

---

A DESCRIPTIVE ACCOUNT  
OF THE  
WORKING OF IRRIGATION WORKS  
IN  
DECCAN AND GUJARAT  
DURING THE YEAR  
1908-1909.

---

For Press only.

---

A DESCRIPTIVE ACCOUNT  
OF THE  
WORKING OF IRRIGATION WORKS  
IN  
DECCAN AND GUJARAT  
DURING THE YEAR  
1908-1909.

---

DESCRIPTIVE ACCOUNT OF THE WORKING OF IRRIGATION  
WORKS IN DECCAN AND GUJARAT DURING THE YEAR  
1908-1909.

*General remarks by the Chief Engineer, Irrigation.*

The Irrigation works in the Deccan and Gujarat include canals with storage works on Ghat rivers having a reliable supply, canals without storage works but with headworks on Ghat-fed rivers with a reliable supply during the monsoon only, tanks in the Deccan and Gujarat and Southern Mahratta Country with supplies dependent on local rain and also a number of small works drawing their supplies from small streams amongst the hills. The supply of the canals with storage works on the Ghat rivers has been devoted to perennial irrigation; the area of irrigation therefore varies very little with the season and is much less than the canals were originally designed to supply as the perennial crops take a great deal more water than ordinary crops. The Kadwa River works with the tank at Waghad in the Nasik District, the Mutha Canal and the Nira Canal with their picturesque storage works—Lakes Fife and Whiting—long narrow lakes 12 and 19 miles long lying in valleys below the great hill forts of Torna and Rajgharh and Singhur in the Bhore State are at present the only works of this class. The works maintained their high standard of irrigation but there was a slight reduction in perennial areas. All the water available was used. The principal canals supplied from Ghat-fed rivers but without storage works are the Jamda in Khandesh, the Lakh and Ojhar Canals in Ahmednagar, the Krishna in Satara and the Gokak in Belgaum, and the Madag Tank in Dharwar, the Gokak having a small but insufficient storage. None of these are large works. On the Jamda Canals in Khandesh, the rainfall on the area commanded was good and irrigation was less needed and less taken than in the preceding year. On the Lakh and Ojhar Canals in Ahmednagar, the rainfall was insufficient for the crops and the canal supplies were largely used. On the Krishna, the supply to the Canal was good and though the area did not increase, more valuable crops were grown with the better supply and the Revenue was large. On the Gokak, the rainfall was about the average but slightly less than in the previous year and there was an increase in area and assessment. On the small Madag Tank canal, the area was a little larger. The supply obtained by tanks in Khandesh was insufficient and it was a bad year owing to want of water. The tanks in Poona and Sholapur had a better supply than those of Khandesh, but Bhadalwadi, Mhaswad and Pathri were the only tanks to overflow. The area irrigated was a little less than the preceding year, the rainfall being better suited to the crops. The tanks in the Satara District all filled, but in the Dharwar District to the South, they had very deficient supplies. On the whole, it was not a good year for tank irrigation, and the supply was better in the central portion of the Deccan than in the North and South. The small tanks in the Southern Mahratta Country irrigated nearly as much as usual but some of them felt the deficient rainfall and remissions amounting to Rs. 5,761 were granted. The Bandkara irrigation on the small works drawing their supply from streams mainly in Khandesh and Nasik has not yet recovered from the long series of years of weak rainfall. The supply during the year under reference had improved, but still it was considered less than the standard and Rs. 75,926 were granted in remission.

GUJARAT.

In Gujarat, there was a decided improvement in the rainfall compared with recent years, but it all fell during the kharif season. Under the Hathmathi and Khari Cut canals depending on the flow in the rivers of the same names, the area under irrigation increased and the newly constructed tanks filled; it was a fair year for tanks. Repairs and improvements to these small works in the Deccan and Gujarat were continued vigorously and the expenditure Rs. 5,01,327 slightly exceeded the Revenue Rs. 4,95,850.

The area irrigated during the year was 1,42,928 and the assessed revenue Rs. 10,99,014 and the proportion for the various classes of works referred to in this note were approximately as follows :—

	Area.	Assessment.
	Acres.	Rs.
For works with storage on Ghat River ... ..	70,927	7,55,435
For works without storage but on a river with Ghat catchment : ... ..	17,374	69,367
For tanks dependent on local rain or tanks with a Deccan catchment ... ..	54,627	2,74,212
Total ...	142,928	10,99,014

## DETAILED REPORTS BY DIVISIONS.

### NORTHERN DIVISION.

A detailed descriptive account of all the irrigation works in operation in this Division was published in the year 1906-1907, and there is nothing particular now to add.

