
IRRIGATION REVENUE REPORT

OF THE

BOMBAY PRESIDENCY,

EXCLUDING SIND.

1914-1915.

[Price—6a. or 7d.]

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IRRIGATION REVENUE REPORT
BOMBAY PRESIDENCY, EXCLUDING SIND,
1914-1915.

PART I.

COMPRISING FIRST CLASS IRRIGATION WORKS FOR WHICH
CAPITAL AND REVENUE ACCOUNTS ARE KEPT.

GENERAL REMARKS.

Works in Operation. The following list includes all the works in operation (42 in number):—

Collectorate.	Number.	Names of Works.	Area of four months' crops which could be irrigated in normal years with a duty at the head of the Canal of 120 acres for the monsoon season and 120 acres for the rabi season per cusec.	Whether Supply is reliable or dependent on local rain.	Storage Works completed or proposed.	Remarks.
		MAJOR WORKS.	Acres.			
		<i>Protective Works.</i>				
Ahmednagar	1	Pravara River Works —Pravara Right Bank Canal.	24,656 for completed canal.	Dependent on local rain.	Storage work at Lake Arthur Hill in progress.	Ghat catchment.
Nasik	2	Girna Left Bank Canal.	Information not available.	Reliable	Chankapur Tank completed.	Do.
Nasik	3	Godavari Left Bank Canal.	21,136	Do.	Lake Beale completed.	Do.
Ahmednagar	3	Godavari Right Bank Canal.	85,600. These are projected figures subject to alteration.	Do.	Lake Whiting completed.	Do.
Poona	4	Nira Canal including Shetphal Tank.	100,000	Do.	Lake Whiting completed.	Do.
Sholapur	5	Mhaswad Tank	17,975	Dependent on local rain.	Completed	Deccan catchment.
		<i>Productive Works.</i>				
Ahmedabad	9	Hathmati Canal and Khari Cut.	24,000	Dependent on local rain.	No storage work; Bokh Reservoir and Chandola Tank completed.	Forest and hilly catchment. Supply depends chiefly on the flow in the Hathmati and Khari Rivers, contents of the Bokh Reservoir and the Chandola Tank.
West Khandesh	10	Lower Panjhra River Works.	8,173	Panjhra River supply not reliable.	Mukti Tank completed.	Ghat catchment for one part and Deccan catchment for the rest.
Nasik	11	Kadwa River Works. { Palkhed Canal. Ojhar Canal. Tambat Canal. Wadali Canal.	7,223 550 970	Reliable	Waghad Tank completed.	Ghat catchment.
Ahmednagar	12	Pravara River Works —Lakh Canal.	582	Reliable for monsoon and rabi.	Storage work at Lake Arthur Hill in progress.	Ghat catchment.
Poona	13	Mutha Canals including Matoba Tank.	49,000	Reliable	Lake Fife completed.	Ghat catchment.
Sholapur	14	Ekruk Tank	13,070	Dependent on local rain.	Completed	Deccan catchment.
Satara	15	Krishna Canal	6,418	Reliable	Proposed	Ghat catchment.

Collectorate.	Number.	Names of Works.	Area of four months' crops which could be irrigated in normal years with a duty at the head of the canal of 120 acres for the monsoon season and 120 acres for the rabi season per cusec.	Whether Supply is reliable or dependent on local rain.	Storage Works completed or proposed.	Remarks.
		MINOR WORKS AND NAVIGATION.	Acres.			
Kaira	16	Wangroli Tank ...	3,400	Dependent on local rain.	Completed	Ordinary catchment on plain ground.
	17	Tranza-Nagrama Tank.	800	Do.	Do.	Tranza Tank has no independent catchment. Nagrama Tank has a catchment of 150 sq. miles. Both are fed by the Matar Drainage channel which is not at all reliable.
	18	Savli Tank ...	3,000	Do.	Do.	Ordinary catchment on sloping ground.
	19	Saiat do. ...	2,000	Do.	Do.	Ordinary catchment on flat ground.
East Khândesh.	20	Hartala do. ...	978	Do.	Do.	Deccan catchment.
	21	Mhasva do. ...	3,255	Do.	Do.	Do.
	22	Jamda Canals ...	42,000	Girna River supply not reliable.	Storage Tanks on the Girna, the Manad and the Panjan Rivers under contemplation. Water is issued from the Chankapur Tank when available.	Ghat catchment for a small part and for the rest Deccan catchment.
Nasik	23	Parsul Tank ...	3,400	Dependent on local rain.	Completed	Deccan catchment.
Ahmednagar	24	Pravara River Works — Pravara Left Bank Canal.	6,852	Do.	Storage work at Lake Arthur Hill in progress.	Ghat catchment.
	25	Bhatodi Tank ...	1,461	Do.	Completed	Deccan catchment.
Poona	26	Kasurdi do. ...	150	Do.	Do.	Do.
	27	Shirsuphal do. ...	1,350	Do.	Do.	Do.
	28	Bhadalvadi do. ...	1,500	Do.	Do.	Do.
Sholapur	29	Koregaon do. ...	416	Do.	Do.	Hilly catchment.
	30	Ashti do. ...	3,382	Do.	Do.	Deccan catchment.
	31	Pathri do. ...	3,094	Do.	Do.	Hilly catchment.
	32	Rewari Canal ...	439	Do.	Nil	Deccan catchment.
Satara	33	Upper Man River Works.	373	Do.	Fingli Tank completed.	Do.
	34	Yerla River Irrigation Works.	1,182	Do.	Nehr do.	Do.
	35	Chikhli Canal ...	355	Do.	Nil	Do.
Bijapur	36	Maini Tank ...	455	Do.	Completed	Do. Supply from catchment is good.
	37	Muchkundi Tank ...	750	Do.	Do.	Deccan catchment.
Belgaum	38	Gadikeri do. ...	418	Do.	Do.	Supply reliable.
	39	Gokak Canal, 1st Section.	10,337	Reliable	Rabi Storage only.	Ghat catchment.
	40	Dambal Tank ...	531	Dependent on local rain.	Completed	Deccan catchment.
Dhârwâr	41	Medleri do. ...	231	Do.	Do.	Do.
	42	Asundi do. ...	303	Do.	Do.	Do.
	43	Madag do. ...	1,418	Do.	Do.	Ghat and forest catchment—reliable.
	44	Mavinkop do. ...	617	Do.	Do.	Forest catchment reliable.
	45	Dharma Canal ...	For monsoon season 6,550 acres. For Rabi nil.	Do.	No storage works, but canal takes off from the River itself.	Ghat catchment.

Nos. 6, 7, 8, 46 and 47—Mâlâdevi, Budhibal, Nira Right Bank Canal, Victoria Tank and the Suki River Project are not included as the works were not in operation in the year under report. No. 48—Gokak Canal, 2nd Section—is in abeyance.

Interest Account.

2. The interest account to end of the year stands as follows:—

	Amount.				Amount.		
	Protective Works.	Productive Works.	Total.		Protective Works.	Productive Works.	Total.
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
Total Interest charges to end of 1913-14 ...	1,10,83,935	1,68,14,235	2,78,98,220	Net revenue realized to end of 1913-14 ...	38,37,163	73,45,695	1,11,82,748
Do. during 1914-15 ...	10,27,162	4,38,339	14,65,501	Do. during 1914-15 ...	4,76,125	4,51,213	9,27,338
					43,13,278	77,96,908	1,21,10,086
				Balance net Interest charges to end of 1914-15...	77,97,869	94,55,766	1,72,53,635
Total end of 1914-15 ...	1,21,11,147	1,72,52,574	2,93,63,721	Total ...	1,21,11,147	1,72,52,574	2,93,63,721

3. The gross revenue realised from all sources during the year, after deducting refunds of revenue (Rs. 21,977), was Rs. 16,98,838, of which Rs. 16,89,398 were direct and Rs. 9,440 indirect receipts. The net revenue actually realized was Rs. 9,48,772. The gross revenue shows a decrease of Rs. 40,645, while the net revenue shows a decrease of Rs. 1,38,821.

Area under command and irrigable area.

4. The gross area under command was 1,260,482 acres and the area irrigable at present is 442,904 acres.

5. The financial results of the year by main heads were as follows:—

	Area irrigated.	Revenue realised.			Working expenses.	Net Revenue.
		Direct Receipts.	Share of Land Revenue.	Total.		
	Acres.	Rs.	Rs.	Rs.	Rs.	Rs.
<i>Class I.—Works for which Capital and Revenue Accounts are kept.</i>						
Major Works. { Protective Works.	84,726	8,10,461	...	8,10,461	3,34,336	4,76,125
{ Productive Works.	46,016	6,87,217	4,109	6,91,326	2,40,113	4,51,213
Total ...	130,742	14,97,678	4,109	15,01,787	5,74,449	9,27,338
Minor Works ...	39,934	1,91,720	5,331	1,97,051	1,75,617	21,434
Total Class I ...	170,676	16,89,398	9,440	16,98,838	7,50,066	9,48,772

The area shown as irrigated includes 10,946 acres on which a consolidated land and water assessment has been and is proposed to be levied. This is derived from old works on which expenditure on improvements only has been incurred.

6. The figures showing areas irrigated, revenue assessed and realised, and working expenses, as compared with former years, are as follows:—

Areas irrigated.

Years.	Area irrigated.	Revenue.		Working expenses.
		Assessment.	Realization.	
	Acres.	Rs.	Rs.	Rs.
1904-05	131,905	8,45,905	6,65,237	3,56,124
1905-06	105,716	8,93,325	8,47,811	3,57,670
1906-07	108,787	9,47,167	8,58,820	3,67,062
1907-08	130,808	10,87,554	11,01,106	3,80,332
1908-09	142,928	10,99,014	10,67,329	3,89,423
1909-10	145,155	11,22,916	12,55,165	4,16,046
1910-11	123,356	10,95,369	12,51,247	4,38,524
1911-12	142,934	13,31,017	13,76,101	4,68,047
1912-13	197,365	15,83,168	14,13,527	5,09,099
1913-14	203,338	17,59,548	17,39,483	6,51,890
Average for ten years	143,229	11,76,498	11,57,583	4,33,422
1914-15	159,730	16,05,516	16,98,838	7,50,066

The decrease of 43,608 acres in the total area irrigated as compared with the previous year was distributed over the several classes of works as follows :—

	Acres.
Protective Works...	32,491
Productive „	5,655
Minor „	5,462
Total	43,608

The variations in the areas irrigated may be remarked upon as follows :—

Deccan Irrigation Division.

The decrease of 39,132 acres in the total area irrigated as compared with the previous year was distributed over the several classes of works as follows :—

	Acres.
Protective Works ...	32,491
Productive „	5,635
Minor „	1,006
Total	39,132

The decrease is due to the less demand for canal water owing to timely and favourable rainfall during the year.

Central Division.

The decrease of 1,495 acres in the total area irrigated as compared with the previous year was distributed over the several classes of works as follows :—

	Acres.
Productive Works...	1,747
Minor „	+ 251
Total	1,496

The decrease under Productive Works was due to the less demand of water from the Ekruk Tank Canal owing to seasonable rainfall.

Southern Division.

As compared with the previous year, the total area irrigated shows a decrease of 8,740 acres. The decrease was both in the kharif and rabi seasons, and is the net result of increases and decreases on several works.

For the kharif season there was a decrease in the case of all the works except the Medleri Tank, where, however, the increase was insignificant, while for the rabi season there was marked increase in the areas irrigated under the Rewari, Chikhli and Maini systems and also to a small extent in the area irrigated by the Upper Man River Works, but the total of these increased areas was more than counterbalanced by that of the decreases in the case of all the other works in the Division and especially in the case of the Gokák Canal where it was more than double of the total increased rabi area mentioned above. The seasonable rainfall of 1914 was chiefly responsible for a considerable decrease in the area irrigated in this Division.

Northern Division.

The rainfall of the year was above the average. The monsoon broke in the beginning of June just like the last year and a little rain continued to fall throughout the month which enabled rice seedlings to be prepared earlier than usual and the transplantation thereof could be commenced by the middle of July. During the whole month of July there was pretty good rainfall, while from 26th July to 2nd of August, it was heavy in the whole of Northern Gujarát.

The total area irrigated by both the Hathmati and Khari Cut Canals was 21,499 acres, against 18,330 acres irrigated by them in the previous year. The total areas irrigated respectively by the Wangroli, Tránza-Nagrama, Savli and Saiat Tanks were 1,301, nil, 1,229 and 909 acres against 453, 173, 146 and 76 acres irrigated by them in the previous year. The net increase in area is 5,760 acres.

Collections of Revenue.

7. The state of the collections was as follows :—

				Rs.
Balance, of demands unrealized at the commencement of the year	...	...	...	1,22,354
				Rs.
Demands of the year—				
Rabi, 1913-14	...	...	...	4,60,699
Kharif, 1914-15	...	...	...	9,03,440
Miscellaneous receipts	...	...	...	3,23,209
				<u>16,87,348</u>
				Total ... 18,09,702
<i>Deduct—</i>				
Remissions	...	...	...	23,097
				<u>Net Total ... 17,86,605</u>
Amount unrealized at the close of the year	...	...	...	75,230
Actual receipts for the year	...	...	...	17,11,375
<i>Add—</i>				
Share of Land Revenue	...	...	...	9,440
				<u>17,20,815</u>
<i>Deduct—</i>				
Refunds of Revenue	...	...	...	21,977
Revenue realized as per paras. 3, 5, and 6	...	...	...	<u>16,98,838</u>

The remissions and refunds together amount to Rs. (31,417). The amount unrealized at the close of the year, viz., Rs. 75,230 is considerably less than that at the close of the last year; the total is made up as follows:—

	Rs.
1 Godávari Canal	33,020
2 Mutha Canals, including Matoba Tank	17,561
3 Nira Canal, including Shetphal Tank	6,640
4 Dharma Canal	6,349
5 Krishna Canal	4,013
6 Kadwa River Works	1,705
7 Ekruk Tank	1,317
8 Parsul Tank	986
9 Wangroli Tank	900
10 Pravara River Canal	845
11 Madag Tank	762
12 Bhatodi Tank	757
13 Hathmati Canal, including Khari Cut	659
14 Gokák Canal	542
15 Other Works	-826
Total ...	<u>75,230</u>

The remarks made by the Superintending Engineers regarding the amounts outstanding are given below:

Superintending Engineer, Deccan Irrigation Division.

