,388,457	45,024	15,036	54,797	69,833	40	24,849

FLOOD PROTECTION DISTRICTS.

STATEMENT of Moneys received and disbursed from 1st July, 1920, to 30th June, 1927 ; and of Interest charged at the rate of 4 per cent. on Capital Debts ; and also of Depreciation and Redemption charged as at 30th June, 1927.

RECEIPTS.

District.	1st July, 1920, to 30th June, 1926.	1926-27.			Grand Total at 30th June, 1927.
		Charge.	Interest and Miscellaneous.	Total.	
	£	£	£	£	£
1. Cardinia	7,233	1,676	24	1,700	8,933
2. Echuca	787	100	..	100	887
3. Lower Kooweerup	16,000	3,963	504	4,467	20,467
4. Kanyapella	165	413	..	413	578
5. Loch Garry	535	504	8	512	1,047
Totals	24,720	6,656	536	7,192	31,912

DISBURSEMENTS, AND INTEREST DEPRECIATION AND REDEMPTION CHARGED.

District.	DISBURSEMENTS.					INTEREST CHARGED.			(A) DEPRE- CIATION. (B) RE- DEMP- TION.	Grand Total at 30th June, 1927.
	1st July, 1920, to 30th June, 1926.	1926-27.			Total at 30th June, 1927.	1st July, 1920, to 30th June, 1926.	1st July, 1926, to 30th June, 1927.	Total at 30th June, 1927.		
		Repairs and Mainte- nance.	Manage- ment.	Total.						
	£	£	£	£	£	£	£	£	£	£
1. Cardinia	2,020	45	114	159	2,179	5,728	1,800	7,528	..	9,707
2. Echuca	538	74	30	104	642	244	47	291	..	933
3. Lower Kooweerup	4,211	122	306	428	4,639	12,968	4,000	16,968	..	21,607
4. Kanyapella	61	51	40	91	152	129	134	263	..	415
5. Loch Garry	55	81	40	121	176	480	480	960	..	1,136
Totals	6,885	373	530	903	7,788	19,549	6,461	26,010	..	33,795

IRRIGATION AND WATER SUPPLY DISTRICTS.

STATEMENT of Moneys received and disbursed from 1st May, 1906, to 30th June, 1927; and of Interest charged at the rate of 4 per cent. on Capital Debts; and also of Depreciation and Redemption charged, as at 30th June, 1927. (Free Headworks excluded.)

RECEIPTS.

District.	1st May, 1906, to 30th June, 1926.	1926-27.					Grand Total at 30th June, 1927.
		Rates.	Compulsory Irrigation Charge.	Water Sales.	Interest and Miscellaneous.	Total.	
	£	£	£	£	£	£	£
1. Bacchus Marsh	69,899	711	3,680	967	29	5,387	75,286
2. Boort	45,827	1,696	..	1,214	11	2,921	48,748
3. Campaspe	14,295	808	..	49	2	859	15,154
4. Cohuna	145,168	1,980	6,132	892	100	9,104	154,272
5. Deakin	84,026	3,630	..	631	35	4,296	88,322
6. Dingee	19,973	125	1,155	250	523	2,053	22,026
7. Dry Lake	608	..	..	..	29	29	637
8. Echuca North	5,797	333	1,799	6	19	2,157	7,954
9. Fish Point .. ..	..	55	..	320	..	375	375
10. Gannawarra	113,095	1,937	5,852	795	115	8,699	121,794
11. Kerang	91,213	2,537	..	3,893	25	6,455	97,668
12. Koondrook	94,179	1,549	3,800	161	1,614	7,124	101,303
13. Leitchville	1,086	513	698	277	2	1,490	2,576
14. Merbein	196,188	1,809	23,588	..	3,100	28,497	224,685
15. Mystic Park	4,820	192	458	92	1	743	5,563
16. Nyah	59,361	344	7,380	137	1,258	9,119	68,480
17. Red Cliffs .. ..	..	7	658	35,963	362	36,990	36,990
18. Rochester	158,480	3,007	11,715	1,839	611	17,172	175,652
19. Rodney	391,097	7,083	13,323	2,430	1,154	23,990	415,087
20. Shepparton	80,676	1,576	5,306	457	1,242	8,581	89,257
21. South Shepparton	1,014	313	1,063	..	8	1,384	2,398
22. Stanhope	27,377	699	3,169	242	712	4,822	32,199
23. Swan Hill	91,275	1,043	5,087	1,330	1,216	8,676	99,951
24. Third Lake	465	136	449	84	1	670	1,135
25. Tongala	73,140	1,133	4,884	469	1,614	8,100	81,240
26. Tragowel Plains	170,569	1,785	8,072	1,981	1,141	12,979	183,548
27. Tresco	12,970	..	3,182	..	144	3,326	16,296
28. Werribee	44,751	690	3,491	900	1,438	6,519	51,270
Totals	1,997,349	35,691	114,941	55,379	16,506	222,517	2,219,866

DISBURSEMENTS, AND INTEREST DEPRECIATION AND REDEMPTION CHARGED.