2. For the Hathmati Canal in the Prantij Taluka, and the Khari Cut Canal in the Daskroi Taluka, the rainfall in Ahmedabad and Prantij was 32.51, and 40.46 inches, respectively; the Hathmati River came down in flood on 17th August 1908. The canal ran full to the end of September, and the discharge then gradually diminished to 24 cusecs on 31st May 1908. The area irrigated was 8,375 acres, and the revenue Rs. 19,634, including Rs. 968 on account of miscellaneous receipts. The Chandola Tank was filled three times, and its storage was supplemented by running surplus water from the Hathmati Canal through the Bhujwa channel, into the Khari River, to be picked up at the Raipur weir and conducted by the Khari Cut Canal into the Chandola Tank giving a good supply to the end of December everywhere. The area irrigated, and the revenue earned, were the highest on record, *viz.*, 8,525 acres, and Rs. 54,858, including miscellaneous receipts. The Bokh and Vasai Reservoirs were filled early in the season and overflowed when heavy and continuous rain fell in the middle of August.

3. The works in operation in the Kaira Collectorate were the Tranza-Nagramma, Wangroli, and Savli Tanks. The Tranza-Nagramma Tanks were not filled, as the flow in the Matar drain did not last sufficiently long. The Wangroli Tank filled, but the land under command being limited, the whole supply was not utilized. An extension of the Right Bank Canal downwards is therefore under consideration; and, if carried out, will add some 2,000 acres to its command. During the year, 1,921 acres were irrigated, and Rs. 6,166 realised, as revenue. The construction estimates of the Tranza-Nagramma and Wangroli Tanks were closed on 31st March 1909. Work on the Savli Tank was in progress; owing to heavy and continuous rain, a portion of the dam in the stream-bed subsided; immediate repairs were carried out, and the tank partially filled and was brought into operation for the first time during the year. The area irrigated was 1,401 acres, and the revenue earned was Rs. 4,761, a satisfactory beginning. The Muwalia Tank is in the Panch Mahals Collectorate. The area irrigated in the Kharif and Rabi seasons was 76 and 313 acres, respectively. Irrigation under the tank is not yet developed, the land under command of the Right Bank Canal and the Left Bank Canal is restricted, and a proposal to extend the Left Bank Canal is under consideration.

4. Rs. 1,11,515 were spent on repairs and improvements to 69 small tanks in the Gujarat Irrigation and 88 in the Old tanks. Surat and Broach Districts.

5. The Goblaj and Bherai Reservoirs filled. A continuous flow was maintained in the river throughout the season, and the water level above and below the sluices was well regulated, fully satisfying the needs of the Kalambandi villages.

## CENTRAL DIVISION.

1. There were 20 works in operation (including the Wadshivna Tank in the Sholapur District) and 3 works under construction (excluding the Maladevi, Budhihal and Victoria Tanks) in the Central Division during the year 1908-1909. The Capital expenditure, Direct and Indirect, amounted to Rs. 17,24,568, the greater portion of which was on the Godaveri Works, namely, Rs. 12,71,651.

2. The total length of Main Canals is 452.91 miles and that of distributaries 479.66 miles.

3. The culturable area under command of the Irrigation Works in operation was 580,217 acres and the area at present estimated as annually irrigable 271,550 acres.

4. The total area irrigated was 99,249 acres against 93,746 acres of the preceding year, and the average rainfall in the Central Division was 17.44 inches as compared with 18.02 in 1907-1908. The increase in area irrigated was mainly on the Nira and Mutha Canals in the Poona District, and the Ojhar Canal in the Ahmednagar District, due to want of timely rainfall.

5. The principal crops irrigated were :—

	Acres.
Jowari	31,138
Sugarcane	13,533
Bajri	19,371
Groundnut	12,918
Wheat	5,891
Gram, Udid, Mug	5,302
Rice	2,036

6. The gross assessed revenue amounted to Rs. 8,62,021 against Rs. 8,89,167 of the preceding year. The decrease is due to the fall of area under the Mhaswad, Ekruk and Ashti Tanks, Jamda Canals, and to decrease in sugarcane area under the Shetphal Tank.

7. The gross revenue realised from all sources excluding refunds, was Rs. 8,13,216 against Rs. 9,53,497 realised in 1907-1908. The balance unrealised to end of 1908-1909 was Rs. 4,36,546.

8. The working expenses during the year under report amounted to Rs. 3,00,490 against Rs. 2,93,482 of the preceding year.

9. The net revenue of the year after deducting Working Expenses was on the basis of assessment, Rs. 5,61,531 and on that of Realisations, Rs. 5,12,726.

10. The Second Class Irrigation Works in the Poona, Nasik and Ahmednagar Irrigation and the two Khandesh Districts irrigated 42,670 acres, against 42,096 acres in 1907-1908. Rs. 65,099 were remitted by the Revenue Department in the Nasik Collectorate on account of the shortage of water-supply.