The unrealised balance of revenue at the close of the year was Rs. 60,985 as detailed below, as compared with Rs. 65,680 in the previous year:—

Unrealised balance.

	Rs.
1 Godávari Canal	33,904
2 Mutha Canals, including Matoba Tank	17,561
3 Kadwa River Works	1,711
4 Nira Canal, including Shetphal Tank	6,663
5 Pravara River Works	1,149
6 Other works	1,034
7 Excess recoveries made for Mhaswad Tank and Lakh Canal to be refunded	-1,037
Total ...	<u>60,985</u>

Of these the sum of Rs. 10,827 has been recovered since the close of the year and steps are being taken in the Civil Department to recover the balance.

Superintending Engineer, Central Division.

The unrealised balance of revenue at the close of the year was Rs. 3,062; of this, Rs. 2,111 have been recovered since 31st March 1915 and steps are being taken in the Civil Department to recover the outstandings.

Superintending Engineer, Southern Division.

The amount unrealised at the close of the year, viz., Rs. 8,632, is greater than that at the close of the previous year by Rs. 1,591 and consists mainly of the large unrealized balances in the case of the Krishna Canal (Rs. 4,237), the Dharma Canal (Rs. 3,216), the Madag Tank (Rs. 762) and the Gokák Canal (Rs. 509). The Collectors concerned are being requested to effect recoveries as early as possible.

Superintending Engineer, Northern Division.

Recoveries have been made with great strictness in both the Collectorates of Ahmedabad and Kaira, and the outstanding balances could not be recovered owing to the heavier demands of the past years from some of the poorer tenants, a large amount of which has since been recovered, and it is hoped that the balances still remaining outstanding, which are small, would be cleared during the year 1915-16.

8. The total working expenses for the year amounted to Rs. 7,50,066 against Rs. 6,51,890 in the previous year, showing an increase of Rs. 98,176 distributed as follows :—

		1913-14.	1914-15.	Difference.
		Rs.	Rs.	Rs.
Major Works—				
Protective Works	... ..	2,86,110	3,34,336	+ 48,226
Productive Works	... ..	2,16,958	2,40,113	+ 23,155
	Total ...	5,03,068	5,74,449	+ 71,381
Minor Works and Navigation	... ..	1,48,822	1,75,617	+ 26,795
	Grand Total ...	6,51,890	7,50,066	+ 98,176

The increases and decreases are explained by the Superintending Engineers as follows :—

Superintending Engineer, Deccan Irrigation Division.

The total working expenses amounted to Rs. 4,99,146 against Rs. 4,39,310 in the previous year, showing an increase of Rs. 59,836 distributed as under :—

		1913-14.	1914-15.	Difference.
		Rs.	Rs.	Rs.
Major Works—				
Protective Works	... ..	2,86,110	3,34,336	+ 48,226
Productive Works	... ..	1,38,537	1,51,412	+ 12,875
	Total ...	4,24,647	4,85,748	+ 61,101
Minor Works and Navigation	... ..	14,663	13,398	— 1,265
	Grand Total ...	4,39,310	4,99,146	+ 59,836

The increase under Works is chiefly made up of increases on the Godavari Canals (Rs. 3,983), on the Mutha Canals (Rs. 3,796) and Nira Left Bank Canal (Rs. 3,716).

Towards the increases under Repairs and Establishment,

	Repairs.	Establishment.
The Nira Left Bank Canal contributed	... 20,962	15,734
Godavari Canals	... 5,228	5,348
Pravara Right Bank Canal	... 1,224	1,897

The causes of these increases have not been explained by the Superintending Engineer, Deccan Irrigation Division.

Superintending Engineer, Central Division.

The total working expenses amounted to Rs. 53,425 against Rs. 53,217 in the previous year showing an increase of Rs. 208. This increase is the result of increases and decreases on several works. The increases on the Mhaswa Tank of Rs. 1,746 and on the Ashti Tank of Rs. 1,537 are noticeable and were due to certain improvements to the former tank and special repairs to the latter.

Superintending Engineer, Southern Division.

The total working expenses for the year amounted to Rs. 72,410 against Rs. 52,793 of the previous year and Rs. 51,027, the average of the past three years. The increase is due to the expenditure incurred on the following:—

	Rs.
(a) Renewing two iron trough aqueducts on Gondwla Canal, mile No. 1 (Upper Man River Works) ...	1,730
(b) Special repairs to the Nehr Tank Dam (Yerla River Irrigation Works) ...	16,000
(c) Special repairs to the Yerla River Irrigation Works—repairs to washouts ...	1,538
(d) Special repairs to Nehr Tank service road ...	760
(e) Urgent special repairs to Chikli Canal ...	1,530
(f) Special repairs to aqueduct No. 3 which was washed away. (Madag Canal) ...	1,443
Total ...	23,001

9. The following table contrasts the charges under the principal heads with those of the two previous years:—

	1912-13.	1913-14.	1914-15.
	Rs.	Rs.	Rs.
Works ...	40,009	42,384	63,835
Repairs ...	2,22,273	3,16,634	3,50,800
Establishment ...	1,55,775	1,77,993	2,17,788
Tools and Plant ...	11,294	15,896	15,152
Total in the Public Works' Department ...	4,29,351	5,52,907	6,47,575
Collection Charges ...	57,432	74,062	71,492
Indirect Charges ...	22,316	24,921	30,999
Total ...	5,09,099	6,51,890	7,50,066

The establishment charges divided between "Direction and Accounts" and "Executive," compare as follows with those for the previous year:—

	1913-14.	1914-15.	Difference.
	Rs.	Rs.	Rs.
Direction and accounts ...	15,657	17,120	+1,463
Executive ...	1,62,336	2,00,668	+38,332
Total ...	1,77,993	2,17,788	+39,795

Details of working expenses.

10. The following table gives the details of the working expenses of some of the principal works :—

Name of works.	Average incidence of water-rate per acre.	Cost of measurement.		Working expenses total in the Public Works Department excluding indirect charges.	
		Total cost.	Per acre.	Per mile of main canal.	Per acre irrigated.
<i>Canals.</i>					
Nira Canal, including Shetphal Tank.	9.53	1,640	0 0 6	1,294	2.39
Háthmati and Khári Cut Canals ...	.	Figures not available.			
Girna Left Bank Canal ...	6.49	199	0 1 5	1,121	6.55
Kadwa River Works ...	6.33	255	0 1 3	621	4.54
Lakh Canal ...	2.13	53	0 1 10	163	8.11
Godavari Canal ...	8.76	1,514	0 1 4	1,028	5.55
Mutha Canals, including Mátoba Tank ...	15.92	600	0 0 9	1,292	9.25
Pravara Right Bank Canal ...	3.29	282	0 1 2	444	3.78
Krishna Canal ...	14.48	628	0 2 10	337	3.32
Yerla River Irrigation Works ...	4.45	624	0 2 5	768	6.22
Rewári Canal ...	4.79	252	0 3 4	447	1.86
Upper Mán River Works ...	4.21	110	0 1 10	239	4.37
Chikhli Canal ...	4.80	53	0 2 2	389	6.49
Gokák Canal ...	4.73	1,065	0 2 8	674	1.68
<i>Tanks.</i>					
Mhaswad Tank ...	4.71	198	0 0 6	223	2.34
Parsul Tank ...	5.44	113	0 1 10	Nil	1.43
Maini Tank ...	4.02	227	0 2 0	276	1.42

11. The gross assessed revenue, direct and indirect, as shown in Statement IV-C accompanying the Irrigation Administration Report for 1914-1915 was Rs. 16,05,516. If Rs. 51,397 being the difference between the value at normal rates of water-issued from the Mutha Canals and the value of water supplied at special reduced rates or gratuitously for water-supply to various institutions in the Poona City, be added to the above amount, the total assessed revenue, both direct and indirect, of the year will be Rs. 16,56,913.

The details of the gross assessment were as follows :—

	Direct Revenue.			Indirect revenue.	Total.
	Water-rates.	Other receipts.	Total.		
<i>Major Works—</i>					
Protective Works ...	Rs. 7,32,147	Rs. 28,353	Rs. 7,60,500	Rs. ...	Rs. 7,60,500
Productive Works ...	4,03,291	2,47,985	6,51,276	4,109	6,55,385
Total ...	11,35,438	2,76,338	14,11,776	4,109	14,15,885
Minor Works ...	1,37,429	46,871	1,84,300	5,331	1,89,631
Grand Total ...	12,72,867	3,23,209	15,96,076	9,440	16,05,516

12. The net assessed revenue of the year, after deducting working expenses, including indirect and all other charges, and neglecting the items amounting to Rs. 51,397 referred to in the preceding paragraph, was Rs. 8,55,450 as compared with Rs. 11,07,658 in 1913-14.

13. The water-rates in force during the year are shown in Statement I-F accompanying the Irrigation Administration Report for 1914-1915, in the remarks column of which the orders sanctioning them are quoted.

14. The average water-rates per acre of land actually irrigated were :—

	1913-14.	1914-15.
	Rs.	Rs.
Protective Works	7.33	8.64
Productive Works	8.48	8.76
Minor Works	3.22	3.44

15. The water-rate assessments and other receipts compare with those of the previous year as under :—

	1913-14.	1914-15.
	Rs.	Rs.
Water-rates	14,44,458	12,72,867
Other Receipts—		
Plantations	10,526	13,147
Water-power	13,937	12,630
Water-supply to towns	1,71,487	1,73,566
Miscellaneous	1,12,387	1,23,866
Total	3,08,337	3,23,209
Share of land-revenue	6,753	9,440
Total	3,15,090	3,32,649
Grand Total	17,59,548	16,05,516

The above comparison shows increases under plantations, water-supply to towns, miscellaneous receipts and share of land revenue and decreases under water-rates and water-power.

The decrease under water-rates was due to the decreased area irrigated owing to timely and favourable rainfall. The same reason accounts for the increase under miscellaneous revenue. The other increases are small and call for no special remarks.

16. The principal crop acreages irrigated during 1913-14 and 1914-15 were as follows :—

	1913-14.	1914-15.	Increase or Decrease.
	Acres.	Acres.	Acres.
Gardens and Orchards	2,689	2,483	—206
Sugarcane	18,206	16,976	—1,230
Wheat	14,556	12,778	—1,778
Rice	18,642	29,579	+10,937
Maize	3,263	2,651	—612
Jowári	61,931	42,749	—19,182
Bájri	14,852	1,092	—13,760
Gram, etc.	9,121	9,843	+722
Groundnut	15,297	15,153	—144
Condiments	3,981	3,566	—415
Cotton	1,765	644	—1,121
Fodder	2,811	1,444	—1,367

The total estimated value of crops is shown as Rs. 1,44,78,830 against Rs. 1,49,05,579 in the previous year and Rs. 1,23,54,219 for the year 1912-13. But these estimated crop values must be regarded as only roughly approximate, there being no uniform method of estimating them. This matter is now receiving the attention of Government.

17. In Statement I-E accompanying the Irrigation Administration Report for 1914-15 the duty of water on each work, as well as the bases on which the duties were calculated, etc., are shown. The results vary with the nature of the crops irrigated, perennial crops requiring much more water than cereals. To obtain a correct comparative result it is necessary to consider the area of each class of crop grown under the canals concerned. Statement G affords means for such a comparison.

DETAILED REPORTS BY LOCAL OFFICERS.

GUJARAT IRRIGATION DISTRICT.

MAJOR WORKS.

Works without storage and dependent on local rain.

18. The area irrigated, net assessment, average water-rate and working expenses under the Hathmati and Khari Cut Canals compare with the average of those of the three preceding years as under. The annual increase in favourable results has been well maintained :—

Year.	Kharif.		Rabi.		Total.		Average water-rate assessed per acre.	Working expenses.
	Acres.	Rs.	Acres.	Rs.	Acres.	Rs.		
Average of 3 years ...	8,550	40,234	2,123	3,804	10,673	44,038	3.23	39,151
1914-15 ...	16,616	98,282	4,883	10,660	21,499	1,08,942	5.07	52,218

19. There was a small flood in the Hathmati River on the 12th July 1914, when the water level rose 1.30 feet above the weir crest. The maximum discharge in the canal was 350 cusecs on the 4th August 1914 and the minimum 18 cusecs on 31st March 1915. The canal continued to flow from June 1914 to the end of March 1915 with a few interruptions, when it was closed for clearing the weeds. The Bokh Reservoir, which is dependent for its supply on the Hathmati Canal, was filled by means of the Bokh Feeder to its F. S. L., the contents being 290 million cubic feet available for irrigation.

20. The miscellaneous revenue realized was Rs. 3,964 against Rs. 3,408 in the previous year. The increase is attributable to the sale of larger number of trees, etc., and to the better prices obtained.

21. Remissions of Rs. 1,377 in the Kharif and of Rs. 9 only in the Rabi season were granted partly on account of some mistakes made in measurement and partly owing to the failure of some crops on account of the submergence of fields and to the deficiency of supply on high lands.

22. The gross assessed revenue which amounted to Rs. 1,12,906 exceeded the working expenses by Rs. 60,688, which shows a return of 4.62 per cent. net, and on the basis of realizations 5.18 per cent. and the gross return of 8.59 per cent. on the direct and indirect capital outlay of Rs. 13,14,975 on the Hathmati and Khari Cut Canals combined—a very satisfactory result. The realizations amounted to Rs. 1,20,302 against Rs. 5,786 in the year 1904-1905 (ten years ago), when the Gujarat Irrigation District was established, showing the enormous growth of Irrigation Revenue that has occurred since that year.

23. The rainfall gauged at Ahmednagar at the head of the Hathmati Canal was 37.78 and 0.87 inches in the Kharif and Rabi seasons, while at Raipur at the head of the Khari Cut Canal it was 41.71 and 0.30 inches respectively.

MINOR WORKS AND NAVIGATION.

Works with storage tanks dependent on local rain.

24. The area irrigated, net assessment and working expenses under the Wangroli, Tranja-Nagrama, Savli and Saiat Tanks compare with the average of those of the previous three years as under :—

Tank.	Year.	Kharif.		Rabi.		Total.		Working expenses.
		Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	Rs.
Wángroli	Average of 3 years...	676	2,335	407	946	1,083	3,281	4,949
	1914-15 ...	1,267	4,580	34	125	1,301	4,705	21,822
Tranja-Na grama.	Average of 3 years...	150	441	129	347	279	788	2,692
	1914-15 ...	...	...	...	...	...	...	2,653
Sávli	Average of 3 years...	636	2,541	380	753	1,016	3,294	14,049
	1914-15 ...	1,122	4,451	107	214	1,229	4,665	13,863
Saiat	Average of 3 years...	274	1,035	226	615	500	1,650	9,737
	1914-15 ...	749	2,962	160	636	909	3,598	34,839

(16) WANGROLI TANK.