District.	DISBURSEMENTS.						INTEREST CHARGED.				(A) DEPRECIATION. (B) REDEMPTION.	Grand Total at 30th June, 1927.
	1st May, 1906, to 30th June, 1926.	1926-27.				Total at 30th June, 1927.	1st May, 1906, to 30th June, 1926.	1st July, 1926, to 30th June, 1927.	Total at 30th June, 1927.			
		Repairs and Maintenance.	Distribution of Water.	Manage- ment.	Total.							
	£	£	£	£	£	£	£	£	£	£	£	
1. Bacchus Marsh	16,487	66	924	240	1,230	17,717	58,691	4,898	63,589	..	81,306	
2. Boort ..	25,495	403	1,196	171	1,770	27,265	16,817	1,532	18,349	(B) 1,400	47,014	
3. Campaspe ..	8,906	44	251	65	360	9,266	8,264	455	8,719	..	17,985	
4. Cohuna ..	98,987	1,258	1,651	395	3,304	102,291	57,148	5,005	62,153	(A) 9,010	173,454	
5. Deakin ..	34,455	215	637	379	1,231	35,686	53,205	3,045	56,250	..	91,936	
6. Dingee ..	9,836	736	557	58	1,351	11,187	14,037	674	14,711	..	25,898	
7. Dry Lake ..	1	..	..	..	..	1	607	29	636	..	637
8. Echuca North ..	2,564	265	552	138	955	3,519	3,924	735	4,659	(A) 5,694	13,872	
9. Fish Point ..	..	41	105	32	178	178	..	312	312	..	490
10. Gannawarra ..	71,684	1,142	1,502	366	3,010	74,694	40,365	4,452	44,817	..	119,511	
11. Kerang ..	49,620	2,120	1,959	448	4,527	54,147	36,995	2,656	39,651	(A) 450 (B) 2,000	96,248	
12. Koondrook ..	61,312	1,787	1,242	276	3,305	64,617	55,436	5,134	60,570	(A) 4,501	129,688	
13. Leitchville ..	423	153	199	52	404	827	658	820	1,478	..	2,305	
14. Merbein ..	168,991	1,605	16,762	431	18,798	187,789	66,565	7,473	74,038	(A) 9,928	271,755	
15. Mystic Park ..	4,246	108	369	76	553	4,799	1,593	519	2,112	..	6,911	
16. Nyah ..	54,487	550	4,658	557	5,765	60,252	27,774	3,944	31,718	(A) 3,802	95,772	
17. Red Cliffs ..	..	1,273	22,439	834	24,546	24,546	..	16,000	16,000	..	40,546
18. Rochester ..	75,569	1,249	4,601	706	6,556	82,125	115,786	9,655	125,441	..	207,566	
19. Rodney ..	161,587	1,160	7,176	1,164	9,500	171,087	240,247	18,093	258,340	..	429,427	
20. Shepparton ..	35,265	892	723	580	2,195	37,460	66,912	6,985	73,897	..	111,357	
21. Sth. Shepparton ..	545	159	307	115	581	1,126	456	926	1,382	..	2,508	
22. Stanhope ..	13,883	577	1,469	163	2,209	16,092	19,014	2,650	21,664	..	37,756	
23. Swan Hill ..	59,337	1,330	1,877	479	3,686	63,023	35,154	5,257	40,411	(A) 4,768	108,202	
24. Third Lake ..	103	40	86	40	166	269	831	926	1,757	..	2,026	
25. Tongala ..	33,937	1,813	1,472	298	3,583	37,520	70,461	5,442	75,903	..	113,423	
26. Tragowel Plains ..	73,015	1,687	2,640	347	4,674	77,689	101,720	9,372	111,092	..	188,781	
27. Tresco ..	12,618	317	2,820	184	3,321	15,939	9,145	3,438	12,583	..	28,522	
28. Werribee ..	9,711	276	853	342	1,471	11,182	35,705	5,812	41,517	..	52,699	
Totals ..	1,083,064	21,266	79,027	8,936	109,229	1,192,293	1,137,510	126,239	1,263,749	41,553	2,497,595	

WATERWORKS DISTRICTS.

STATEMENT of Moneys received and disbursed from 1st May, 1906, to 30th June, 1927; and of Interest charged at the rate of 4 per cent. on Capital Debts; and also of Depreciation and Redemption charged, as at 30th June, 1927. (Free Head-works excluded.)

RECEIPTS.