11. The estimated value of crops irrigated during the year under report was Rs. 71,02,813 against Rs. 71,53,433 of the preceding year.

## SOUTHERN DIVISION.

1. The rainfall gauged on all the first class works in the Southern Division was less than that of the previous year ; and there was a demand for water which resulted in an increase of the irrigated area over that of the previous year by 1,534 acres. 1,184 acres were irrigated under the Upper Man River Works during the rabi season.

2. During the year under report, Rs. 1,17,203 were expended on repairs to 204 tanks in the Belgaum, Dharwar Irrigation, Ratnagiri and Kolaba Districts. Of these 51 tanks are in the Belgaum District, 150 in the Dharwar Irrigation, 2 in Ratnagiri and 1 in Kolaba Districts. In addition to the above, a sum of Rs. 2,886 was spent on surveying tanks in the Belgaum District.

The working of the principal works is shortly described below :

### SATARA DISTRICT.

#### *Krishna Canal.*

3. The flow of the Krishna was as usual very small during the months of April and May. In the rabi season, the supply was ample and was largely utilised. The area irrigated and the assessment were 5,190 acres and Rs. 46,187 and show increases of 46 acres and Rs. 13,167 over the corresponding figures of the previous year.

4. The Rewari and Chikhli Canals are works without any storage and dependent on local rain. Under both of these, the areas irrigated (1,929 acres) and the assessment (Rs. 8,248) during the year were greater than those of the previous year (1,569 acres and Rs. 5,844).

5. The remaining Minor Works in the Satara Collectorate are the Yerla River, Upper Man Works and Mayni Tank. The area irrigated under these works during the year, was (5,170 acres) and the total assessment (Rs. 27,179); those of the previous year were (6,658 acres and Rs. 28,104).

### BELGAUM DISTRICT.

#### *Gokak Canal.*

6. The monsoon flow on the Ghatprabha commenced on the 11th June. The highest flood of the year occurred on the 13th July 1908 ; its discharge was 70,975 cubic feet per second which is equivalent to a run-off of 0.10 inch per hour from the catchment area (1,080 square miles).

7. The area (8,015 acres) irrigated during the year shows an increase of 267 acres in the kharif and 34 acres in the rabi seasons over the corresponding figures of the previous year.

8. The gross revenue of the year was Rs. 57,262. The net profit after deducting working expenses (Rs. 14,992) comes to Rs. 42,270.

### DHARWAR IRRIGATION DISTRICT.

#### *(a) Canals supplied by ghat rivers with storage works—Madag Tank.*

This tank is fed by the Chowradi river which has at it a catchment area of about 540 square miles, all in Mysore territory. The river has very large floods every year from July to October, and the waste weir continuously overflows from July to January. The tank maintained a sufficient supply of water for irrigation throughout the year.

The total area irrigated was 895 acres, the assessment Rs. 2,915 and the total revenue from all sources was Rs. 3,092, which is the highest on the record. A large area, 489 acres, was cultivated with garlic which is a profitable crop and one grown at small expenditure.

(b) *Canal supplied by ghat rivers without storage works—  
Dharma and Naregal Canals.*

These small canals are supplied by the ghat-fed Dharma River without storage works; the tanks fed by the canals have a total capacity of some 132 million cubic feet. The area now commanded by the entire system is about 14,000 acres but admits of extension. The area irrigated annually is about 9,000 acres and the annual revenue to Government is about Rs. 30,000. The expenditure incurred on maintenance and repairs and on the supervision of water distribution during the year was Rs. 3,159. The crops both those under direct irrigation from the canals and those under the subsidiary tanks, were in good condition while those grown in the neighbourhood from rainfall alone were much inferior to them. The tanks dependent on the canals all received a sufficient supply of water and many of them overflowed for some time.

(c) *Works with storage tanks dependent on local rain.*

In this class, there are :—

- (1) Dambal Tank.
- (2) Medleri Tank.
- (3) Asundi Tank.
- (4) Mavinkop Tank.

The supply of water to the first three tanks is not certain as the rainfall on their catchments is generally inadequate. The supply to tank No. 4 (which is in the Kanara Collectorate) is fairly certain as it has a hilly forest catchment to the west of the District and in the rainy zone.

The first three tanks did not receive good replenishments owing to the rainfall being much below normal. The waste weirs of all the four tanks did not overflow this year.

The total area irrigated under all four tanks was 1,414 acres and the irrigation assessment, Rs. 5,759, the corresponding figures for the previous year being 1,320 acres and Rs. 6,434 respectively. The decrease in the revenue assessed, although the irrigated area increased, was due to a large amount of low-rated crop, namely, Jowari, having been cultivated under Medleri and Dambal Tanks owing to insufficient rainfall. The total revenue from all sources under these tanks was Rs. 5,916, the corresponding figure for the previous year being Rs. 6,800.