25. This tank was just full and the increase in the irrigated area and in the assessment were due to the storage having been partly utilized in irrigating the kharif crop mainly rice, there being little or no rabi crop afterwards owing to the favourable rainfall in September on which gram was grown.

26. The **miscellaneous revenue** amounted to Rs. 91 only against Rs. 562 in the previous year. The decrease was due to the land in the tank bed not having been taken up for cultivation though it was put up for auction.

27. The **remissions** granted during the year amounted to Rs. 287 in the kharif season only.

28. The **rainfall** gauged in the tank catchment was 29.87 and 0 inches respectively in the kharif and rabi seasons.

(17) TRANZA-NAGRAMA TANKS.

29. These tanks were empty and there was therefore no irrigation under them. They have little or no independent catchments of their own and there was no flow in the feeder channel. An endeavour is being made to divert the flow *via* Alindra and Chokadia and Heranj Tanks.

30. The **miscellaneous revenue** amounted to Rs. 296 against Rs. 504 in the previous year.

31. No **remissions** were granted.

32. The **rainfall** gauged in the Nagrama Tank was 26.11 and 0 inches respectively in the kharif and rabi seasons.

(18) SAVLI TANK.

33. This tank was full and the supply available was used up mainly for irrigating the kharif crop—mainly rice, and what little remained was given for the rabi crops mainly gram and a little wheat which was grown under the wells.

34. The **miscellaneous revenue** amounted to Rs. 372 against Rs. 222 in the previous year. The increase is attributable to the greater area of land let out for cultivation in the tank bed.

35. No **remissions** were granted during the year.

36. The **rainfall** gauged at the tank was 30.53 and 0.18 inches respectively in the kharif and rabi seasons.

(19) SALAT TANK.

37. The tank was full and the supply was used for irrigating both the kharif and rabi crops to the extent possible.

38. The miscellaneous revenue amounted to Rs. 450 against Rs. 479 in the previous year. The revenue is likely to increase in future; it is derived mainly by letting out the area of land in the tank bed for cultivation, and the sale-proceeds of grass growing on the canal banks, etc.

39. A remission of only Re. 1 was granted in the kharif season.

40. The rainfall gauged at the tank was 29.6 and 0 inches respectively in the kharif and rabi seasons.

POONA IRRIGATION DISTRICT.

Works with Ghat Storage.

(4) NIRA CANAL AND SHETPHAL TANK.

41 (a). The rainfall at Bhatghar, at the three representative stations along the canal, and at Shetphal Tank, was considerably over the average of the past three years:—

Station.	Rainfall during 1914-15.	Rainfall during 1913-14.	Average rainfall during the past three years.	Remarks.
Bhatghar	54.74	40.36	38.72	The rainfall on the whole was very satisfactory.
Rajgad	123.00	Not reported.		
Pimpra	21.09	13.37	14.07	
Baramati	16.77	14.78	14.21	
Nimbgaon	16.33	10.43	12.12	
Shetphal	17.39	16.46	13.30	

41 (b). The following table gives the run-off during 1914 from the catchment of Lake Whiting:—

Name of catchment.	Area in square miles.	Actual run-off in M. cft. in 1914.	Equivalent run-off in inches.	Remarks.
Lake Whiting.	128	29,251*	98†	* Calendar year (1st January to 31st December 1914). M. cft. Flood discharge 24,253 Irrigation discharge 4,851 Evaporation, absorption and leakage 453 1st January, depth ... 69.30 31st December, depth ... 70.40 Therefore contents on those dates:— 2,923.88 3,087.40 Difference ... 164 Total ... 29,251 Equivalent to depth on catchment area of inches† 98 nearly.

42. The level of water in Lake Whiting on 31st March 1915 was 59.20 against 56.00 on the same date of the preceding year. None of the under-slucices was opened to empty the tank and run off silt laden flood water. The lowest depth attained was 39 feet, the corresponding contents being 390.20 million cubic feet.

43. The lake began to receive replenishment from 13th June 1914, and rose steadily until on 8th July, the level reached 75 feet (crest of waste weir), when the south waste weir gates were opened to pass off the ordinary flood water.

44. On the 18th July 1914, the level in the tank rose to 78.70 due to heavy rain. The maximum run off in 24 hours amounted to 2,299 million cubic feet on 21st July. The automatic gates, which can be brought into action with 3 feet depth of water, worked well. The total flood discharge from the waste weir was 42,323 million cubic feet. By raising the south weir gates the full supply, 83 feet level, was obtained on the 6th September 1914, and maintained till the 18th October, when water had to be drawn off for irrigation.

45. The average discharge in cusecs at the head of the Nira Canal for each month during 1914-15 was as shown below :—

Month.	Number of days.	Discharge in day cusecs.	Remarks.
February 1914 (16th to 28th) ...	13	2,278	1 day cusec = 1 cusec running for 24 hours and if multiplied by 86,400 gives the number of cubic feet of water. The quantity of water which entered the canal is thus :— 97,562 × 86,400 or 8,429 million cubic feet.
March " ...	31	4,265	
April " ...	30	3,723	
May " ...	31	3,927	
June " ...	30	3,758	
July " ...	31	10,355	
August " ...	31	11,597	
September " ...	30	12,105	
October " (1st to 15th) ...	15	5,055	
" " (16th to 31st) ...	16	7,963	
November " ...	30	13,474	
December " ...	31	10,319	
January 1915 ...	31	5,888	
February " (1st to 15th) ...	15	2,855	
Total ...	365	97,562	or 267 cusecs on the average.

46. Water in Shetphal Tank reached its lowest depth, namely 7.20 feet on 23rd June 1914. It was then replenished from the Nira Canal and the highest reading was 37 feet on 22nd August 1914.

47. The following table shows the area irrigated, water rate levied, gross assessed revenue, working expenses, etc., during the year as compared with the average of the past three years :—

Area irrigated in acres.		Assessment.		Gross assessed revenue.		Working expenses.		Realization.		Average rainfall of 5 stations.	
1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.
Acres.	Acres.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Inches.	Inches.
54,133	56,103	5,15,801	5,14,631	5,33,794	5,21,165	1,65,743	1,14,432	5,88,105	4,93,697	25.26	18.48

48. The increase of over Rs. 50,000 in working expenses as compared with the average figure of the previous 3 years is chiefly due to the execution of certain special repairs to distributaries and other works of extensions and improvements, and partly to a necessary increase in expenditure on ordinary maintenance and repairs to keep the works in efficient order.

49. The sugarcane and perennial areas on the Nira Canal and Shetphal Tank are compared below with the figures for the previous three years :—

Year.	Area in acres.
1911-12 ...	9,439
1912-13 ...	7,949
1913-14 ...	9,182
1914-15 ...	7,121

50. The total sugarcane and perennial area is less than that of the previous year owing to overlapping "Adsali" not being allowed in perennial blocks during the hot-weather season (as there was not sufficient water in the tank).

51. The total culturable area under command of the Nira Canal and Shetphal Tank was 227,670 acres, of which 15.89 per cent. was assessed in the kharif and 7.89 per cent. in the rabi season. The corresponding percentages for the year 1913-14 were 17.70 and 15.98 respectively.

52. The refunds given during the year amounted to Rs. 11 and there were no remissions.

53. The cost incurred on measuring the irrigated area amounted to Rs. 1,640, viz., a little less than 6 pies per acre compared with a little over 4 pies of the previous year.

(13) MUTHA CANALS INCLUDING MATOBA TANK.

54 (a). The rainfall figures for eight representative stations on this system are shown in the subjoined table:—

Stations.		Rainfall during 1914-15.	Rainfall during 1913-14.	Average rainfall during the past 3 years.
		Inches.	Inches.	Inches.
Tank area	Musa	149.48	129.52	115.10
	Mutha	90.66	59.14	63.86
	Khadakvasla	51.38	40.24	33.56
	Garli	316.08		
	Yegra	254.47		
		These stations are newly opened.		
Canal area	Poona (Sassoon Hospital) .	33.13	26.85	23.63
	Khedgaon	14.02	9.23	9.97
	Matoba Tank... ..	15.10	16.11	11.98

54 (b). The following table gives the run-off during 1914 from the catchment of Lake Fife:—

Name of catchment.	Area in square miles.	Actual run-off in million cft., 1914.	Equivalent run-off in inches.
Lake Fife	196	79,000	173

55. The lowest water-level at Lake Fife was 7.10 feet (18.9 feet below weir crest) on the 20th June 1914. New replenishment was received from 21st June 1914 and the lake was filled to overflowing 26 feet on the 21st August 1914. The highest level reached was 34 feet on the 10th September 1914.

56. The full supply level and highest flood level are both at the top of the automatic gates, viz., 34 feet over the sill of sluices, and 8 feet over the weir crest.

57. The regular draw-off commenced on the 6th October 1914, and by 1st April 1915 the level went down to 19.54 feet above the sill of sluices.

58. The Matoba Tank was dry upto 26th June 1914, when it received its first replenishment. The highest level 29 feet was reached on the 24th July 1914, when the tank overflowed for 37 days, i. e., upto 29th August 1914. The level then began to go down and reached 27.54 feet on 13th September 1914. The tank received its second replenishment on the day following, and reached its full supply level 29 feet on the 18th September, and continued to overflow till the 8th October 1914. The level then again went down gradually, and the tank was dry on the 27th March 1915.

59. The following table shows the area irrigated, water rates levied, and gross assessed revenue, etc., during the year as compared with the average of the past three years.

Area irrigated in acres.		Assessment.		Gross assessed revenue.		Realizations.		Average rainfall of 6 stations in inches.	
1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.
Acres.	Acres.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Inches.	Inches.
12,298	14,585	1,96,562	2,17,688	3,75,996	3,79,456	3,89,600	3,94,946	50.40	43.02

* Includes Rs. 42, revenue derived on account of percolation of water from the Mutha Canal.

60. The working expenses for the Poona water supply and the Mutha Canals proper for the year 1914-15 are compared with the average of the past three years, as under :—

	1914-15.	Average of the past three years.
Poona water supply ...	Rs. 65,720	Rs. 61,292
Mutha Canals ...	64,384	60,908
Total ...	1,30,104	1,22,200

61. The total area under perennial, including sugarcane on the Mutha Canals and Matoba Tank, are compared below with the figures for the previous three years :—

Year.	Area in acres.
1911-12 ...	6,075
1912-13 ...	5,186
1913-14 ...	5,676
1914-15 ...	5,284

62. The total refund of the revenue made during the year amounted to Rs. 393 and remissions Rs. 19 against Rs. 230 and nil respectively in 1913-14.

63. The actual cost of measuring the crops amounted to Rs. 600, viz., 9·4 pies per acre against 9·5 pies in 1913-14.

Poona Water-supply,

64. The assessed revenue from the water supply to the Poona City and the Cantonment amounted to Rs. 1,46,190 against Rs. 1,52,182 in 1913-14. The average daily supply of filtered water delivered into the mains for distribution from the Poona Water Works amounted to 1,488,149 gallons against 1,279,065 gallons in the previous year 1913-14.

65. The loss of revenue on account of water supplied either gratis or at reduced rate to certain charitable and public institutions in the Poona Cantonment and Suburbs, in accordance with Government orders, amounted to Rs. 10,069 against Rs. 9,240 in 1913-14.

Storage Works dependent on local rains.

(26) KASURDI TANK.

66. The tank was dry upto 26th June 1914, and then received its first replenishment. The tank again dried up on 16th July 1914, and received another replenishment on 5th August 1914, and again dried up on 15th August 1914. It received its third replenishment on 14th September, and the level reached was 15·10 feet above sill of outlet, that is, 2·34 feet below weir crest. The tank overflowed on 1st October 1914.

67. Water was issued to rabi crops causing a reduction in level, but a further replenishment was received and a second overflow on 5th November. The tank finally dried up on 28th December 1914.

68. The following table shows the area irrigated, water-rates assessed, gross assessed revenue, working expenses, etc., during the year as compared with the average of the past three years :—

Area irrigated in acres.		Assessment.		Gross assessed revenue.		Working expenses.		Realizations.		Rainfall in inches.	
1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.
Acres.	Acres.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Inches.	Inches.
79	50	325	203	694	571	633	690	710	562	13·70	12·89

(27) SHIRSUPHAL TANK.

69. The tank was dry upto 14th June 1914, when it received replenishment. The highest level reached was 18 feet above the sill of outlet on 1st October 1914. This was 13 feet below weir crest. Water was issued to rabi crops, and the tank dried up on 31st January 1915.

70. The following table shows the area irrigated, water rates levied, gross assessed revenue, working expenses, etc., during the year as compared with the average of the past three years :—

Area irrigated in acres.		Assessment.		Gross assessed revenue.		Working expenses.		Realizations.		Rainfall in inches.	
1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.
Acres.	Acres.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Inches.	Inches.
886	523	8,414	1,704	4,185	4,766	2,232	2,105	2,766	5,511	16.23	8.58

71. The following table gives the run-off during 1914 from the catchment of this tank :—

Name of catchment.	Area in square miles.	Actual run-off in Mc. ft. 1914.	Equivalent run-off in inches.	Average rain fall in catchment.	Percentage of run-off.
Shirsuphal	23.5	179	3.3	14.59	26.60

(28) BHADALWADI TANK.

72. The tank was dry upto 16th June 1914, when it received replenishment. The highest level reached was 27.60 feet above the sill of outlet. This was 7.40 feet below weir crest on 3rd October. The issue of water for rabi crops lowered the level to 17.38 feet on 16th January 1915, when another replenishment was received. The tank did not dry up during the year.

73. The following table shows the area irrigated, water-rates levied, gross assessed revenue, working expenses etc., during the year as compared with the average of the past three years :—

Area irrigated in acres.		Assessment.		Gross assessed revenue.		Working expenses.		Realizations.		Rainfall in inches.	
1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.
Acres.	Acres.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Inches.	Inches.
1,209	1,208	5,847	4,815	6,112	4,734	3,054	2,696	6,201	4,701	16.40	9.79

74. The following table gives the run-off during 1914 from the catchment of this tank :—

Name of catchment.	Area in square miles.	Actual run-off in Mc. ft. 1914.	Equivalent run-off in inches.	Average rainfall in catchment.	Percentage of run-off.
Bhadalwadi	23.0	126	2.4	12.80	18.75

MALSIRAS DISTRICT.