District.	1st May, 1906, to 30th June, 1926.	1926-27.				Grand Total at 30th June, 1927.
		Rates.	Water Sales.	Interest and Miscellaneous.	Total.	
	£	£	£	£	£	£
1. Birchip	305,231	4,642	92	16	4,750	339,543
2. Sea Lake		8,982	138	129	9,249	
3. Tyrrell		12,519	..	396	12,915	
4. Wycheproof		7,270	111	17	7,398	
5. Carwarp	6,748	1,201	..	59	1,260	8,008
6. Carwarp Central	295	293	..	16	309	604
7. Dering .. .. .	..	662	..	8	670	670
8. Eureka	278	296	..	2	296	576
9. Karkarooc	126,042	12,443	..	126	12,569	138,611
10. Kerang North-West Lakes	2,173	152	..	1	152	2,326
11. Long Lake	116,050	8,904	..	82	8,986	125,036
12. Mornington Peninsula	24,666	3,000	..	57	3,057	27,723
13. Narre Warren .. .. .	..	62	251	1	314	314
14. Tyntynder	62,991	7,724	..	334	8,058	71,049
15. Upper Western Wimmera	46,992	4,819	..	7	4,826	51,818
16. Upper Wimmera United	79,796	6,815	50	9	6,874	86,670
17. Walpeup East .. .. .	..	5,795	149	8	691	6,486
18. Walpeup West	17,139	1,826	151	58	2,035	19,174
19. Werribee	4,506	722	30	5	757	5,263
20. Western Wimmera	171,966	13,433	1,420	60	14,913	186,879
21. Wimmera United	184,812	15,222	771	178	16,171	200,983
22. Yelta	2,495	512	16	6	534	3,029
Totals	1,157,975	112,033	3,179	1,575	116,787	1,274,762

DISBURSEMENTS, AND INTEREST DEPRECIATION AND REDEMPTION CHARGED.

District.	DISBURSEMENTS.					INTEREST CHARGED.					(A) DEPRECIATION. (B) REDEMPTION.	Grand Total at 30th June, 1927.
	1st May, 1906, to 30th June, 1926.	1926-27.				Total at 30th June, 1927.	1st May 1906, to 30th June, 1926.	1st July 1926, to 30th June, 1927.	Total at 30th June, 1927.			
		Repairs and Maintenance.	Distribution of Water.	Management.	Total.							
	£	£	£	£	£	£	£	£	£	£	£	
1. Birchip ..	140,642	13,224	5,858	1,311	20,393	161,035	175,967	16,288	192,255	..	353,290	
2. Sea Lake ..												
3. Tyrrell ..												
4. Wycheproof ..												
5. Carwarp ..	10,836	995	390	36	1,421	12,257	4,950	1,058	6,008	A	586	18,851
6. Carwarp Central ..	444	30	58	19	107	551	168	94	262	..	813	
7. Dering ..	..	46	79	30	155	155	..	483	483	..	638
8. Eureka ..	171	111	249	30	390	561	90	155	245	..	806	
9. Karkarooc ..	46,482	3,407	1,581	380	5,368	51,850	78,902	7,955	86,857	..	138,707	
10. Kerang N.W. Lakes ..	1,243	15	77	26	118	1,361	1,017	75	1,092	..	2,453	
11. Long Lake ..	74,040	2,141	2,777	399	5,317	79,357	41,833	4,787	46,620	A	8,305	134,282
12. Mornington Peninsula	3,594	88	112	49	249	3,843	21,072	2,808	23,880	..	27,723	
13. Narre Warren ..	..	10	10	25	45	45	..	52	52	..	97
14. Tyntynder ..	39,159	2,697	1,186	364	4,247	43,406	38,396	5,072	43,468	..	86,874	
15. Upper Western Wimmera	21,180	393	903	204	1,500	22,680	21,940	2,575	24,515	(A 606) (B 1,500)	49,301	
16. Upper Wimmera United	27,673	337	603	342	1,282	28,955	46,794	5,026	51,820	B	2,390	83,165
17. Walpeup East ..	4,205	160	..	70	230	4,435	2,137	195	2,332	..	6,767	
18. Walpeup West ..	12,304	1,500	..	113	1,613	13,917	5,984	1,101	7,085	A	1,200	22,202
19. Werribee ..	1,566	27	69	44	140	1,706	4,192	589	4,781	..	6,487	
20. Western Wimmera ..	84,589	1,516	3,578	813	5,907	90,496	76,822	7,581	84,403	(A 2,422) (B 5,460)	182,721	
21. Wimmera United ..	65,899	753	1,369	798	2,920	68,819	195,675	11,220	116,895	B	5,310	191,024
22. Yelta ..	1,423	117	200	36	353	1,776	1,210	185	1,395	..	3,171	
Totals ..	535,450	27,567	19,099	5,089	51,755	587,205	627,149	67,299	694,448	27,719	1,309,372	

DISTRICTS HELD IN TRUST BY THE COMMISSION.

STATEMENT OF RECEIPTS AND DISBURSEMENTS FOR THE YEAR ENDED 31ST DECEMBER, 1926.

RECEIPTS.

Name of Trust.	Bank Balance, at 31st December, 1925.	1926.				Grand Total for Year 1926.
		Rates.	Water Sales.	Interest and Miscellaneous.	Total.	
	£	£	£	£	£	£
Avoca	Cr. 128	727	44	19	790	918
Avoca (Quambatook, Urban)	Cr. 71	426	118	44	588	659
Carrum	Cr. 211	2,322	..	285	2,607	2,818
Loddon United	Dr. 414	2,538	10	21	2,569	2,155
Loddon United (Mitiamo, Urban)	Cr. 74	91	124	80	295	369
Totals	{ Cr. 484 } Dr. 414	6,104	296	449	6,849	6,919

DISBURSEMENTS.

Name of Trust.	1926.					Grand Total for Year 1926.	Bank Balance carried forward, 1st January, 1927.
	Repairs and Maintenance.	Water Distribution.	Management.	Total.	Interest.	(A) Depreciation. (B) Redemption.	
	£	£	£	£	£	£	£
Avoca	409	..	120	529	227	B 92	Cr. 70
Avoca (Quambatook, Urban)	109	127	43	279	153	A 60 B 29	Cr. 138
Carrum	1,060	..	221	1,281	1,209	B 201	Cr. 127
Loddon United	437	1,101	274	1,812	643	B 277	Dr. 577
Loddon United (Mitiamo, Urban)	163	..	21	184	133	A 28 B 12	Cr. 12
Totals	2,178	1,228	679	4,085	2,365	A 88 B 611	Cr. 347 Dr. 577

URBAN DISTRICTS

STATEMENT of Moneys received and disbursed from 1st May, 1906, to 30th June, of Depreciation and Redemption charged, as at 30th June, 1927. (Free Headworks

RECEIPTS.

District or Division.	1st May, 1906, to 30th June, 1926.	1926-27.				Grand Total at 30th June, 1927.
		Rates.	Water Sales.	Interest and Miscel- laneous.	Total.	
	£	£	£	£	£	£
1. Bacchus Marsh	19,959	1,178	648	3	1,829	21,788
2. Berriwillock	1,888	276	6	7	289	2,177
3. Berwick	1,068	396	33	10	439	1,507
4. Beulah	6,324	483	67	30	580	6,904
5. Birchip	14,628	582	420	80	1,082	15,710
6. Bittern	342	63	39	2	104	446
7. Brim	450	266	7	..	273	723
8. Carrum	19,323	5,144	634	120	5,898	25,221
9. Chillingollah .. .. .	..	57	48	..	105	105
10. Cohuna	7,162	756	170	88	1,014	8,176
11. Corop	490	30	..	..	30	520
12. Cranbourne	2,163	269	501	11	781	2,944
13. Culgoa	1,766	246	56	6	308	2,074
14. Dandenong	19,287	3,371	919	324	4,614	23,901
15. Dimboola	26,229	1,086	573	109	1,768	27,997
16. Dingle	48	84	..	1	85	133
17. Frankston	12,051	2,879	415	120	3,414	15,465
18. Hastings .. .. .	..	54	..	39	93	93
19. Hopetoun	6,795	597	171	51	819	7,614
20. Jeparit	8,418	668	148	16	832	9,250
21. Jung Jung	1,010	153	18	1	172	1,182
22. Koondrook	4,996	436	23	3	462	5,458
23. Lake Boga	4,250	314	8	22	344	4,594
24. Lalbert .. .. .	..	283	201	..	484	484
25. Lascelles	1,348	150	5	9	164	1,512
26. Leitchville	509	274	22	13	309	818
27. Lockington	181	321	..	12	333	514
28. Manangatang	801	494	75	8	577	1,378
29. Marnoo .. .. .	..	254	62	1	317	317
30. Merbein	5,175	1,053	142	85	1,280	6,455
31. Minyip	9,096	754	104	16	874	9,970
32. Mornington	8,735	2,295	202	103	2,600	11,335
33. Nandaly .. .. .	..	130	..	2	132	132
34. Natimuk	8,028	274	238	1	513	8,541
35. Nyah	646	86	5	1	92	738
36. Nyah West	1,247	782	8	12	802	2,049
37. Ouyen	9,052	1,307	554	71	1,932	10,984
38. Piangil	913	412	130	2	544	1,457
39. Pyramid Hill	195	566	..	13	579	774
40. Rainbow	12,716	843	168	41	1,052	13,768
41. Red Cliffs	1,710	1,260	7	12	1,279	2,989
42. Rupanyup	7,810	730	100	5	835	8,645
43. Sea Lake	9,089	786	233	58	1,077	10,166
44. Somerville	726	202	55	5	262	988
45. South Frankston	3,742	916	56	1	973	4,715
46. Spring Vale	1,918	1,453	46	14	1,513	3,431
47. Stanhope	54	228	1	7	236	290
48. Ultima	4,426	555	13	32	600	5,026
49. Waitechie .. .. .	..	65	..	1	66	66
50. Watchem	3,141	312	45	1	358	3,499
51. Werribee	11,154	1,327	243	50	1,620	12,774
52. Wonthaggi	54,574	2,505	2,016	17	4,538	59,112
53. Woomelang	8,754	400	512	31	943	9,697
54. Woorinen .. .. .	..	44	..	..	44	44
55. Wycheproof	8,989	770	142	36	948	9,937
Totals	333,376	41,219	10,289	1,703	53,211	386,587

AND DIVISIONS.

1927; and of Interest charged, at the rate of 4 per cent. on Capital Debits; and also excluded).

DISBURSEMENTS, AND INTEREST, DEPRECIATION, AND REDEMPTION CHARGED.