Storage Works with Deccan Catchment.

(5) MHASWAD TANK.

75. The supply of the tank is dependent on local rain on its large catchment of 480 square miles. On 1st April 1914, the water in the tank was below the sill of the canal sluice. Replenishments were received between the 14th June 1914 and the 4th October 1914. The replenishments were all small with the exception of those received on 14th June and 26th September. The total replenishment during the year was 2,051.05 million cubic feet, equivalent to 0.15 inch on the catchment area and 15 per cent. of the rainfall. The highest level of water reached during the year was 20.10 feet above the sill of canal sluices, the corresponding contents being 1,963.57 million cubic feet on 4th October 1914. The lowest level to which the water fell was 9.30 feet above sill of canal sluices on 31st March 1915, the corresponding contents being 628.13 million cubic feet. The supply was utilised for irrigating rabi crops only, as, owing to short supply, no water could be issued to kharif crops when they wanted it most in June, July and first half of August 1914.

76. The average rainfall recorded at the 5 rain-gauge stations in the catchment of the tank from 1st June to 31st October 1914 was 1,362 inches. The average rainfall for the whole year was 16.05 inches.

77. The following table shows the area irrigated, water-rates levied, gross assessed revenue, working expenses etc., during the year as compared with the average of the past three years :—

Area irrigated in acres.		Assessment.		Gross assessed revenue.		Working expenses.		Realizations.		Rainfall in inches.	
1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.
Acres.	Acres.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Inches.	Inches.
6,342	9,582	30,033	30,427	30,950	55,255	17,816	19,723	37,064	53,477	13.62	11.96

78. During the year owing to seasonable rainfall in the kharif season, kharif crops were grown to a larger extent than usual, thereby reducing the area available for rabi crops. Besides, owing to good rainfall in the rabi season also, water was not required for all rabi crops in and outside blocks, and the supply in the tank was not therefore fully utilised. This explains the fall in area and revenue.

79. The cost of measurement works out to Re. 0-0-6 per acre against Re. 0-0-10 for the previous year.

PRAVARA CANALS DISTRICT.

(a) Canals supplied by Ghat-fed river with storage works.

(3) GODAVARI RIGHT BANK CANAL.

80. This canal forms part of the Godavari Irrigation Project and is fed from the Lake Beale Storage reservoir on the Darna River near Asvali Station, G. I. P. Railway, in addition to the river supply. A length of 62 miles of this canal has been in operation during the year. The construction of the last 8½ miles is in progress. The main canal will, if adequate labour is available, be completed in all respects by the end of March 1916.

(3) GODAVARI LEFT BANK CANAL.

81. The first 40 miles of the canal were brought into operation during the year under report. There was an ample supply of water in the canal, but the demand was little owing to good and timely rainfall in the Násik Táluka as well as in Kopargaon Táluka of the Ahmednagar District. 1,748 acres of

rabi were, however, given out on 6 year leases. Water will be let down the whole length of the canal, *viz.*, 48 miles after the completion of the railway overbridges and the remaining distributary blocks, which works are in progress.

82. The following table shows the area irrigated, water-rates levied, gross assessed revenue, working expenses etc., on the Godavari Right and Left Bank Canals during the year as compared with the average of the past three years :—

Name of Canal.	Area irrigated in acres.		Assessment.		Gross assessed revenue.		Working expenses.		Realizations.		Rainfall in inches.	
	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.
	Acres.	Acres.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Inches.	Inches.
Godavari Right Bank Canal ...	14,336	24,269	1,39,690	1,36,986	1,62,395	1,44,633	1,47,582	55,427	1,56,464	1,03,013	22-43	14-14
Godavari Left Bank Canal ...	2,766	618	16,209	3,268									17-34	17-51

83. The cost incurred on the measuring establishment amounted to Rs. 1,269 and Rs. 245 with an irrigated area of 14,336 and 2,766 acres, respectively and work out to nearly 17 pies per acre. The rate for the last year was nearly 15 pies per acre.

(b) Canals supplied by Ghat-fed rivers without storage works.

84. Both the existing Ojhar Left Bank Canal and the new Pravara (Ojhar) Right Bank Canal come under this heading at present, as the canals draw their supply from the Pravara River and flow only as long as the river supply is sufficient.

85. A storage reservoir in the ghats at Bhandardara (Lake Arthur Hill) on the Pravara River is under construction. It will give an ample perennial supply to both these canals.

(24) PRAVARA LEFT BANK CANAL.

86. The work consisting of widening and extension of the old canal was started in 1910. The earthwork of the main canal is almost completed except the approaches to masonry works and the making of a few cuts at old canal crossings. The construction of masonry works is making satisfactory progress and it is expected that the canal will be ready for letting down water by the monsoon of 1916.

87. In order to facilitate construction of new masonry works and widening of the existing works which are on the old alignment, the canal has been closed for irrigation from 15th October 1913, the available water supply being utilised by the Pravara Right Bank Canal.

88. The following table shows the area irrigated, water rates levied, gross assessed revenue, working expenses etc., during the year as compared with the average of the past three years :—

Area irrigated in acres.		Assessment.		Gross assessed revenue.		Working expenses.		Realizations.		Rainfall in inches.	
1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.
Acres.	Acres.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Inches.	Inches.
16	5,005	27	13,104	3,139	25,309	5,724	7,181	3,190	17,229	25-32	13-20

89. The cost incurred on the measuring establishment amounted to Rs. 3 with an irrigated area of 16 acres, and works out to nearly 36 pies per acre.

(1) PRAVARA RIGHT BANK CANAL.

90. All the works on this canal are completed including distributaries upto mile 30. The construction of the tail branch and the Rahuri distributary is making progress and the latter is nearing completion. Efforts to establish good gardens and nurseries in the compounds have been continued and it is hoped that the gardens will eventually prove financially remunerative.

91. The following table shows the area irrigated, water rates levied, gross assessed revenue, working expenses etc., during the year as compared with the average of the past three years :—

Area irrigated in acres.		Assessment.		Gross assessed revenue.		Working expenses.		Realizations.		Rainfall in inches.	
1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.
Acres.	Acres.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Inches.	Inches.
3,865	5,984	12,710	15,148	13,033	15,571	16,044	7,213	13,199	3,509	25.32	13.20

92. The cost incurred on the measuring establishment amounted to Rs. 282 with an irrigated area of 3,868 acres and works out to nearly 14 pies per acre, the same as last year.

(12) LAKH CANAL.

93. This canal draws its supply from the Pravara River, just where it is crossed by the Dhond-Manmad Railway near Lakh village. Being situated below the Ojhar weir, it only receives such water as is not required by the Pravara Canals and the supply runs short after October. In the year under report, owing to copious rainfall, there was no demand for canal water in the kharif as well as rabi seasons, and therefore the area irrigated under this canal was small compared with the average of the previous 3 years as shown in the table printed below.

94. The cost incurred on the measuring establishment amounted to Rs. 53 with an irrigated area of 463 acres, and works out to 22 pies per acre. The figure for the last year was 15 pies nearly.

95. The following table shows the area irrigated, water rates levied, gross assessed revenue, working expenses etc., during the year under report as compared with the average of the past three years :—

Area irrigated in acres.		Assessment.		Gross assessed revenue.		Working expenses.		Realizations.		Rainfall in inches.	
1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.
Acres.	Acres.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Inches.	Inches.
463	2,023	986	3,504	1,862	4,103	4,086	2,909	2,898	3,637	20.51	11.71

NASIK AND AHMEDNAGAR IRRIGATION DISTRICT.

Works with Ghat Storage.

(11) KADWA RIVER WORKS.

96. The water level of the Waghad Tank on 1st April 1914, was R. L. 118.30, that is 38.30 feet above the sill level, which is at R. L. 80.00. The contents of the tank at this level are 345.28 million cubic feet. From 118.30 on 1st April 1914, the level fell to R. L. 111.40 (which was the lowest level reached during the year 1914-15) on 25th June 1914. The contents of the tank at this level are 219.07 million cubic feet. The tank then filled to

R. L. 120'00 crest of weir, and water flowed over waste weir on 29th June 1914. The maximum depth over the waste weir was 7'90 on 17th July 1914, and the overflow continued for 33 days. The automatic waste weir gates were closed on 1st August 1914, water being stored to full supply level, that is, R. L. 128'00 or 48 feet above the sill level 80'00, giving a storage of 605'55 million cubic feet. There was comparatively a copious rainfall and the supply was more than sufficient for the area under irrigation during the rabi and hot weather seasons of 1914-15. The balance of storage was reserved to assist the Godavari Canals system when repairs were being carried out to Darna sluices in the month of May 1915. The water in the tank on 31st March 1915 was 42'27 feet above the sill level showing a volume of 436'27 million cubic feet. The total supply in the tank was 5,697 million cubic feet representing a run-off of 8 inches.

97. The mean rainfall gauged at the two stations in the catchment of 29 square miles from 1st June to 31st December 1914 was 85'38 inches, or 21'55 inches more than in the previous year.

98. The following table shows the area irrigated, water rates levied, gross assessed revenue, working expenses, etc., during the year as compared with the average of the past three years :—

Name of work.	Area irrigated in acres.		Assessment.		Gross assessed revenue.		Working expenses.		Realizations.		Rainfall in inches.	
	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.
	Acres.	Acres.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Inches.	Inches.
Waghad Tank ...	...	1	...	1	682	759	2,925	5,286	683	710	85'38	55'52
Falkhed Canal ...	2,322	2,650	15,099	17,134	16,364	15,671	12,049	7,403	23,607	17,265	...	...
Ojhar Tambat Canal ...	719	835	4,368	4,920	4,398	5,136	1,205	1,284	4,250	5,916	...	...
Wadali Canal ...	220	373	1,182	1,716	1,192	2,083	1,136	1,136	603	2,202	...	...
Enhanced Land Revenue as per G. R. No. 428 of 6th August 1875.	...	...	...	...	594	...	...	...	...	...	...	...
Total ...	3,261	3,859	20,649	23,771	23,230	23,549	17,315	15,109	29,143	26,093	85'38	55'52

(2) CHANKAPUR TANK.

Girna Left Bank Canal.

99. The tank has been used since 1909-10. Water was stored up to R. L. 167'00 full supply in the tank. On account of the favourable natural supply of the river derived from its tributaries and the unusual rainfall in the year under review, it was not necessary to draw on the tank storage until the middle of April 1915, and even then the tank water was not actually required for the Girna system but was let out to supplement the supply to the Jamda Canals in the East Khandesh district at the request of that district.

100. The following table shows the area irrigated, water rates levied, gross assessed revenue, working expenses, etc., during the year as compared with the average of the past three years :—

Area irrigated in acres.		Assessment.		Gross assessed revenue.		Working expenses.		Realizations.		Rainfall in inches.	
1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.
Acres.	Acres.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Inches.	Inches.
2,243	2,935	14,560	12,558	14,741	12,778	16,418	11,215	15,721	11,096	86'18	30'83

101 The cost incurred on the measuring establishment amounted to Rs. 199 with an irrigated area of 2,243 acres and works out to one anna and five pies per acre. The figure for the last year was 19 pies.

(3) GODAVARI CANALS, LAKE BEALE—DARNA DAM.

102. One thousand and thirty-eight acres were cultivated in the rabi season in the basin of the lake and the assessment derived therefrom amounted to Rs. 3,245. This shows steady progress and a most satisfactory state of affairs indicating the appreciation on the part of the inhabitants of the surrounding villages of the advantages got from such cultivation, which is given out in general at the nominal rate of Rs. 2 per acre.

Storage Works with Deccan Catchment.

(23) PARSUL TANK.

103. The tank received its first replenishment on 27th June 1914. Water flowed over the waste weir crest which is 35·8 feet above sluice sill, continuously from 19th July to 22nd August 1914, a quite unusual state of affairs, as this waste weir rarely flows. There was timely and copious rainfall in the catchment of the Parsul Tank and the water-supply was sufficient for irrigation during the kharif and rabi seasons. At the end of the year under report there was 22·6 feet of water left showing unusually promising possibilities for hot weather crops, which are ordinarily entirely absent on this system.

104. The following table shows the area irrigated, water rates levied, gross assessed revenue, working expenses, etc., during the year as compared with the average of the past three years:—

Area irrigated in acres.		Assessment.		Gross assessed revenue.		Working expenses.		Realizations.		Rainfall in inches.	
1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.	1914-15.	Average of past 3 years.
Acres.	Acres.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Inches.	Inches.
983	1,195	5,350	3,723	5,388	3,939	1,852	1,558	4,504	3,944	19·99	10·46

The increase in assessment is due to higher rated crops being grown.

105. The cost incurred on the measuring establishment amounted to Rs. 113, with an irrigated area of 983 acres, and works out to about 22 pies per acre. The figure for the last year was 18 pies.

SHOLAPUR DISTRICT.

Storage Works with Deccan Catchment.

(14) EKRUK TANK.

106. The year began with 17·40 feet of water in the tank, representing a storage of 616·80 million cubic feet. The level fell to 14·12 by the 1st June, and a replenishment of nearly 19 feet was received between 26th June and 30th September. The maximum level attained was 33·45 feet on the 30th September (storage being 2,318·41 million cubic feet). This was about 5 feet below weir crest and the water level then began to fall till it reached its lowest on the 31st March 1915, viz., 28·70 feet over the sill (1,656·96 million feet).

107. The mean rainfall gauged at the five stations in the catchment of 159 square miles from 1st June to 31st October 1914 was 20·80 inches. The total replenishment received was 2,208·19 million cubic feet, the proportion of run-off to rainfall over the catchment of 159 square miles being 0·28. (The catchment area has been altered from 152 to 159 square miles).

108. The total area irrigated during the year was 2,430 acres against 3,855 acres, the preceding 3 years' average. The decrease is due to less demand for kharif water owing to good rains throughout the season.

109. The gross assessed revenue amounted to Rs. 72,667 against Rs. 81,728, the previous average. The decrease is due to the reasons given above.

110. The working expenses amounted to Rs. 13,938 against the average of Rs. 16,822.

(29) KOREGAON TANK.