District or Division.	DISBURSEMENTS.						INTEREST CHARGED.				(a) DEPRECIATION. (b) REDEMPTION.		Grand Total at 30th June, 1927.
	1st May, 1906, to 30th June, 1926.	1926-27.				Total at 30th June, 1927.	1st May, 1906, to 30th June, 1926.	1st July, 1926, to 30th June, 1927.	Total at 30th June, 1927.				
		Repairs and Maintenance.	Distribution of Water.	Management.	Total.								
										£	£	£	
1. Bacchus Marsh ..	5,413	15	183	117	315	5,728	13,970	1,430	15,400	(a)	674	21,802	
2. Berriwillock ..	1,182	82	16	34	132	1,314	663	161	824	(a)	49	2,187	
3. Berwick ..	127	14	17	9	40	167	941	399	1,340		..	1,507	
4. Beulah ..	2,648	108	122	40	270	2,918	3,504	251	3,755	(a)	56	6,729	
5. Birchip ..	6,885	30	311	77	418	7,303	6,639	577	7,216	(a) (b)	848	15,367	
6. Bittern ..	59	3	4	3	10	69	279	90	369		..	438	
7. Brim ..	154	15	10	34	59	213	254	155	409	(a)	42	664	
8. Carrum ..	3,222	200	287	383	870	4,092	16,040	5,000	21,040		..	25,132	
9. Chillingollah ..	..	19	11	18	48	48	..	111	111	(a)	20	179
10. Cohuna ..	1,870	90	173	58	321	2,191	4,478	599	5,077	(a) (b)	658	7,926	
11. Corop ..	210	10	..	7	17	227	236	19	255	(a)	36	518	
12. Cranbourne ..	345	24	31	56	111	456	1,896	648	2,544		..	3,000	
13. Culgoa ..	918	96	44	34	174	1,092	877	151	1,028	(a)	39	2,159	
14. Dandenong ..	3,806	148	196	398	742	4,548	14,455	3,850	18,305	(a)	500	23,353	
15. Dimboola ..	16,584	438	756	115	1,309	17,893	6,843	390	7,233	(a)	1,620	27,976	
										(b)	1,230		
16. Dingee ..	16	14	15	15	44	60	49	53	102	(a)	14	176	
17. Frankston ..	2,098	115	177	217	509	2,607	9,653	2,900	12,553		..	15,160	
18. Hastings ..	..	3	4	9	16	16	..	77	77		..	93
19. Hopetoun ..	4,205	93	326	33	452	4,657	3,036	353	3,389	(b)	150	8,196	
20. Jeparit ..	1,785	5	43	51	99	1,884	5,450	579	6,029	(b)	800	8,713	
21. Jung Jung ..	761	17	31	26	74	835	365	68	433	(a)	10	1,278	
22. Koondrook ..	2,579	24	145	39	208	2,787	2,169	203	2,372	(a)	225	5,384	
23. Lake Boga ..	1,711	19	204	55	278	1,989	2,410	163	2,573	(a) (b)	258	4,820	
24. Lalbert ..	..	..	35	39	74	74	..	325	325	(a)	87	486
25. Lascelles ..	778	7	20	30	57	835	786	73	859	(a)	96	1,790	
26. Leitchville ..	266	13	108	23	144	410	350	171	521	(a)	28	959	
27. Lockington ..	61	15	26	25	66	127	105	224	329	(a)	45	501	
28. Manangatang ..	249	25	80	42	147	396	396	329	725	(a)	130	1,251	
29. Marnoo ..	..	15	25	32	72	72	..	157	157	(a)	63	292
30. Merbein ..	2,357	50	534	118	702	3,059	2,521	641	3,162	(a)	250	6,471	
31. Minyip ..	2,926	18	163	37	218	3,144	5,466	514	5,980	(a)	419	9,943	
										(b)	400		
32. Mornington ..	1,425	87	134	135	356	1,781	7,013	2,200	9,213		..	10,994	
33. Nandaly ..	..	20	20	20	60	60	..	37	37	(a)	24	121
34. Natimuk ..	1,780	32	65	85	182	1,962	5,396	324	5,720	(b)	750	8,432	
35. Nyah ..	255	13	12	20	45	300	275	55	330	(a)	52	682	
36. Nyah West ..	305	52	91	55	198	503	859	482	1,341	(a)	156	2,000	
37. Ouyen ..	4,140	64	319	122	505	4,645	4,850	1,285	6,135	(a)	250	11,030	
38. Piangil ..	188	50	52	35	137	325	545	319	864	(a)	136	1,325	
39. Pyramid Hill ..	103	92	145	68	305	408	46	254	300		..	708	
40. Rainbow ..	2,523	34	26	76	136	2,659	8,076	863	8,939	(a)(b)	1,520	13,118	
41. Red Cliffs ..	1,188	11	673	64	748	1,936	629	356	985	(a)	80	3,001	
42. Rupanyup ..	2,755	21	14	39	74	2,829	4,080	557	4,637	(a) (b)	778	8,244	
43. Sea Lake ..	5,600	49	228	70	347	5,947	2,680	629	3,309	(a)	574	9,830	
44. Somerville ..	153	8	11	21	40	193	699	240	939		..	1,132	
45. South Frankston ..	526	31	39	32	102	628	3,083	920	4,003		..	4,631	
46. Spring Vale ..	178	48	60	41	149	327	1,610	1,340	2,950		..	3,277	
47. Stanhope ..	25	10	15	20	45	70	34	138	172	(a)	32	274	
48. Ultima ..	1,895	47	27	57	131	2,026	2,270	376	2,646	(a)	140	4,812	
49. Waitehie ..	..	25	12	18	55	55	..	37	37		..	92
50. Watchem ..	1,041	30	41	35	106	1,147	1,979	194	2,173	(a)	120	3,440	
51. Werribee ..	4,021	46	407	70	523	4,544	6,296	1,035	7,331	(a)	525	12,400	
52. Wonthaggi ..	8,337	226	512	341	1,079	9,416	36,587	2,372	38,959	(b)	9,000	57,375	
53. Woomelang ..	2,997	68	154	60	282	3,279	5,040	635	5,675	(a) (b)	480	9,434	
54. Woorinen ..	..	10	10	15	35	35	..	33	33		..	68
55. Wycheproof ..	4,758	31	391	67	489	5,247	3,993	419	4,412	(a)	550	10,209	
Totals ..	107,408	2,830	7,555	3,740	14,125	121,533	199,871	35,761	235,632		23,914	381,079	