111. The tank was dry at the beginning of the year. It began to fill gradually till a maximum height of 16 feet over the sill level was reached on the 13th September, when the waste weir began to overflow, and this continued till 7th October. The level then began to fall gradually and at the end of the year it was 6.65 feet over the sill of outlet representing a volume of 39 million cubic feet. The storage was mostly utilized for the rabi leases, there being no demand for kharif owing to seasonable rainfall. The rainfall gauged at Koregaon from June to 31st October 1914 was 25.06 inches which gave a total replenishment of 180.62 million cubic feet. The proportion of run-off to the total rainfall over the catchment of 7 square miles was 0.44.

112. The area irrigated was 507 acres against 420 acres, the previous average. The increase was due to sufficient water being available to meet the requirements of the rabi irrigation to the full extent.

113. The gross assessed revenue was Rs. 2,397 against the average of Rs. 2,370.

114. The working expenses amounted to Rs. 1,087, against Rs. 2,237, the average of the last three years in which some unusual items of work were carried out.

(30) ASHTI TANK.

115. The tank was dry at the beginning of the year. The monsoon inflow raised the gauge to a maximum of 15.30 feet over the sill of the outlet, *i. e.*, nearly 7 feet below the crest of the waste weir representing a volume of 680.88 million cubic feet. There being no demand for kharif irrigation owing to the seasonable rainfall, the storage was chiefly utilized for the rabi leased area. The mean rainfall gauged at the two stations in the catchment of 92 square miles was 21.71 inches giving a replenishment of 789.77 million cubic feet, the proportion of run-off to the total rainfall on the catchment being 0.17. The catchment area has been altered from 96 to 92 square miles.

116. The area irrigated was 3,150 acres against 3,324 acres, the average of the previous three years. The decrease is due to water being not required for kharif irrigation owing to the seasonable rainfall.

117. The gross assessed revenue amounted to Rs. 26,602 against the average of Rs. 21,158. The increase is due to the amount realized from the sale of dead trees on the contours.

118. The working expenses amounted to Rs. 7,679 against Rs. 7,536 average.

(31) PATHRI TANK.

119. The level of water in the tank was 14.60 feet above the sill of outlet at the beginning of the year representing a volume of 223.36 million cubic feet. The lowest level reached was 11.15 feet on the 13th June. Since then the tank began to receive replenishment till it rose to the full supply level, *viz.*, 31.5 feet over sill, on the 16th August and thereafter the waste weir began to overflow and continued till 18th October. The level then began to go down gradually and the height of water over the sill of outlet on the 31st March 1915 was 27.06 feet representing a volume of 270.07 million cubic feet. The mean rainfall gauged at the two stations in the catchment of 27.5 square miles was 30.02 inches which gave a total replenishment of 836.40 million cubic feet, the proportion of run-off to rainfall being 0.44.

120. The area irrigated was 1,429 acres against 1,649 acres, the average of the preceding triennium. The decrease is due to the seasonable rainfall.

121. The gross assessed revenue amounted to Rs. 6,990 against Rs. 8,063, average.

122. The working expenses amounted to Rs. 2,093 against Rs. 2,860, the average of the preceding three years, during which some unusual items of work were carried out.

AHMEDNAGAR DISTRICT.

Storage works with Deccan catchment.

(25) BHATODI TANK.

123. The tank is on the Mehekari river. It is a small tank, with a capacity at F. S. L. of 92·7 million cubic feet and depends solely on local rain for its supply, which generally suffices for the monsoon and a part of the rabi season. The tank was empty until the end of June 1914, when it received its first replenishment, the water rising to R. L. 79·00. The highest level of water in the tank was 98·50, viz., 28½ feet above the outlet sill (R. L. 70·00) or 1½ feet below the top of the masonry dam (R. L. 100·00) on 26th June 1914. Water was flowing over the waste weir for about 18 days. The tank dried up on 30th April 1915, and received small replenishments in November 1914 and April 1915.

124. The area irrigated, gross assessment from all sources and working expenses are given below in comparison with the average of the three preceding years :—

Name of tank.	Area irrigated.						Total gross assessment from all sources.		Working expenses.		Rainfall.	
	Kharif.		Rabi.		Total.		1914-15.	Average of the past 3 years.	1914-15.	Average of the past 3 years.	1914-15.	Average of the past 3 years.
	1914-15.	Average of the past 3 years.	1914-15.	Average of the past 3 years.	1914-15.	Average of the past 3 years.						
1	9	3	4	5	6	7	8	9	10	11	12	13
Bhatodi ...	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs.	Rs.	Rs.	Inches.	Inches.
	291	409	640	844	931	752	7,777	6,232	3,025	2,754	24·77	16·78

The results of the year were better than the average.

EAST KHANDESH DISTRICT.

Works without storage but on a river with Ghat Catchment.

(22) JAMDA CANALS.

125. On the 1st April 1914 the discharge of the river Girna, which feeds the Jamda Canals, was 69·84 cusecs, the supply being supplemented by water from Chankapur Tank, in the Nasik District, from time to time varying from 20 to 75 cusecs.

126. The subjoined statement shows area irrigated compared with the average of the preceding three years and the corresponding assessments and working expenses :—

Area irrigated.						Assessment.						Gross assessed revenue.		Working expenses direct and indirect.	
Kharif.		Rabi.		Total.		Kharif.		Rabi.		Total.		1914-15.	Average of the 3 preceding years.	1914-15.	Average of the 3 preceding years.
1914-15.	Average of the 3 preceding years.	1914-15.	Average of the 3 preceding years.	1914-15.	Average of the 3 preceding years.	1914-15.	Average of the 3 preceding years.	1914-15.	Average of the 3 preceding years.	1914-15.	Average of the 3 preceding years.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
428	1,709	1,062	1,522	1,490	3,231	4,080	5,229	3,099	3,397	7,179	8,556	9,820	10,641	8,124	10,565

127. Owing to rainfall almost every month during the year the demand for irrigation was less than usual resulting in a decrease in the area irrigated and assessment under the canals. The decrease under grossed assessed revenue is however not so great mainly due to proceeds from the sale of mango fruits and dead babul trees. The gross revenue includes Rs. 2,641 for miscellaneous revenue in addition to the water rate assessed.

128. The cost of measurement per acre irrigated was 9 pies nearly.

Storage Works with Deccan catchment.

(20) HARTALA TANK.

129. On 1st April 1914 the contents of the Hartala Tank were 30.29 million cubic feet which decreased to 21.26 million cubic feet by 2nd June 1914. After replenishment the tank began to overflow from 16th September to 21st October 1914. This is the first time that the tank has overflowed in period of 20 years. The maximum depth of flood over the waste weir was 6". The storage by the end of the year decreased to 96.29 million cubic feet against the full storage of 134.87 million cubic feet.

(21) MHASWA TANK.

130. On 1st April 1914 the contents of the Mhaswa Tank were 37.73 million cubic feet which decreased to 22.26 million cubic feet by 8th June 1914. After replenishment the tank began to overflow from 28th June 1914 to the middle of October 1914 with small and occasional variations in the water level. The contents of the tank on the 31st March 1915 were 71.28 million cubic feet.

131. The following table shows the rainfall and storage of the Hartala and Mhaswa tanks :—

Tank.	Rainfall, June to October.	Full supply storage.	Maximum storage reached during the year.	Storage on 31st October 1914.
	Inches.	M. cft.		M. cft.
Hartala	39.87	134.9	Overflowed ...	132.81
Mhaswa	39.10	153.05	Overflowed ...	142.56

132. The area irrigated during the year compared with the average of the preceding three years, and corresponding assessment and working expenses are given in the following statement :—

Tank.	Area irrigated.						Assessment.						Gross revenue.		Working expenses.	
	Kharif.		Rabi.		Total.		Kharif.		Rabi.		Total.					
	1914-15.	Average of the 3 preceding years.	1914-15.	Average of the 3 preceding years.	1914-15.	Average of the 3 preceding years.	1914-15.	Average of the 3 preceding years.	1914-15.	Average of the 3 preceding years.	1914-15.	Average of the 3 preceding years.	1914-15.	Average of the 3 preceding years.	1914-15.	Average of the 3 preceding years.
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Hartala	9	63	45	30	54	98	10	74	90	65	100	139	1,205	825	9.55	3.6
Mhaswa	44	258	333	395	377	663	118	306	674	816	792	1,122	1,385	1,282	6.078	2,509

133. The areas irrigated and the revenue from water rates under both the tanks were much below the average owing to copious and frequent rainfall. The gross revenue was however in excess of the three years' average in the case of the Hartala tank due to proceeds from the sale of dead babul trees in the tank bed, while in the case of the Mhaswa tank it was much below due to non-realization of the full amount assessed on account of lease of land in the tank bed for cultivation for a period of five years.

134. The increase under working expenses under both the tanks is due to certain special repairs.

WEST KHANDESH DISTRICT.

Work depending on river supply from Ghat catchment supplemented by a tank with a Deccan catchment.

(10) LOWER PANJHRA RIVER WORKS.

135. These works are mainly fed by the Panjhara River, supplemented by the Mukti Tank Storage, when the river supply decreases.

Source of water supply.

136. The official year commenced with a storage of 2.74 million cubic feet in the tank. It received the first replenishment on 7th May 1914, raising the storage to 10.32 million cubic feet. The maximum supply 324.28 cubic feet was reached on 17th September 1914. Owing to timely and copious rains there was no demand for tank water for kharif crops. After meeting the demands of the Kayam Bagait and dry crop lands, there was a balance of 244.39 million cubic feet on 31st March 1915 to meet the requirements in the hot season. The full storage capacity is 342.3 million cubic feet.

Storage.

137. The year's rainfall was 24.36 inches nearly double that of the preceding year and confined to the Kharif season as in 1913-14.

138. The following table shows the area irrigated during the year, the assessment and the working expenses compared with the average of the previous three years:—

	Area irrigated.						Assessment.						Revenue from other sources.	Working expenses.		
	Kharif.		Rabi.		Total.		Kharif.		Rabi.		Total.					
	1914-15.	Average of the past 3 years.	1914-15.	Average of the past 3 years.	1914-15.	Average of the past 3 years.	1914-15.	Average of the past 3 years.	1914-15.	Average of the past 3 years.	1914-15.	Average of the past 3 years.	1914-15.	Average of the past 3 years.		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
LOWER PANJHRA WORKS.																
Mukti Tank.																
Patasthal lands.	1,595	1,446	219	237	1,814	1,813	8,352	8,087	2,789	3,494	11,141	11,551	2,023	918	10,527	10,594
Jirayat lands ...	12	648	666	206	678	954										
Total ...	1,607	2,094	885	673	2,492	2,767	8,352	8,087	2,789	3,494	11,141	11,551	2,023	918	10,527	10,594

139. The area under patasthal is almost the same, but that under dry crop, though less than the average of the last three years, is more than the preceding year's, which was 205 acres. The reason for less average is due to seasonable rainfall.

140. The revenue from patasthal land is fixed under the survey settlement. The decrease under jirayat is due to less area irrigated: The increase under revenue from other sources is due to good realisations from grass in the tank limits.

141. The cost of measurements of land irrigated during the year amounted to Rs. 6-11-1 which gives a rate of Re. 0-0-11 per acre.

SATARA DISTRICT.

(15) KRISHNA CANAL.

(Supply: River with Ghat Catchment.)

142. On the improvements to increase the storage capacity of the pool above Khodsi Weir an expenditure of Rs. 7,002 was incurred for the construction of the buttress wall and the purchase of materials for raising the curved portion

of the existing weir. The work of fixing falling shutters for the crest remains to be completed. The total expenditure to end of the year under report has been Rs. 56,335.

143. The rainfall gauged at Retre Budruk during the year under report was greater than that of the previous year and much more than the average of the past ten years:—

Year.	Kharif.	Rabi.	Total.
	Inches.	Inches.	Inches.
1913-14	26.55	2.80	29.35
1914-15	32.80	6.12	38.92
Average of previous ten years ... ..	.....	.....	24.71

144. The supply in the river, as gauged in April 1914, was 22 cusecs and it increased to 26 cusecs in May and 1,213 cusecs in June. The discharge reached its maximum in August when it measured 8,491 cusecs. The supply decreased steadily during the following months until it was 59 cusecs in March 1915.

145. The area irrigated during the year was 3,573 acres and assessment Rs. 51,743 against 5,015 acres and Rs. 56,237 in the previous year and 4,649 acres and Rs. 46,812, the average figures of the previous three years. The decrease in the area irrigated is due to diminished demand for water on account of copious rainfall during both the kharif and the rabi seasons.

146. The working expenses, including direct and indirect charges, amounted to Rs. 12,320 or to Rs. 3.45 per acre against Rs. 2.59 of the previous year and Rs. 2.54, the average of the previous three years.

147. Deducting working expenses, the net profit of the year was Rs. 40,555 compared with Rs. 47,187 of the previous year and Rs. 37,044, the average of the previous three years.

(32) REWARI CANAL.

(Deccan Catchment.)

148. The rainfall gauged at Rewari during the year was greater than that of the previous year and the average:—

Year.	Kharif.	Rabi.	Total.
	Inches.	Inches.	Inches.
1913-14	20.60	1.50	22.10
1914-15	27.95	1.65	29.60
Average of previous ten years ... ..	.....	.....	23.51

149. The area irrigated was 1,199 acres and the assessment Rs. 5,754 against 1,024 acres and Rs. 4,333 of the previous year and 907 acres and Rs. 4,108, the corresponding averages of the previous three years. The increase in area and assessment is due to cultivators being confident that the stream's supply would not fail them during the rabi season.

150. The working expenses, direct and indirect, amounted to Rs. 2,320 against Rs. 2,135 of the previous year and Rs. 2,022, the average of the previous three years.

151. The operations of this year showed a net profit of Rs. 3,503 as compared with Rs. 2,854 of the previous year and Rs. 2,544, the average of the previous three years.

(33) UPPER MAN RIVER WORKS.

(Deccan Catchment.)

152. The rainfall gauged at Gondwla was greater than in the previous year and the average:—

Year.	Kharif.	Rabi.	Total.
	Inches.	Inches.	Inches.
1913-14	10·79	2·74	13·53
1914-15	14·34	1·80	16·14
Average of previous ten years ... ..	.....	.....	15·98

153. The Pingli Tank became dry on 8th January 1914, and no replenishment was received until the 13th June 1914, which, however, was not sufficient to permit of any kharif irrigation. On 12th October 1914 there was good rainfall and the tank's supply reached 174 million cubic feet, which served to assist in raising 958 acres of cultivation in the rabi season. The quantity of water remaining in the tank on 31st March 1915 was 48 million cubic feet.