LOAN EXPENDITURE

STATEMENT OF LOAN EXPENDITURE DURING THE YEAR ENDED 30TH JUNE, 1927.

Works.	Loans Application Act No. 3404.	Loans Application Act No. 3447 and other Sources.	Total.
<i>Free Headworks.</i>	£ s. d.	£ s. d.	£ s. d.
1. Goulburn River Works	9 6 3	1,298 13 9	1,308 0 0
2. Kerang North-West Lakes Works	3 15 6	..	3 15 6
3. Kow Swamp Works .. .. .	..	142 0 8	142 0 8
<i>River Murray Waters Acts—Works.</i>			
4. Storages, Weirs and Locks	44,569 18 5	179,845 17 5	224,415 15 10
<i>Reservoirs and Storages.</i>			
5. Goulburn Storages—			
Sugarloaf Reservoir	21,225 12 0	89,490 2 6	110,715 14 6
Waranga Reservoir Enlargement	1,414 6 9	11,507 16 9	12,922 3 6
6. Maffra, Glenmaggie Reservoir	10 10 11	85,876 7 11	85,886 18 10
7. Melton and Pykes Creek Reservoirs	63 8 8	779 13 1	843 1 9
8. Wimmera-Mallee Storages—Pine Lake	35 5 3	44,753 7 10	44,788 13 1
<i>Waterworks Districts.</i>			
9. Bellarine Peninsula .. .. .	..	1,204 9 9	1,204 9 9
10. Birchip, Sea Lake, Tyrell, and Wycheproof	6 0 0	49,116 18 4	49,122 18 4
11. Carwarp and Carwarp Central	243 0 10	3,681 16 6	3,924 17 4
12. Dering .. .. .	..	6,073 3 5	6,073 3 5
13. Eureka .. .. .	..	255 15 0	255 15 0
14. Karkaroc	3 0 0	8,616 1 4	8,619 1 4
15. Long Lake .. .. .	..	6,265 9 1	6,265 9 1
16. Millewa	9,271 4 2	104,085 17 3	113,357 1 5
17. Mornington Peninsula	886 13 6	49,591 3 1	50,477 16 7
18. Tyntynder .. .. .	..	9,166 3 7	9,166 3 7
19. Walpeup East and Walpeup West	229 12 2	1,111 9 5	1,341 1 7
20. Werribee .. .. .	..	401 9 8	401 9 8
21. Western Wimmera	4 12 8	6,683 4 1	6,687 16 9
22. Wimmera United	6 0 0	4,440 14 9	4,446 14 9
23. Wimmera Main Channels .. .. .	..	28,028 17 8	28,028 17 8
24. Yelta .. .. .	..	853 7 2	853 7 2
<i>Towns.</i>			
25. Bacchus Marsh and Werribee	30 16 10	544 11 5	575 8 3
26. Berriwillock, Beulah, Birchip, and Brim .. .. .	..	740 8 10	740 8 10
27. Carwarp, Cohuna, and Dandenong	59 11 10	2,877 6 9	2,936 18 7
28. Coliban .. .. .	..	37,044 11 1	37,044 11 1
29. Chillingollah, Culgoa, Dimboola, Dingee, and Hopetoun	Cr. 1 0 0	4,335 13 0	4,334 13 0
30. Jeparit, Jung Jung, Koondrook, and Lake Boga, and Lascelles	5 0 0	388 9 2	393 9 2
31. Lalbert, Leitchville, Lockington, and Macorna	63 16 3	463 8 11	527 5 2
32. Manangatang, Marnoo, Merbein, and Minyip	23 9 6	925 18 6	949 8 0
33. Nandaly, Natimuk, Nullawill, and Nyah West .. .. .	..	5,172 15 5	5,172 15 5
34. Ouyen, Piangil, Pyramid, Rainbow, and Red Cliffs	Cr. 11 3 0	1,871 16 10	1,860 13 10
35. Rupanyup, Sea Lake, Stanhope, and Ultima .. .. .	..	1,462 6 10	1,462 6 10
36. Waitehie, Watchem, Woomelang, and Woorinen .. .. .	..	3,176 8 7	3,176 8 7
37. Wycheproof .. .. .	..	234 11 0	234 11 0
38. Wonthaggi	102 11 5	3,352 2 7	3,454 14 0
<i>Irrigation and Water Supply Districts.</i>			
39. Bacchus Marsh and Werribee	1,230 14 5	18,106 13 6	19,337 7 11
40. Boort	578 18 8	7,178 13 8	7,757 12 4
41. Campaspe .. .. .	..	357 11 8	357 11 8
42. Cohuna and Gannawarra	2,261 11 5	16,157 2 8	18,418 14 1
43. Deakin .. .. .	..	2,866 12 8	2,866 12 8
44. Dingee .. .. .	..	188 2 1	188 2 1
45. Echuca North .. .. .	..	63 9 7	63 9 7
46. Fish Point	928 8 7	9,701 1 6	10,629 10 1
47. Kerang	307 15 6	8,820 2 0	9,127 17 6
48. Koondrook	1,728 9 0	19,997 3 7	21,725 12 7
49. Leitchville	152 16 10	6,344 19 6	6,497 16 4
50. Maffra, Sale	130 4 3	63,115 9 5	63,245 13 8
51. Merbein	293 4 3	4,510 15 6	4,803 19 9
52. Mystic Park	1 14 0	329 11 2	331 5 2
53. Nyah	577 3 10	4,043 2 2	4,620 6 0
54. Red Cliffs	3,383 2 0	32,045 9 6	35,428 11 6
55. Red Cliffs—Clearing land charged to Discharged Soldiers' Settlement Fund .. .. .	..	2,359 6 0	2,359 6 0
56. Rochester	58 0 8	25,765 18 3	25,823 18 11
57. Rodney	78 9 7	44,453 8 4	44,531 17 11
58. Shepparton	35 17 3	21,265 5 11	21,301 3 2
59. South Shepparton .. .. .	..	2,541 7 7	2,541 7 7
60. Stanhope .. .. .	..	2,818 7 7	2,818 7 7
61. Swan Hill	596 0 3	10,020 3 10	10,616 4 1
62. Third Lake	170 19 1	670 0 9	840 19 10
63. Tongala .. .. .	..	4,200 18 9	4,200 18 9
64. Tragowel Plains	3 9 6	36,560 3 3	36,563 12 9
65. Tresco	835 11 7	3,062 9 9	3,898 1 4
66. Goulburn Main Channels	357 11 1	183,627 0 8	183,984 11 9
<i>Flood Protection and Drainage Districts.</i>			
67. Gippsland Rivers and Other Districts	406 14 2	16,142 8 8	16,549 2 10
68. Goulburn Levees	21 4 0	407 15 4	428 19 4
69. Hallam	0 7 4	11,249 13 9	11,250 1 1
70. Kooweerup and Cardinia	53 8 6	35,810 18 11	35,864 7 5
<i>Miscellaneous.</i>			
71. Investigations Storages and Works	162 17 1	2,064 7 7	2,227 4 8
72. Torrumbarry Districts—New Districts commanded by Torrumbarry Weir	2 17 7	482 2 2	484 19 9
Totals	92,613 0 4	1,353,188 6 2	1,445,801 6 6

STATEMENT OF EXPENDITURE DURING THE YEAR ENDED 30TH JUNE, 1927.

CONSTRUCTION OF TANKS AND FORMING ROADS IN THE MALLEE.

(This Expenditure was met by the Public Works Department.)

	£	s.	d.
1. Mallee Tanks (Public Tanks)	12,065	14	3
2. Clearing Roads	17,209	8	1
Total	£29,275	2	4

ESTIMATES.

Anticipated requirements to meet Disbursements by the Commission and Estimate of the moneys available from its Revenues to provide the same for the year ending 30th June, 1928, with Estimate of the total amount available from the Revenues of all Authorities to meet interest payable by the State for the year ending 30th June, 1928.

ESTIMATED DISBURSEMENTS.

A.

Revenue Producing Works—

Coliban District	£14,300
Irrigation and Water Supply Districts	127,000
Waterworks Districts	61,000
Drainage and Flood Protection Districts	2,500
Diversions from Streams	500
General Expenditure and Salaries (proportion) over £250 to be apportioned to above Districts	26,700
	<hr/> £232,000

B.

Non-Revenue Producing Works—

General Services—

River Gaugings, Surveys, New Projects, Boring for Water, Land Settlement, General Expenditure and Salaries (proportion) over £250	£12,000
Loan Works, Services on Account defrayed from Votes	8,000
Waterworks Trusts Administration	2,500
	<hr/> £22,500

C.

Non-Revenue Producing Works—

Free Headworks—

Broken River	£275
Goulburn-Waranga	1,750
Kow Swamp	1,750
Lake Lonsdale and Lower Wimmera	500
Loddon River	325
North-West Lakes	400
	<hr/> 5,000
	<hr/> £259,500

ESTIMATED RECEIPTS.