154. The area irrigated was 958 acres and the assessment Rs. 4,034 as compared with 1,151 acres and Rs. 4,255 in the previous year and 1,080 acres and Rs. 4,357, the average of the previous three years.

155. The working expenses, including direct and indirect charges, amounted to Rs. 4,365 against Rs. 1,821 in the preceding year and Rs. 2,532, the average of the previous three years. The increase in the expenditure is due to Rs. 1,730 having been spent on renewing two iron trough aqueducts on the Gondwla Canal.

156. The operations of the year show a net deficit of Rs. 48.

(34) YERLA RIVER IRRIGATION WORKS.

(Deccan Catchment.)

157. The rainfall gauged at Khatgun was considerably above the average and nearly double that of the previous year:—

Year.	Kharif.	Rabi.	Total.
	Inches.	Inches.	Inches.
1913-14	12·72	2·05	14·77
1914-15	25·60	2·42	28·02
Average of previous ten years ... ..	.....	.....	22·83

158. On the 31st March 1914 the Nehr Tank held 60 million cubic feet and by the 13th June this had fallen to 35 million cubic feet, when small replenishments began until on 26th August the tank overflowed. Regular draw-off from the tank commenced on 28th October when the supply was 458 million cubic feet, and by the 31st March this was reduced to 196 million cubic feet.

The total run-off was 1,085 million cubic feet., which is 0·3 of the rainfall on the catchment area.

159. The area irrigated and the assessment were, respectively, 4,110 acres and Rs. 18,296 against 6,367 acres and Rs. 23,866 of the previous year and 5,142 acres and Rs. 20,707, the average figures of the previous three years. The decrease is due to the demand for water being relatively less than usual because of timely rainfalls.

160. The **working expenses**, including direct and indirect charges, amounted to Rs. 26,311 against Rs. 11,498 of the previous year and Rs. 8,279, the average. This large increase in the expenditure is due to the following special repairs having been carried out during the year:—

	Rs.
(a) Special repairs to Nehr Tank Dam	16,000
(b) Special repairs to Nehr Tank Service road	760
(c) Special repairs to Yerla River Irrigation works, Repairs to washouts	1,538
Total	18,298

161. The result of the year's operations was a **net deficit** of Rs. 7,469.

(35) CHIKHLI CANAL.

(Deccan Catchment.)

162. The **rainfall** gauged at Chikhli was much greater than the average of previous three years and nearly double that of the preceding year:—

Year.	Kharif.	Rabi.	Total.
	Inches.	Inches.	Inches.
1913-14	12.95	1.73	14.68
1914-15	26.66	1.83	28.49
Average of previous ten years ... ..	.....	.....	19.70

163. The **area irrigated** and the **assessment** were 396 acres and Rs. 1,902 respectively against 411 acres and Rs. 1,520 of the preceding year and 294 acres and Rs. 1,402, the average figures of the previous three years. The increase in the area and assessment was due to a demand for water on account of deficiency of rainfall at the end of the rabi season.

164. The **working expenses**, including direct and indirect charges, amounted to Rs. 2,605 against Rs. 789 of the previous year and Rs. 743, the average of the previous three years. This increase was due to a sum of Rs. 1,530 having been spent on special repairs to the canal.

165. The operations of the year showed a **net deficit** of Rs. 629.

(36) MAINI TANK.

(Deccan Catchment.)

166. The **rainfall** gauged at Maini was almost equal to that of the last year and the average:—

Year.	Kharif.		Total.
	Inches.	Inches.	Inches.
1913-14	15.96	4.45	20.41
1914-15	18.66	2.26	20.92
Average of previous ten years ... ..	.....	.....	20.60

167. The **level of water** in the Maini Tank was lowest on the 11th April 1914, when the tank was practically dry. Thereafter there were small replenishments until the waste weir overflowed on the 4th August, which it continued to do for two months. The total run-off was 3,041 million cubic feet.

168. The area irrigated was 1,789 acres and the assessment Rs. 7,196 against 2,128 acres and Rs. 8,487 of the previous year and 1,717 acres and Rs. 7,375, the average of the previous three years. Of the area cultivated, only 19 acres were of kharif because rainfall was abundant in that season, while absence of rain accounted for the large area irrigated in the winter months.

169. The working expenses, direct and indirect, amounted to Rs. 2,671 against Rs. 2,786 of the previous year and Rs. 2,839, the average.

170. The result of the year's operations was a net profit of Rs. 4,525.

BIJAPUR DISTRICT.

(37) MUCHKUNDI TANK.

(Deccan Catchment.)

171. The rainfall of 1914 was greater than that of the previous year but somewhat less than the average:—

Year.	Kharif.	Rabi.	Total.
	Inches.	Inches.	Inches.
1913-14	6.36	2.90	9.26
1914-15	9.18	2.35	11.53
Average of previous ten years	.....	.....	14.79

172. The tank was dry until 15th August and it was not until the 2nd October that water reached the level of the outlet sluice. In the following five weeks the water level increased so slightly that no irrigation was feasible. By the middle of February 1915 the tank had become dry.

173. The concession of the free grant of water from this tank has been extended for a further period of five years by Government Resolution No. A. I.-3685, dated the 27th March 1914.

174. The working expenses of the year amounted to Rs. 281 against Rs. 235 of last year and Rs. 278, the average of the previous three years.

175. The result of the year's operations was a net profit of Rs. 983, (which was chiefly due to receipts from canal produce other than water) as compared with Rs. 709, of last year and Rs. 1,009, the average of the previous three years.

DHARWAR IRRIGATION DISTRICT.

(40) DAMBAL TANK.

(Deccan Catchment.)

176. The rainfall gauged was less than that of the previous year and the average:—

Year.	Kharif.	Rabi.	Total.
	Inches.	Inches.	Inches.
1913-14	9.69	4.88	14.57
1914-15	9.64	2.97	12.61
Average of previous ten years	.....	.....	14.76

177. There was a very small quantity of water in the tank at the beginning of the year. Slight replenishments occurred in June and August 1914, but by the 29th September the tank was dry.

The total run-off was 13 million cubic feet, which is 0.01 of the rainfall on the catchment area.

178. The area irrigated and water rate assessment were respectively 5 acres and Rs. 25 against 274 acres and Rs. 729 of last year and 145 acres and Rs. 342, the average of the previous three years. The decrease both in the area irrigated and revenue was due to scarcity of water in the tank, most of the water available having been used for the old authorized irrigation under the tank.

179. The area of irrigated lands assessed at consolidated rates was 144 acres and the irrigation share of revenue was Rs. 916, giving an average rate of Rs. 6.36 per acre.

180. The working expenses, including direct and indirect charges, amounted to Rs. 802 against Rs. 985 of last year and Rs. 1,206, the average.

181. The operations of the year resulted in a net profit of Rs. 1,019.

(41) MEDLERI TANK.

(Deccan Catchment.)

182. The rainfall was greater than that of the previous year but a little less than the average :—

Year.	Kharif.	Rabi.	Total.
	Inches.	Inches.	Inches.
1913-14	8.04	1.87	9.91
1914-15	8.27	3.05	11.32
Average of previous ten years ... ..	.....	.....	11.81

183. The water was below the outlet sill until 3rd May, when the tank received a replenishment reaching a maximum level of 7 feet on the outlet sill on the 6th August 1914. The water was again below the outlet sill from 6th January 1915 to end of the year.

The total run-off was 14 million cubic feet which is 0.05 of the rainfall on the catchment area.

184. The area irrigated and the assessment were respectively 46 acres and Rs. 466 against 92 acres and Rs. 693 of last year and 63 acres and Rs. 440, the average figures of the previous three years. The decrease in the area irrigated was due to the insufficient supply.

185. The working expenses amounted to Rs. 1,183 against Rs. 1,446 of last year and Rs. 1,205, the average of the previous three years.

186. The operations of the year showed a net deficit of Rs. 532.

(42) ASUNDI TANK.

(Deccan Catchment.)

187. The rainfall gauged was greater than that of last year and the average :—

Year.	Kharif.	Rabi.	Total.
	Inches.	Inches.	Inches.
1913-14	14.53	4.35	18.88
1914-15	16.37	9.09	25.46
Average of previous ten years ... ..	.....	.....	20.40

188. On 1st April 1914 the tank had 2.75 feet of water above the actual bed. The tank received replenishments in May and subsequent months and the waste weir overflowed for a few days at the beginning and end of August and again for 11 days in November. On 31st March 1915 the gauge showed 4.8 feet as standing on the tank bed.

The total run-off was 210 million cubic feet which is 0.15 of the rainfall on the catchment area.

189. The **area irrigated** and the **assessment** were respectively 136 acres and Rs. 590 against 147 acres and Rs. 601 of last year and 92 acres and Rs. 408, the average figures of the previous three years.

190. The **area irrigated under consolidated assessment** was 190 acres and the irrigation share of revenue was Rs. 687 or Rs. 3.62 per acre.

191. The **working expenses** amounted to Rs. 1,355 against Rs. 1,326 of last year and Rs. 3,247, the average of previous three years.

192. The year's operations resulted in a **net profit** of Rs. 56.

(43) MADAG TANK.

(Ghat Catchment.)

193. The **rainfall** gauged was greater than that of last year and the average :—

Year.		Kharif.	Rabi.	Total.
		Inches.	Inches.	Inches.
1913-14	... ..	17.07	9.32	26.39
1914-15	... ..	24.59	5.11	29.70
Average of previous ten years	... ..	.....	.....	25.65

194. Till 5th July 1914 the canal was closed as the water level was not high enough to reach the outlet. The tank received replenishments in July and subsequent months, and the waste weir overflowed continuously for seven months after the 7th July. The level of water on the 31st March 1915 was 2.6 feet above the sill of outlet.

195. The **area irrigated** was 532 acres as compared with 715 acres of last year and 657 acres, the average of the previous three years, the assessment being Rs. 1,981 against Rs. 2,522 and Rs. 2,429, the corresponding figures of the previous year and the average. The decrease in area and assessment was due to a shortage in demand for water owing to seasonable rainfall.

196. The **working expenses** amounted to Rs. 4,565 against Rs. 2,860 of last year and Rs. 2,250, the average of the previous three years. The increase was due to an expenditure of Rs. 1,443 incurred on special repairs to one of the canal aqueducts which had been washed away.

197. The operations of the year resulted in a **net deficit** of Rs. 2,470.

(44) MAVINKOP TANK.

(Forest Catchment.)

198. The **water level** was below the sill of outlet until 15th July 1914 and thereafter good replenishments were received and the waste weir overflowed for about 35 days from 24th July 1914. The tank held a good supply for the rice land under it and no remissions were necessary. On 31st March 1915 the water level stood at 3 feet above the outlet sill.

199. The whole of the **irrigated area**, which was 560 acres, is assessed at consolidated rates, the irrigation share of which was Rs. 2,259.

200. The **working expenses** amounted to Rs. 670 against Rs. 686 of last year and Rs. 953, the average of the previous three years.

201. The operations of the year showed a **net profit** of Rs. 1,589.

(45) DHARMA CANAL.

202. The gauging of **rainfall** at Yekambi, which is in the catchment of Dharma River, was commenced in 1909-1910. The rainfall was much in excess of that of the previous year and the average of the previous five years :—

Year.	Kharif.	Rabi.	Total.
	Inches.	Inches.	Inches.
1913-14	57·38	7·20	64·58
1914-15	107·00	7·02	114·02
Average of previous five years ... ..	.....	.....	72·94

203. Water was admitted into the canal on 5th July 1914 and it flowed continuously until the 16th November.

204. The **area irrigated** during the year at crop rates was 618 acres and the **assessment** Rs. 3,133, the rate per acre being Rs. 5·07.

205. The **area assessed at consolidated rates** was 7,861 acres and the irrigation share of revenue was Rs. 18,195 or Rs. 2·31 per acre.

206. The **total revenue** from all sources amounted to Rs. 21,440.

207. The **working expenses** amounted to Rs. 1,267.

BELGAUM DISTRICT.

(38) GADDIKERI TANK.

(Ghat Catchment.)

208. The management of this tank is in the hands of the Revenue Department.

209. The **area irrigated** during the year was 377 acres and the irrigation share of the consolidated assessment amounted to Rs. 2,061.

210. The **working expenses**, direct and indirect, were Rs. 341 against Rs. 361 of last year and Rs. 343, the average of the previous three years.

211. The result of the year's operations was a **net profit** of Rs. 1,720.

(39) GOKAK CANAL, FIRST SECTION AND STORAGE WORKS.

212. The **rainfall** gauged at Dhupdal was greater than that of the preceding year and also greater than the average :—

Year.	Kharif.	Rabi.	Total.
	Inches.	Inches.	Inches.
1913-14	9·00	2·52	11·52
1914-15	21·99	2·99	24·98
Average of previous ten years ... ..	.....	.....	19·88

213. The Dhupdal Reservoir reached a level of only 2 feet above the outlet on the 22nd April and thereafter had occasional replenishments until it overflowed on the 6th July. The maximum flood of the year occurred on the morning of the 6th August 1914, when nearly $7\frac{1}{2}$ feet of water passed over the weir crest. This was the highest flood recorded since the construction of the weir.

214. The weir crest was temporarily raised to a height of two feet, as usual, at a cost of Rs. 2,021 and the supply thus obtained was most useful.

215. Owing to the low level of water in the reservoir early in the year there was shortage of supply guaranteed for the Gokak Mills and on that account a rebate of Rs. 1,683 was necessitated.

216. The area irrigated during the year and the assessment thereon were 6,462 acres and Rs. 30,576 respectively against 10,522 acres and Rs. 45,263 of last year and 9,699 acres and Rs. 42,680, the average of the previous three years. The decrease is due to a shortage in demand for water on account of seasonable rainfall.

217. The area cultivated in the tank bed during the year and the assessment thereon were 229 acres and Rs. 1,077 respectively against 428 acres and Rs. 1,755 of last year and 292 acres and Rs. 1,232, the average of the previous three years. The decrease in the area and assessment was due to the water in the tank not receding at the usual time.

218. The working expenses, including direct and indirect charges, amounted to Rs. 11,354 against Rs. 12,556 in 1913 and Rs. 13,187, the average of the previous three years.

219. The result of the year's operations was a net profit of Rs. 36,716 as compared with Rs. 51,034 of the last year and Rs. 47,264, the average of the previous three years.

PART II.

COMPRISING SECOND CLASS IRRIGATION WORKS FOR WHICH ONLY REVENUE ACCOUNTS ARE KEPT—AND AGRICULTURAL WORKS FOR WHICH NEITHER CAPITAL NOR REVENUE ACCOUNTS ARE KEPT.

GENERAL REMARKS.

220. The following table gives a general comparison of the financial results of Second Class Irrigation Works for which only Revenue Accounts are kept, for the year under report, with those for 1913-14 :—

	1913-14.	1914-15.	Increase.	Decrease.
	Acres.	Acres.	Acres.	Acres.
Area irrigated	46,945	49,809	2,864	.....
	Rs.	Rs.	Rs.	Rs.
Revenue Receipts	1,99,095	2,15,892	16,797	.....
Expenditure	3,63,392	3,65,256	1,864	.....

221. The details of expenditure on this class of works are as follows :—

	Expenditure.		Comparison.	
	1913-14.	1914-15.	Increase.	Decrease.
	Rs.	Rs.	Rs.	Rs.
Extensions and Improvements .	80,522	1,01,284	20,762	.....
Maintenance and Repairs ...	1,69,975	1,38,666	.....	31,309
Establishment	85,661	94,738	9,077	.....
Tools and Plant	7,920	9,194	1,274	.....
Total ...	3,44,078	3,43,882	.....	196
Share of collection charges ...	19,314	21,374	2,060	.....
Total ...	3,63,392	3,65,256	1,864	.....

222. The following table shows the areas irrigated in the different districts in the Deccan and Gujarát and the consolidated revenue assessed during the

year 1914-15 in respect of irrigation works on which expenditure has been incurred during the year :—

Collectorate.	Number of works.	Area irrigated. Acres.	Revenue.			Remarks.
			Irrigation share. Rs.	Land share. Rs.	Total. Rs.	
(a) Ahmedabad	77	5,171	* 12,374	14,017	26,391	(a) Works in charge of Gujarat Irrigation District. * Includes Rs. 125 on account of "Water rates—Direct Receipts." † Do. Rs. 4,678 do. ‡ Do. Rs. 785 do.
(a) Kaira	83	8,973	† 33,706	19,036	52,742	
(a) Panch Maháls	32	475	‡ 1,400	190	1,590	
Surat	24	1,190	2,657	13,014	15,671	§ Includes Rs. 591 on account of "Water rates—Direct Receipts."
Broach	4	123	206	611	817	
West Khándesh	18	5,152	§ 39,585	6,899	46,484	
East Khándesh	2	202	1,354	464	1,818	(b) Works in charge of Násik and Ahmednagar Irrigation District.
(b) Násik	29	4,720	35,690	5,846	41,536	
Ahmednagar	Water Rates—Direct Receipts.
Poona	1	26	127	...	127	
Sátára	(c) Works in charge of the Irrigation District, Dhárwár.
Belgaum	77	4,514	17,560	4,990	21,950	
Dhárwár	142	16,271	60,756	15,189	75,945	
Kánara	20	2,053	4,972	1,243	6,215	
Bijápur	4	621	2,218	1,630	3,848	
Ratnágiri	2	316	1,324	46	1,370	
Total	515	49,809	2,13,929 (d)	82,575	2,96,504	

(d) Direct Receipts—

Water Rates Rs. 6,306

Indirect Receipts ,, 2,07,623

Total ,, 2,13,929

223. The actual expenditure and receipts for the year 1914-15 on the works referred to in paragraph 222 were as follows :—

Collectorate.	EXPENDITURE.								ACTUAL RECEIPTS.						
	Direct Charges.								Direct Receipts.			Indirect Receipts.	Grand Total, Direct and Indirect Receipts.	Less Refund of Revenue.	Gross Receipts Less Refunds.
	Extensions and Improvements.	Maintenance and Repairs.	Establishment.		Tools and Plant.	Total.	Share of Collection Charges.	Grand Total.	Water Rates from Irrigation.	Miscellaneous.	Total Direct Receipts.	Share of Consolidated Revenue.			
			Direction.	Executive.											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Ahmedabad ...	Rs. 12,057	Rs. 83,306	Rs.	Rs.	Rs.	Rs.	Rs. 1,237	Rs.	Rs. 125	...	Rs. 125	Rs. 12,249	Rs. 12,374	Rs.	Rs. 12,374
Kaira ...	64,658	10,258	5,313	28,381	2,502	1,75,043	3,871	1,79,791	4,678	1,568	6,246	29,028	35,274	...	35,274
Panch Mahals ...	17,790	778	227	909	...	6,233	140	6,520	785	177	962	615	1,577	...	1,577
Surat ...	814	3,994			266		...		1	2,657	2,658	...	2,658		
Broach ...	.....	289	21	...	14	14	206	220	...	220					
West Khándesh ...	2,127	12,174	644	2,455	205	17,605	3,929	21,534	591	...	591	38,994	39,585	...	39,585
East Khándesh ...	.....	722	32	170	11	935	185	1,070	...	...	.....	1,854	1,354	...	1,354
Násik ...	1,368	15,455	721	10,329	4,238	32,111	3,569	35,680	...	...	.....	35,690	35,690	...	35,690
Ahmednagar ...	.....	.....	...	...	...	...	...	...	...	...	.....	.....	.....	...	...
Poona ...	.....	56	3	21	1	81	13	94	127	...	127	.....	127	...	127
Sátára ...	.....	.....	...	...	...	...	...	.....	...	...	.....	.....	.....	...	...
Belgaum ...	1,541	11,535	395	1,492	399	15,362	1,762	17,124	...	64	64	17,560	17,624	...	17,624
Dhárwár ...	929	49,879	2,191	41,403	1,835	96,237	6,080	1,02,317	...	139	139	60,756	60,895	...	60,895
Kánara ...	.....	.....	...	...	...	...	497	497	...	...	.....	4,972	4,972	...	4,972
Bijápúr ...	...	90	3	21	1	115	222	337	...	...	.....	2,218	2,218	...	2,218
Ratnágiri ...	...	130	6	22	2	160	132	292	...	...	.....	1,324	1,324	...	1,324
Total ...	1,01,234	1,38,666	9,535	85,203	9,194	3,43,882	21,374	3,65,256	6,306	1,963	8,269	2,07,623	2,15,892	..	..

224. The whole area of irrigation and revenue due from Second Class Irrigation Works in the Deccan and Gujarát as recorded in the register of these works is 215,895 acres and 8,57,732 rupees with the exception of districts for which lists are not prepared. The figures will be modified when new or revised lists are issued.

DETAILED REPORTS BY DISTRICT OFFICERS.

**WORKS FOR WHICH ONLY REVENUE
ACCOUNTS ARE KEPT.**

GUJARAT IRRIGATION AND SURAT AND BROACH DISTRICTS.

225. There was rather a high flood in the Khari River, caused by heavy rainfall in its catchment on the 10th July 1914. The heavy flood caused a breach in the protective bund at Lali and the water flowed into the Gobraj Tank and filled it and flowed over its waste weir; the Bherai Reservoir and all the other tanks were full to their F. S. Ls., and the water was issued from them for rice seedlings; sufficient water was subsequently given to irrigate the rice crop in the Kalambandi villages though the transplantation of seedlings was late for want of labour, and the Gobraj Tank remained nearly full at the end of the season.

226. The sluices were maintained at a cost of Rs. 246, and Rs. 5,782 were spent on their improvements, making certain feed channels, construction of a needle shed in the compound of the store shed at Naika, maintenance and repairs to the Gobraj Tank and Bherai Reservoir, clearance of the Gha Bajeria weeds from the bed of the Khari River, etc.

227. The remissions granted by the Collector owing partly to the flooding in low lands and the deficiency of supply on high lands and the consequent failure of the crops amounted to Rs. 3,050.

228. The following table compares the area irrigated and the assessment levied with the average of the previous ten and three years:—

	Average of 10 years ending 1913-14.		Average of 3 years ending 1913-14.		1914-15.	
	Area.	*Revenue after deducting remissions.	Area.	*Revenue after deducting remissions.	Area.	*Revenue after deducting remissions.
I.—Irrigation above the Kalambandi villages ...	Acres. 792	Rs. 3,191	Acres. 786	Rs. 3,126	Acres. 766	Rs. 4,361
II.—Irrigation from tanks fed by the River Khari.	198	600	198	614	198	511
III.—Irrigation below the Kalambandi villages.	513	2,358	214	983	...†	...†
IV.—Irrigation from the Khari Sluices proper (i. e., 10 Kalambandi villages) ...	6,929	29,199	6,830	27,410	†6,201	†39,760
	8,432	35,348	8,028	32,133	7,165	44,632

* The revenue is consolidated and exclusive of Inámdárs' shares.

† Note (1).—Since the year 1912-13, no figures of irrigation are shown under the Head III-Kalambandi villages as the people of Kaloi (which is the only village coming under Head) objected to water-rates being levied, as they received no water from the Khari River; the water-rates amounting to Rs. 2,948 on 641 acres which had been assessed, for over 20 years have been wholly remitted, and the village itself has been struck off the Canal Return VIII.

‡ Note (2).—The reduction in the area irrigated under the Head IV-Irrigation from the Khari Sluices proper is chiefly due to the abandonment of land assessed to Himayat by some people at the time of the Revision Survey and also to 121 acres of land having been taken up in the Gobraj Tank. The increase in revenue under the same Head is due to the good supply of water as compared with the average of the three preceding years.

229. The revenue of the year from the khari sluices proper was a little less than that in the previous year, owing to the relinquishment of certain lands by the cultivators for (kharábo) fallow lands and the high rates thereon.

230. The assessment rates under the khari sluices proper, i. e., of the "Kalambandhi" villages, being consolidated, the average rates per acre for land and water respectively were as under:—

			Land share.	Irrigation share.	Total consolidated.
			Rs. a. p.	Rs. a. p.	Rs. a. p.
Government land	...	...	3 13 5	6 13 6	10 10 11
Alienated land	...	...	0 11 10	1 6 4	2 2 2

231. During the year, 213 old Tanks, *viz.*, 77 in Ahmedabad (inclusive of 16 Talukdari), 82 in Kaira, 32 in Panch Mahals and 22 in the Surat and Broach Districts, were either repaired or improved at a total cost of Rs. 1,35,042, while Rs. 8,087 were spent on surveys and preparation of plans and estimates for repairs or improvements to a number of similar tanks in the Ahmedabad and Kaira and Panch Mahals Collectrates. Out of the above works, 59 were completed, while repairs to the remainder were in progress. Some of the tanks repaired or improved in the Gujarat Irrigation District have been brought on to the list of tanks to be maintained by the Irrigation Department and others will be brought on, as soon as their examination, which is going on in all the talukas with that object in view, is completed.

232. The area irrigated and the revenue derived from the old irrigation tanks and bunds are as under:—

District.	Area irrigated.	Revenue.		
		Irrigation share.	Land share.	Net consolidated assessment.
	Acres.	Rs.	Rs.	Rs.
Ahmedabad	10,139	23,562	28,563	52,125
Kaira	2,680	4,550	8,408	12,958
Panch Mahals	170	615	190	805
Surat	13,861	31,641	1,35,828	1,67,469
Broach	780	1,353	4,761	6,114
Total	27,630	61,721	1,77,750	2,39,471

POONA IRRIGATION DISTRICT.

233. The following table gives the area irrigated, the consolidated assessed revenue and the irrigation share thereof, for the six irrigation works in the Poona Collectrate for which only Revenue Accounts are kept, for the year 1914-15:—

Name of work.	Area irrigated.	Revenue.		
		Irrigation share.	Land share.	Total.
	A. g.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Dam at Kasur	25 28	127 6 0	.....	127 6 0
Dam at Vadaj	150 33	517 10 0	.....	517 10 0
Dam at Agar	53 18	432 0 0	89 0 0	521 0 0
Dam at Narayangaon	427 17	2,403 2 0	917 1 0	3,320 3 0
Tank at Patas	There is no	irrigation from	this Tank.	
Vadhana Tank and Channel.	30 15	17 12 0	7 8 0	25 4 0
Total	687 31	3,497 14 0	1,013 9 0	4,511 7 0

234. During the year under report a sum of Rs. 58 was expended on repairs to the dam at Kasur.

235. The following statement shows the average area irrigated during the past three years and the revenue assessed on the works as compared with the figures of the year under report :—

Period	Area irrigated.	Irrigation share of revenue.
For 1914-15	Acres. 688	Rs. 3,498
Average of the past 3 years	704	3,501

NASIK AND AHMEDNAGAR IRRIGATION DISTRICT.

236. The area irrigated and the revenue derived on lands irrigated by bandhāras in the Nāsik Collectorate, for which only Revenue Accounts are kept, were as shown below :—

Area irrigated.	Net consolidated Revenue.		
	Irrigation share.	Land share.	Total.
Acres. 28,554	Rs. 1,72,771	Rs. 40,704	Rs. 2,13,475

237. Remissions amounting to Rs. 7,823 were granted by the Revenue Department on account of short supply to certain Bandhāra channels (thals).

238. The expenditure during the year on these works amounted to Rs. 13,047 exclusive of establishment and tools and plant charges.

239. The following table shows the average area irrigated during the past three years and the revenue assessed on works as compared with the figures of the year under report :—

Period.	Area irrigated.	Irrigation share of revenue.
For 1914-15	Acres. 28,554	Rs. 1,72,771
Average of the past 3 years	29,072	1,51,413

AHMEDNAGAR DISTRICT.

240. There are two second class works in the Akola Taluka, viz., the Sāvargaon and Gardāni bandhāras. No expenditure was incurred on them during the year.

241. The following statement shows the area irrigated and the gross assessed revenue as compared with the average for the past three years :—

Name of Bandhāra.	During 1914-15.		Average of the past 3 years.	
	Area irrigated.	Gross revenue.	Area irrigated.	Gross revenue.
Sāvargaon and Gardāni	Acres. 145	Rs. 486	Acres. 145	Rs. 440

EAST KHANDESH DISTRICT.