Coliban District	£43,000
Irrigation and Water Supply Districts	250,000
Waterworks Districts	172,000
Flood Protection Districts	7,000
Miscellaneous	20,000
	<hr/> £492,000

Estimated amount available from Revenue Producing Works to meet Interest £260,000

Less expenditure as per "B" and "C" above on Non-Revenue Producing Works 27,500

£232,500

To which add Estimated Revenues from other Authorities—

Waterworks Trusts	£48,000
Local Bodies	21,500
	<hr/> £69,500

Total Estimated amount available from Revenues of all Authorities to meet Interest £302,000

STATEMENT OF LOAN LIABILITY.

STATEMENT of the amount provided by the State to meet Interest on its Loan Expenditure for Works of Water Supply, both State Works of Water Supply and Works vested in Authorities other than the Commission; and of the sums paid from the revenues of the Commission, and from the moneys received from such other Authorities, to provide such Interest for the year ended 30th June, 1927 :—

	Loan Liability of State for Works of Water Supply at 30th June, 1927, exclusive of Melbourne Water Supply.					Interest payable by State on Net Advances.	Total Interest of £844,224 debitable to—				Amount received from Revenues of all Authorities to meet Interest.
	Total Advances, including Cost of Loan Flotation.	Deduct Redemption Paid.	Net Advances.	(A.) Amounts Written Off. (B.) Free Head-works. (C.) Uncompleted or Unallocated Works. (D.) Loans Unexpended.	Balance at Debit of Authorities.		(A.) Written Off. (B.) Free Head-works. (C.) Uncompleted or Unallocated Works. (D.) Loans Unexpended.	Commission and Other Authorities.			
Works.	£	£	£	£	£	£	£	£	£		
Completed Works.	Waterworks Districts	3,912,070	49,628	3,862,442	(A.) 175,055	3,687,387	170,662	(A.) 7,735	162,927	£223,962 (after providing £30,000 for non-revenue producing works, including Free Head-works).	
	Irrigation and Water Supply Districts	3,544,276	31,470	3,512,806	(A.) 575,152	2,937,654	155,213	(A.) 25,413	129,800		
	Goulburn Channel Works (Free Headworks excluded) Pykes Creek, Melton, and Distributary Works	985,619 156,569	106 ..	985,513 156,569	(C.) 487,788 ..	497,725 156,569	43,545 6,918	(C.) 21,553 ..	21,992 6,918		
Uncompleted or Unallocated Works.	Mornington Peninsula	573,608	..	573,608	(C.) 70,230	503,378	25,345	(C.) 3,103	22,242	£77,530	
	Koo-wee-rup and Cardinia Flood Protection Schemes	325,592	..	325,592	(C.) 178,117	147,475	14,388	(C.) 7,869	6,519		
	Sugarloaf Reservoir and Waranga Reservoir Enlargement	2,019,921	1,000	2,018,921	(C.) 2,018,921	..	89,206	(C.) 89,206	..		
Other Authorities.	Maffra-Sale Irrigation and Water Supply District	914,638	..	914,638	(C.) 914,638	..	40,413	(C.) 40,413	..	£77,530	
	Millewa Waterworks Districts	350,356	..	350,356	(C.) 350,356	..	15,480	(C.) 15,480	..		
	Red Cliffs Irrigation and Water Supply District	745,422	..	745,422	(C.) 336,131	409,291	32,936	(C.) 14,852	18,084		
	Waterworks Trusts (including First Mildura)	1,879,346	258,616	1,620,730	(A.) 316,537	1,304,193	71,612	(A.) 13,986	57,626		
	Local Bodies (Municipalities)	783,677	125,363	658,314	(A.) 163,760	494,554	29,088	(A.) 7,236	21,852		
	River Murray Agreement Works	1,426,820	..	1,426,820	(C.) 1,426,820	..	63,044	(C.) 63,044	..		
	Irrigation and Waterworks Trusts Abolished	32,754	30	32,724	(A.) 32,724	..	1,446	(A.) 1,446	..		
	Free Headworks	1,252,462	420	1,252,042	(B.) 1,252,042	..	55,321	(B.) 55,321	..		
	Free Grants to Local Authorities	147,046	..	147,046	(B.) 147,046	..	6,497	(B.) 6,497	..		
	Surveys, Exploratory, and Preliminary Works, including Purchase of Land reserved for Reservoirs	210,686	..	210,686	(C.) 210,686	..	9,309	(C.) 9,309	..		
	Loan Moneys unexpended	312,343	..	312,343	(D.) 312,343	..	13,801	(D.) 13,801	..		
	Totals	19,573,205	466,633	19,106,572	8,968,346	10,138,226	844,224	396,264	447,960	301,492	

Dated at the Office of the State Rivers and Water Supply Commission, Treasury
Gardens, Melbourne, the 17th day of November, 1927.

WM. CATTANACH, Chairman.

E. SHAW, Commissioner.

RICHD. HORSFIELD, Commissioner.

M. NALLY, Secretary.

STATE RIVERS AND WATER SUPPLY COMMISSION.

SHOWING
CATCHMENT AREAS, RESERVOIRS, and SUPPLY MAINS.