242. The area irrigated and the revenue derived from each of the old Second Class Irrigation Works are shown below :—

No.	Name of work.	Area irrigated.	Revenue.		
			Irrigation share.	Land share.	Total.
		Acres.	Rs.	Rs.	Rs.
1	Patonda channel ...	132	796	313	1,109
2	Toli channel ...	70	558	151	709
3	Amalner channel ...	373	2,181	1,005	3,186
	Total ...	575	3,535	1,469	5,004

243. The gross revenue excluding land share was Rs. 3,535 against Rs. 3,328 of the previous year. The outlay on these works was Rs. 936, as detailed below, against Rs. 845 in the previous year :—

Extensions and Improvements	...	...	Rs.
Maintenance and Repairs	...	...	Nil.
Establishment	...	...	722
Tools and Plant	...	...	208
			11
		Total ...	936

WEST KHANDESH DISTRICT.

244. The area irrigated and the revenue derived from the old irrigation works are shown below :—

Years.	Area irrigated.	Revenue.		
		Irrigation share.	Land share.	Total.
	Acres.	Rs.	Rs.	Rs.
1914-15 ...	8,975	54,593	13,655	68,248
Average of the previous 3 years.	2,300	56,728	14,198	70,926

245. These figures are exclusive of old irrigation on the Lower Pánjhra River Works. Remissions amounting to Rs. 5,987 were granted. The outlay incurred on this class of works during 1914-15 compares with the outlay of previous three years as detailed below :—

Description.	Expenditure.	
	Average of the previous three years.	1914-15.
Extensions and Improvements ...	Rs. 178	Rs. 2,127
Maintenance and repairs ...	7,158	12,174
Establishment ...	1,285	2,455
Tools and Plant ...	57	205
Total ...	8,678	16,961

246. The old works on the Lower Panjhra River consist of old bandharas and channels such as :—

Dhulia Bandhara and channel.		
Nimkhedi	do.	do.
Japi	do.	do.
Nahalod	do.	do.
Kavtha	do.	do.
Betawad	do.	do.
Mandal	do.	do.
Mudhi	do.	do.

They are repaired from the annual provision of Rs. 3,000 made for Maintenance and Repairs of Lower Panjhra Works under 42—Major Works.

247. The work of Special Repairs described in last year's report to Gondur Tank was completed at a total cost of Rs. 18,435 and a sum of Rs. 2,854 was spent on the improvements to Mandal Bandhara.

248. The irrigation under Shahada Channel for dry crop land amounted to 183 acres as compared with 393 acres, the average of the last three years.

SATARA DISTRICT.

249. There is only one second class work in this district, *viz.*, Boregaon Dam, which served 102 acres with a consolidated assessment of Rs. 1,036, of which the irrigation share was Rs. 622.

BIJAPUR DISTRICT.

250. There are altogether 16 second class works maintained by the Public Works Department. The total area irrigated was 1,222 acres assessed at Rs. 6,500, of which Rs. 4,808 was the irrigation share.

DHARWAR IRRIGATION DISTRICT.

251. The expenditure during the year incurred on repairs to the second class tanks in the Dhárwar and Kánara Collectorates was Rs. 50,872.

252. The area under command of tanks irrigating more than 50 acres each and assessed at consolidated rates is 64,028 acres. During the year under report 61,192 acres were irrigated as compared with 60,460 acres in 1913 and the consolidated assessment was Rs. 2,17,461, of which sum remissions to the extent of Rs. 1,231 were granted by the Collector because of damage due to floods from breaches. The net consolidated assessment was thus Rs. 2,16,230 and the irrigation share was Rs. 1,72,983.

BELGAUM DISTRICT.

253. The total number of second class tanks irrigating over 50 acres each in this district is 67 with an irrigated area of 9,916 acres paying a consolidated assessment of Rs. 41,319, of which the irrigation share is Rs. 33,053.

254. A sum of Rs. 11,535 was spent during the year on repairs to second class tanks. The details are given below :—

	Rs.
(a) Repairs to 3 tanks each irrigating 50 acres and above ...	791
(b) Repairs to 12 tanks each irrigating below 50 acres ...	6,442
(c) Surveying 49 tanks ...	2,151
(d) Compensation for the land taken for the tanks ...	2,151
	11,535

255. A sum of Rs. 1,541 was spent during the year in constructing a bandhara across the Badchi Nalla in Athni Taluka. The work is in progress.

RATNAGIRI DISTRICT.

256. There are four irrigation works in the Ratnagiri Collectorate, which irrigated 1,221 acres during the year. The consolidated assessment and irrigation share were Rs. 6,913 and Rs. 4,485 respectively.

AGRICULTURAL WORKS.

WORKS FOR WHICH NEITHER CAPITAL NOR REVENUE
ACCOUNTS ARE KEPT.

GUJARAT IRRIGATION AND SURAT AND BROACH DISTRICTS.

257. All the drainage channels in these Districts worked satisfactorily and were maintained and improved at a cost of Rs. 11,576 and 1,899 respectively.

POONA IRRIGATION DISTRICT.

KHAMGAON TANK.

258. This partially completed tank was dry up to the 20th June 1914, when it began to receive replenishment from the Mutha Right Bank Canal. The tank overflowed on the 13th September 1914, and continued overflowing for one month. During the kharif season 28 acres were irrigated and during the rabi 190 acres, the total irrigated area during the year being 218 acres and the gross assessment Rs. 896. The tank dried up on 1st March 1915.

SHOLAPUR DISTRICT.

WADSHIVNE TANK.

259. The tank was quite dry at the beginning of the year. The first and main replenishment of 7'60 feet was received on the 26th June representing a storage of 42'25 M. Cft., which with small increases lasted till the 16th of January 1915, after supplying the demands for 103 acres of kharif and 143 acres of rabi area. The rainfall gauged at the two stations in the catchment of 14'5 square miles was 14'07 inches, which gave a total replenishment of 52'46 M. Cft., the proportion of run-off to the total rainfall in the catchment being 0'11. The waste weir did not overflow.

260. The area irrigated was 247 acres against 270 acres, the average of the preceding three years.

261. The gross assessed revenue amounted to Rs. 2,314 against Rs. 1,479, the average of the preceding three years. The increase is due to penal rates having been charged for 100 acres, for which water was taken unauthorisedly in 1913-14.

262. The working expenses amounted to Rs. 1,377 against Rs. 1,917, the previous three years' average.

WEST KHANDESH DISTRICT.

TALWADA TANK.

263. The rainfall during the year was 30'90 inches and was better than that of the preceding year.

264. The year commenced with a storage of 28·31 M. cft. and the first replenishment was received on 24th May 1914, raising the water in the tank from 20·37 M. cft. to 24·04 M. cft. The maximum storage during the year was reached on 7th October 1914, amounting to 117·22 M. cft. when the tank overflowed.

265. The distributaries for this tank were only completed last year. The **area irrigated** was 176 acres and the **revenue assessment** Rs. 705 against 70 acres and Rs. 396 respectively of the previous three years' average.

266. The construction of the distributaries has been completed, and the water is now let out to kharif and rabi crops.

Revenue Report of Irrigation works in the
Bombay Presidency excluding Sind for
1914-15—Review of

GOVERNMENT OF BOMBAY.

PUBLIC WORKS DEPARTMENT.

Resolution No. W. I.—4605.

Bombay Castle, 1st May 1916.

Letter from the Superintending Engineer, Central Division, No. 6300, dated 20th September 1915.

Submits the Irrigation Revenue Report Parts I and II for his Division for 1914-15.

Letter from the Superintending Engineer, Deccan Irrigation Division, No. 6501, dated 25th September 1915.

Submits the Irrigation Revenue Report for his Division for 1914-15.

Read letter from the Superintending Engineer, Central Division, No. 6630, dated 4th October 1915.

Read letter from the Superintending Engineer, Central Division, No. 6729, dated 7th October 1915.

Letter from the Superintending Engineer, Northern Division, No. 8371, dated 21st October 1915.

Submits, with remarks, the Irrigation Revenue Report Parts I and II for his Division, for 1914-15.

Letter from the Superintending Engineer, Southern Division, No. D.—1729, dated 21st October 1915.

Submits the Irrigation Revenue Report for his Division for 1914-15 and makes remarks.

Letter from the Superintending Engineer, Deccan Irrigation Division, No. 7883, dated 23rd November 1915.

With reference to Government memorandum No. 10795-I., dated 30th September 1915, submits the general remarks together with the descriptive accounts in connection with the Irrigation Revenue Report pertaining to his Division. States that no alteration is necessary in the list of Irrigation works in operation as shown on page 1 — 2 of the printed report for 1913-14.

Letter from the Superintending Engineer, Central Division, No. 8029, dated 30th November 1915.

With reference to Government memorandum No. 11370-I., dated 16th October 1915, submits the general remarks in connection with the Irrigation Revenue Report for his Division for 1914-15.

Letter from the Superintending Engineer, Southern Division, No. D.—2208, dated 13th December 1915.

Submits, in a tabular form, certain information called for by Government in Government memorandum No. 12718-I., dated 30th November 1915.

Letter from the Superintending Engineer, Central Division, No. 8450, dated 16th December 1915.

With reference to Government memorandum No. 12993-I., dated 30th November 1915, submits a report seriatim on the points therein raised.

Memorandum from the Superintending Engineer, Northern Division, No. 10192, dated 24th December 1915.

With reference to Government memorandum No. 12717-I., dated 23rd November 1915, forwards a letter from the Executive Engineer, Gujarat Irrigation District, submitting the necessary explanation regarding the wiping out of Irrigation below Kalambandi villages No. III and the reduction of area and revenue in case of villages No. IV.

Letter from the Accountant General, Bombay, No. B. K.—23—1—2905, dated 20th January 1916.

Forwards two tables in connection with part II of the Revenue Report, Deccan and Gujarat for the year 1914-15. Makes remarks.

Memorandum from the Superintending Engineer, Deccan Irrigation Division, No. 995, dated 11th February 1916.

With reference to Government memorandum No. 13022-I., dated 1st December 1915, submits, in a statistical form, the further information therein called for.

Read Government Telegram to the Superintending Engineer, Deccan Irrigation Division, No. 3519.-T., dated 28th March 1916.

Telegram from the Superintending Engineer, Deccan Irrigation Division, No. T.—145, dated 1st April 1916 :—

"Government Telegram 3519-T. of 28th ultimo. With duty one hundred twenty for rabi and monsoon season canal leads area irrigable normal years are Godavari Right Bank Canal thirty-five thousand six hundred acres Godavari Left twenty-one thousand one hundred thirty-six acres total for two canals fifty-six thousand seven hundred thirty-six acres."

RESOLUTION.—The Irrigation Works, dealt with in this report, are divided into three classes namely :—

(1) First Class Works (in Part I), being those for which Capital and Revenue Accounts are kept.

(2) Second Class Works (in Part II), being those for which only Revenue Accounts are kept. They are small but very numerous tanks, bandharas and channels, and

(3) Agricultural Works (also in part II), being those for which neither Capital nor Revenue Accounts are kept. These are generally very small works.

2. The total capital outlay on the first class irrigation works upto the end of 1914-15 was Rs. 5,50,86,770 and the net revenue realized was Rs. 9,48,772. The capital expenditure both direct and indirect in the last year ~~alone~~ was Rs. 47,82,695, and of this figure, nearly Rs. 33½ lakhs were spent on the Nira Right Bank Canal and about Rs. 13 lakhs on the Godavari and Pravara River Projects. Good progress continued to be made with the Godavari and Pravara Canals, and on the former system a total length of 62 miles of the Right Bank Canal and 40 miles of the Left Bank Canal were in operation during the year.

3. In the Northern Division the area of Irrigation showed an increase of 5,760 acres, but in the other Divisions there was a decrease amounting to 49,368 acres, and this was chiefly due to less demand for canal water owing to timely and favourable rainfall during the year.

4. With the decrease of irrigation, there was a fall in the gross assessed revenue which amounted to Rs. 16,05,516 or Rs. 10 per acre against Rs. 17,59,548 of the previous year, and Rs. 11,57,583, the average of the previous ten years.

5. The unrealized balance at the close of the year was Rs. 75,230 which is less than the previous year's figure by Rs. 48,451. The greater portion of the amount unrealized (Rs. 60,985) was in the Deccan Irrigation Division, and of this Rs. 10,827 are reported to have since been recovered. The balance remaining outstanding is still large and an effort should be made to effect prompt recoveries.

6. There will continue to be an increase in working expenses as long as new lengths of canal come into operation annually, and an increase of Rs. 98,176 has been recorded this year, of which the Nira Left Bank Canal alone was responsible for Rs. 46,338. The total charge for the year was Rs. 7,50,066.

7. The resulting net Revenue for the year was :—

	Rs.
(i) on the basis of assessment	8,55,450
(ii) on the basis of realization... ..	9,48,772

as compared with Rs. 11,07,658 and 10,87,593 respectively during the previous year.

8. The policy of Government in the last 12 years has been to make liberal annual grants for expenditure on the improvement and maintenance of the second class irrigation works. The annual expenditure during this period has been on the average 4.4 lakhs of rupees and a large number of works have been put into good working order.

In previous years, it was usual to give in the General Remarks prefacing Part II of this Report figures of area and revenue for an indefinite and variable number of second class works. Since the year 1913-14 it has been decided to give the area and revenue for only those works on which some expenditure is incurred during the year. Lists of works are being prepared for each district and are approaching completion. The present figures show that the total area under irrigation and revenue due from second class irrigation works in the Deccan and Gujarat are 215,895 acres and Rs. 8,57,732. From paragraphs 220 to 222 it will be seen that an expenditure of Rs. 3,65,256 was incurred on 515 works during the year under review, while the area irrigated and revenue realized amounted to 49,809 acres and Rs. 2,15,892 respectively, the corresponding figures of the previous year being 46,945, acres and Rs. 1,99,095.

9. The Irrigation officers and all officers concerned with the distribution of water are thanked for the management of the works.

10. Copies of the report and of this review should be forwarded to the Government of India. Copies should also be sent to the Secretary of State for India.

W. N. CARTLAND,
Under Secretary to Government,
Irrigation and Railways.

G. R. No. W. I.—4605, P. W. D., dated 1st May 1916.

To

The Revenue Department, Secretariat.
The Financial Department, Secretariat.
The Commissioner in Sind.
The Commissioner, N. D.
The Commissioner, C. D.
The Commissioner, S. D.,
The Director of Agriculture.
The Settlement Commissioner and Director of Land Records.
The Chief Engineer in Sind.
All Superintending Engineers of Divisions.
The Accountant General, Bombay.
All Executive Engineers in charge of Irrigation Works.
The Government of India.
The Under Secretary of State for India. } By letter.

Class A.

Exd. C. S. P.

No. _____ of 1916.

Copy forwarded for information and guidance to